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School of Business  
Virginia Commonwealth University

This is to certify that the dissertation prepared by **Edward D. Showalter** entitled **The Corporate Character Ethical Value Structure: Construct Definition, Measurement, Validation and Relationship to Organizational Commitment** has been approved by his committee as satisfactory completion of the dissertation requirement for the degree of **Doctor of Philosophy**.

Chair: D. Robley Wood, Jr., Professor of Management; Virginia Commonwealth University

Assistant Chair: Randall G. Sleeth, Associate Professor of Management; Virginia Commonwealth University

Eugene H. Hunt, Professor Emeritus; Virginia Commonwealth University

C. Glenn Pearce, Associate Professor of Management; Virginia Commonwealth University

Stephen J. Perez, Assistant Professor of Economics; Virginia Commonwealth University

Anson Seers, Chair, Department of Management; Virginia Commonwealth University

Jack L. Haar, Dean, School of Graduate Studies; Virginia Commonwealth University

Howard E. Tuckman, Dean, School of Business; Virginia Commonwealth University

Date

*April 18, 1997*



The Corporate Character Ethical Value Structure: Construct Definition,  
Measurement, Validation and Relationship to Organizational Commitment

A dissertation submitted in partial fulfillment of the requirements for  
the degree of Doctor of Philosophy at Virginia Commonwealth University

By

Edward D. Showalter

M.B.A., 1990, Virginia Commonwealth University

B.A., 1984, Randolph-Macon College

Chair: D. Robley Wood, Jr. Professor of Management

Assistant Chair: Randall G. Sleeth, Associate Professor of Management

Virginia Commonwealth University

Richmond, Virginia

May 1997

### ACKNOWLEDGMENT

I would like to offer my thanks and appreciation to those who have helped me bring this document into its present form. I have received encouragement and support from so many that it would be impossible to thank all of them individually without doubling the length of this document, but there are some to whom I feel I owe special recognition.

I first extend a hearty thanks to the members of my committee, each of whom brought special skills and knowledge, and each of whom have encouraged and challenged me to work harder than I thought possible. I owe a special debt of gratitude to Gene Hunt and Randy Sleeth for the many hours they have spent with me fine-tuning the theory, method and presentation.

I also thank Ted Smith who helped me in data collection. This is not the easiest subject on which to gather data, and I am very appreciative to all who helped in that process.

In conclusion, I thank my family. My parents, who first taught me the importance of character, my siblings who gave me encouragement and inspiration, and my extended family and in-laws who helped in more ways than I can mention. To my two sons, Davis and Thomas Fox, thanks for letting Daddy "hog the computer," I love you both. Most importantly, I give my thanks and my love to my wife, Judee, who has stood by me through the entire process. Without her love and support this project could never have started, much less been completed.

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# **LIST OF ABBREVIATIONS**

ABT:	Affective-Based Trust (McAllister, 1995)
BBE:	Broad-Based Equity (a sub-scale from the MES)
BSRI:	Bem Sex-Role Inventory (Bem, 1974)
CBT:	Cognitive-Based Trust (McAllister, 1995)
CC-EVM:	Corporate Character Ethical Value Matrix
CCC:	Character Counts Coalition
CCQ:	Corporate Character Questionnaire (current study)
CMD:	Cognitive Moral Development theory (Kohlberg, 1976)
CONT:	Contractualism (a sub-scale from the MES)
CTI:	Conditions of Trust Inventory (Butler, 1991)
DIT:	Defining Issues Test (a test of CMD)
EPQ:	Ethics Position Questionnaire (Forsyth, 1980)
EVQ:	Corporate Shared Ethical Values Questionnaire (Hunt, Wood, & Chonko, 1989)
IIAA:	Independent Insurance Agents of America
LOC:	Locus of Control (Rotter, 1966)
MACH IV:	Measure of Machiavellianism (Christie & Geis, 1970)
MES:	Multidimensional Ethics Scale (Reidenbach & Robin, 1990)
MJI:	Moral Judgment Inventory (a test of CMD)
OB:	Organizational Behavior
OC:	Organizational Commitment
OCB:	Organizational Citizenship Behavior
OCQ:	Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979)
PME:	Perceived Managerial Enforcement (current study; contains items from Hunt, Wood, & Chonko, 1989)
REL:	Relativism (a sub-scale from the MES)
SEV:	Shared Ethical Values (current study; contains items from the OCQ and the EVQ.

## **ABSTRACT**

The Corporate Character Ethical Value Structure: Construct Definition, Measurement, Validation and Relationship to Organizational Commitment

By Edward D. Showalter, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 1997

Chair: D. Robley Wood, Jr. Professor of Management

Assistant Chair: Randall G. Sleeth, Associate Professor of Management

The corporate character value structure consists of ethical values applied in a business setting arranged in a two dimensional matrix presented here as the Corporate Character Ethical Value Matrix, or CC-EVM. The two matrix dimensions are: behavior-types defined as either (1)custodial or (2)proactive; and behavior targets (1)task, (2)consideration-specific, directed toward a specific relationship, or (3)consideration-general, directed at generalized relationships or the organization. The current research developed the matrix to define and classify the six values presented by The Character Counts Coalition's (1993) as core "pillars" of character: trustworthiness, responsibility, respect, caring, fairness and citizenship. The theoretical background for this matrix was built from the organizational trust and organizational citizenship behavior (OCB) literatures, and the business ethics literature.

The study tested the uniqueness of these six constructs using items developed from established measures that were combined as one instrument with items developed based on Character Counts Coalition statements. Factor analysis of student (n=324) responses explored the existence of theorized dimensions underlying the established trust and OCB measures. Item reduction eliminated items failing to discriminate between factors, and five factors emerged. The first factor contained items from McAllister's (1995) cognitive-based trust measure and Van Dyne, Graham, and Dienesch's (1994) obedience measure. The second and third factors contained items from Van Dyne et al.'s advocacy and loyalty measures respectively. The fourth and fifth factors expressed concern for friends and country, and contained items developed from the Character Counts Coalition. Reliable ( $\alpha > .80$ ) scales from the factor items allowed further testing for inferences about the scales validity using personality and demographic measures.

Findings show support for the behavior-targets dimension of the CC-EVM. The first factor corresponded to the task target. The advocacy and loyalty measures corresponded to the consideration-specific and consideration-general targets. The friends and country scales failed to exhibit predicted relationships. The five measures were regressed against measures provided by an insurance agency industry sample (n=112) of organizational commitment and shared ethical values. The strongest relationship emerged between consideration-general (loyalty) and organizational commitment. No support emerged for the behavior-types dimension. Implications for researchers and practitioners are discussed.

## CHAPTER 1: INTRODUCTION

### Introduction

"Individuals act as they do because of their values. The value sets of individuals provide strong reasons for action, and the most dear values are ones we call "moral values" or "ethical values." Corporate strategy which ignores the role of people in the organization simply ignores why organizational members act as they do. Corporate strategy must return to the individual values of corporate members, *before it is formulated*. [original italics] It must be built on these values, rather than taking them as constraining forces (Freeman, 1988, p.11).

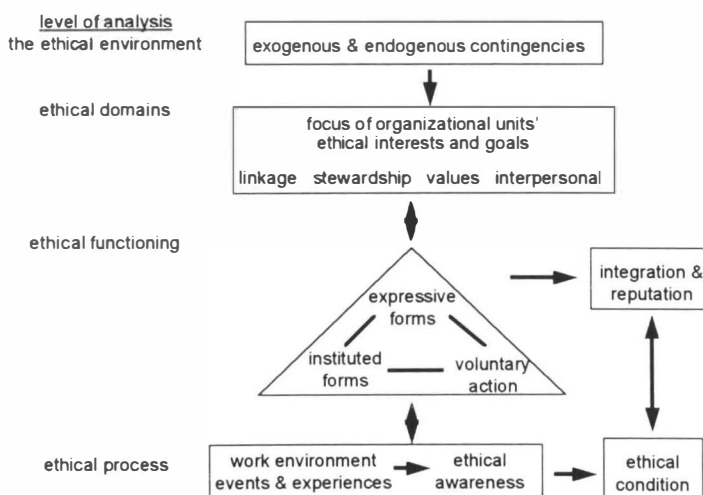
Freeman (1988) makes a case, from a business strategy perspective, for incorporating ethics and ethical values into the strategic management process. Kababoff, Waldersee & Cohen (1995) pointed out several shortcomings in research on organizational values, including a lack of theory development. "Although a variety of value dimensions have been identified via researchers' intuition, surveys of the literature and factor analysis, there is an absence of well-specified theories of organizational values"(p. 1097).

If values, especially ethical values, are important to business ethical conduct, researchers in this area must answer three immediate

questions: (1) What is an ethical value? (2) How can ethical values be classified? and (3) How ethical values be measured?

Nicholson (1994) presented a framework of levels of ethical analysis for theory and research in business ethics. Reiterating Freeman's earlier concerns, Nicholson wrote that organizational theory and organizational behavior have for the most part "ignored the ethical dimension of employees' and managers' experience" (Nicholson, 1994, p. 583). Nicholson presupposed that ethical behavior by companies and individuals exists due to one of three reasons: they can afford it, they are compelled to it, or they are inspired to it. Nicholson questioned the possibility of delineating behavior or goals with an ethical component from those which do not have an ethical component. If all actions have ethical components, no behavior of either an individual or an organization can be free from ethical analysis (Nicholson, 1994).

**Figure 1: Nicholson's (1994) Framework for inquiry into organizational ethics**



Source: Nicholson, N. (1994). Ethics in organizations: A framework for theory and research. Journal of Business Ethics, 13, p. 584.

Nicholson's model (Figure 1) presented four levels of analysis. The highest level, the ethical environment, exists outside the control of the firm. The firm must remain aware of and react to the ethical environment. The other three levels of analysis dealt with the firm's relations and reactions to the exogenous and endogenous contingencies of the ethical environment. The current research addresses some issues and clarifications needed in the highest of Nicholson's other three levels, ethical domains.

Nicholson divided domains into two classes, exogenous (linkage & stewardship dealing with the organization's relations with external stakeholders) and endogenous (values and interpersonal dealing with the organization's internal environment and relations among organizational members). Linkage referred to relations with external stakeholder groups; stewardship concerned the consequences and externalities of outputs and services. Values concerned "the ethical character of the company as a moral agent" (Nicholson, 1994, p. 585) and included the qualities of altruism, openness, honesty, trust and trustworthiness. Interpersonal issues "relate to an implied social order of moral conduct," (Nicholson, 1994, p. 585) and include "caring behavior, concern for the personal development of people, encouraging corporate citizenship among members, the responsible use or sharing of power, equitable payment, and the treatment of minorities" (Nicholson, 1994, p. 585).

The third level, ethical functioning, contained identifiable behaviors and institutionalized ethical functioning (e.g. codes of ethics). Three forms of action -- expressive, instituted, and voluntary -- constitute ethical functioning. Expressive forms included individual attitudes, beliefs, and corporate culture. Instituted forms include



roles, rules, standardization and organizational design. Instituted and expressive forms of ethical functioning serve as boundaries for individual's voluntary action. The results of these forms of ethical functioning include the integration of ethical ideas and goals, and the firm's reputation. The lowest level, the micro or ethical process level, concerns the creation or modification of beliefs and values over time as a result of events and experiences. The outcomes of the ethical process level constitute the ethical condition of the organization.

Nicholson (1994) pointed out two potential problems in his domain description. The theoretical classes of domains were weak rather than strong, and it was difficult to determine the moral agent from these classes. In addition, Nicholson's model failed to clarify the distinction between values as guides to behavior, and forms of behavior, both of which appeared in the ethical domain level; yet forms of behavior reappeared in the lower ethical functioning level. Nicholson defended the concept of ethical domains above the functioning and process levels.

### **Problem and Purpose for the Current Study**

For effective empirical research to continue in this area, ethical domains must be redefined clearly and from a strong theoretical base. The problem is developing clear definitions, classifications, and measurements of the values in the ethical domains.

The Nicholson framework, in part, addressed the absence of well-specified theories of organizational values, still exhibited a lack of clarity in the ethical domains level of analysis. The problem this research project addressed was the lack of clarity in the ethical

domains level of analysis which impedes clear definition, classification and measurement of ethical values in business.

The purpose of this research was to address the weaknesses in the Nicholson framework by defining an ethical value and presenting a classification structure for ethical values known as the Corporate Character Ethical Value Matrix or CC-EVM.

### **Definition of an ethical value**

This study drew on Rokeach's (1973) work on values. "A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973, p. 5). Terminal values are those concerning end-states of existence or quantifiable goals. Instrumental values concern modes of conduct or behavior to reach goals. To value making a profit is a terminal value, while to value making that profit through superior performance is an instrumental value. Rokeach (1973) presented seven ways values serve as multifaceted standards guiding behavior. As presented by Rokeach (1973), values: (1) influence positions on social issues, (2) influence predispositions toward political or religious ideologies, (3) guide self-presentations, (4) serve as standards for evaluations of self and others, (5) serve as a basis of comparisons of competence and morality, (6) serve as standards to persuade and influence others, and (7) serve as standards to rationalize otherwise unacceptable beliefs, attitudes, and actions to protect, maintain, and enhance self-esteem.

In short, values are guides to behavior, as well as standards by which to judge behavior. This study defined an **ethical value** as: **an instrumental value serving as a guide or standard for ethical behavior.**

"Ethical values" in this definition are equivalent to Rokeach's (1973) "moral values." "Moral values refer only to certain kinds of instrumental values, to those that have an interpersonal focus which, when violated, arouse pangs of conscience or feelings of guilt for wrongdoing" (Rokeach, 1973, p. 9). Ethical values then function as a guide or standard for right or good interpersonal behavior.

### **Theory: The Corporate Character Ethical Value Matrix (CC-EVM)**

#### **The Dimensions of the Ethical Value Matrix**

From a behavioral standpoint, several streams of research define "good" or "right" behavior in an organizational context. The theory developed in this research postulates that two of these literatures, (1) trust and (2) organizational citizenship behavior, converge on a concept presented here as "corporate character." Corporate character as defined here is a value structure that guides individual behavior in an organizational context. The corporate character value structure consists of ethical values arranged in a two dimensional matrix presented here as the Corporate Character Ethical Value Matrix, or CC-EVM. The two dimensions of the CC-EVM are **types** of behaviors and **targets** of behaviors. The CC-EVM theory defines two ethical behavior types and three ethical behavior targets.

Hosmer (1995) defined trust as "the result of 'right,' 'just,' and 'fair' behavior -- that is, morally correct decisions and actions based upon the ethical principles of analysis -- that recognizes and protects the rights and interests of others within society" (p. 399). This definition created a direct link between trust and ethics in that both concern right, just, and fair behavior. Hosmer pointed out that trust

was accompanied by an "expectation of generous or helpful or, at the very least, non-harmful behavior on the part of the trusted person, group, or firm." (1995, p. 392) This distinction between helpful and non-harmful types of behavior was the basis for the first dimension of the CC-EVM, ethical behavior **types**.

The CC-EVM theory presented in this study categorizes ethical behaviors in two types, either **proactive**, seeking to improve the status quo; or **custodial**, seeking only to maintain the status quo. If support exists for the CC-EVM theory, the existence of a proactive behavior or the absence of a custodial behavior would explain both positive and negative modifications in the status quo. This categorization may be context-specific or role-specific. If an individual's job requires a behavior, the CC-EVM theory defines that behavior as custodial, in that failure to perform that behavior has negative consequences. If the behavior is positive and not required by the individual's job, that behavior is proactive. This theoretical classification categorizes not individual behaviors and their consequences, but the values that guide those behaviors.

The other dimension of the CC-EVM is behavior **targets**. Ethical behavior-types classify behavior as preventing harm or doing good, ethical behavior-targets classify behavior as preventing harm or doing good to what or whom. The CC-EVM divides targets of behavior into two major categories along the lines of the task vs. relationship dichotomy established by the Michigan and Ohio State studies (Yukl, 1994). **Task** targets concern behaviors toward achieving the formal goals of the organization. Behaviors which target tasks are generally measurable and clearly defined. The ethical element of task-targeted behaviors comes

from the indirect effect of the task-behavior on relationships, and not a direct consequence of the task.

All business ethics deals with relationships (Arthur, 1984). To avoid confusion in terminology, the term "**consideration**" replaces the use of the term "relationship" as a category of behavior-targets.

The multidimensional nature of trust found throughout the trust literature supports the expectation of the target dimension of consideration. Consideration behaviors are those that affect relationships directly rather than through the performance of a task. Mayer and Davis (1995) defined trust in terms of ability, benevolence and integrity; Butler and Cantrell (1984) listed integrity, competence, consistency, loyalty, and openness; Rempel, Holmes and Zanna (1985) listed predictability, dependability and faith. Implicit in all these lists of trust factors are elements of task behavior (e.g., ability, competence, predictability) and consideration behavior (e.g., benevolence, openness and faith).

The organizational citizenship literature provides an additional distinction along the target dimension between local and distant consideration. Becker & Vance (1993) referred to local and distant altruism: (1) local-altruism is citizenship behavior directed at individuals with whom the acting individual has direct or face-to-face interaction, (2) distant-altruism is citizenship behavior directed at more general groups of individuals outside direct interaction. By similar logic, consideration behaviors act upon either specific or general relationships. Specific relationships involve identifiable parties. Examples of specific relationships include: leader-subordinate, employee-workgroup (if all members of the workgroup are known), coworker-coworker, salesperson-customer. Generalized

relationships involve one or more parties classified as categories of people rather than as individuals. These categories of people can be either large or small, but within which there are unidentifiable parties. Examples of general relationships include: company-stockholders, company-customer base and, individual-society. Targets of behavior divide into three categories: **task**, **consideration-specific**, and **consideration-general**.

The result of this categorization is a 2 x 3 matrix of values serving as types of, or guides to, ethical behaviors. The matrix contains six values organized as a value structure, rather than as a value system. Rokeach defined a value system as "an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance" (Rokeach, 1973, p. 5). This linear conception of a set of values limits interaction between and among the values. Kabanoff, Waldersee, and Cohen defined a value structure as "the overall pattern of relations among a set of values, containing elements of both compatibility and conflict among them" (1995, p. 1077). Kabanoff et al. drew a clear distinction between their work and that of Rokeach stating "A value structure is different from a value hierarchy because the former includes compatibility and conflict, and the latter is simply a priority-based ordering" (1995, p. 1077).

#### **Labels for the Cells of the Corporate Character Ethical Value Matrix**

The "Aspen Conference," held in 1992 by the Josephson Institute of Ethics, developed through a modified Delphi technique a set of six values as a basis for character education: Trustworthiness, Responsibility, Respect, Caring, Fairness and Justice, and Citizenship

and Civic Virtue (Hanson, 1992). To date, no empirical research has defined these six values as unique constructs. Despite the lack of empirical evidence, several organizations have accepted these six values as reasonable expressions of ethical values including: Big Brothers/Big Sisters of America, 4-H, AARP, United Way, and the United States 103rd Congress[H. J. RES. 366] (Character Counts Coalition, 1993). The wide public acceptance of these “pillars” as reasonable ethical values indicated that the six words would serve as a plausible set of labels for the cells of the CC-EVM. Figure 2 represents the CC-EVM with the six “Aspen Conference” values in place.

**Figure 2: The Corporate Character Ethical Values Matrix (CC-EVM)**

<b>Targets Types</b>	<b>Task</b>	<b>Consideration-specific</b>	<b>Consideration-general</b>
<b>Custodial</b>	<b>Trustworthiness</b>	<b>Respect</b>	<b>Justice &amp; Fairness</b>
<b>Proactive</b>	<b>Responsibility</b>	<b>Caring</b>	<b>Citizenship &amp; Civic Virtue</b>

The corporate character ethical value matrix or CC-EVM represents the domains of ethical behaviors. The current research offers that the CC-EVM domain structure represents a clearer replacement to the endogenous domain structure in Nicholson’s (1994) framework.

#### **Variables Within the Corporate Character Ethical Value Matrix**

##### **Trustworthiness: Custodial type -- Task target**

Trustworthiness, as defined here, concerns primarily ability and competence. McAllister drew a distinction between affect-based trust and cognition-based trust, affect-based trust rooted in “reciprocal interpersonal care and concern” and cognition-based trust in “individual

beliefs about peer reliability and dependability.” Central elements of cognition based-trust included competence and dependability which are the primary elements considered in the CC-EVM definition of trustworthiness. The other elements of trust flow from “responsibility” and “caring”. If an individual cannot (by lack of ability) do something, he or she is not trustworthy in that capacity. As a value or guide to behavior, trustworthiness deals with behaviors that improve or broaden relevant competence at handling tasks or dealing with information, as required by the individual’s occupation.

#### **Responsibility: Proactive type -- Task target**

Responsibility is task behavior taken on by the individual with the end of improving relationships as a consequence of the task, and thus improving the status quo. Part of the CC-EVM’s definition of responsibility is explained by the distinction between getting the job done (as in the definition of trustworthiness) and getting the job done well. The CC-EVM theory asserts that an individual who highly values responsibility will seek to do the job well. The CC-EVM’s definition of responsibility also includes task behaviors that are beyond the individuals job description, but benefit the organization. This second element of the definition is similar to Bateman & Organ’s (1983) conceptualization of extra-role behaviors.

#### **Respect: Custodial type -- Consideration-Specific target**

The respect value dimension guides behaviors preventing the deterioration of existing relationships. Many of these behaviors equate with social etiquette (e.g., acknowledging someone’s entrance into a room, a cordial greeting, shaking hands). Only in the absence of these



behaviors do individuals feel others are not showing respect. In the CC-EVM definition, respect is a granted rather than an earned concept. The CC-EVM theory predicts that individuals high on the respect dimension would exhibit these behaviors to total strangers as well as to long-term colleagues.

**Caring: Proactive type -- Consideration-Specific target**

McAllister's (1995) affective foundation for trust is analogous to the CC-EVM's concept of caring. Wimbush and Shepard (1994) defined caring by stating: "In an ethical climate dominated by the 'caring' dimension, employees would have a sincere interest for the well-being of each other, as well as others within and outside of the organization, who might be affected by their ethical decisions." (Wimbush & Shepard, 1994, p. 638) This concept narrows here to include only those with whom the individual has a specific relationship. Interest in general others would align with the citizenship dimension. Caring behaviors go beyond social etiquette, extending into honest concern for improving relationships.

**Fairness: Custodial type -- Consideration-General target**

Fairness embodies the concepts of procedural and distributive justice. Behaviors linked to fairness seek equitable distribution of opportunities and/or outcomes. As with respect, only the absence of fairness modifies the status quo.

**Citizenship: Proactive type -- Consideration-General target**

Van Dyne, Graham, and Dienesch divided citizenship into civic citizenship and organizational citizenship, both made up of three categories of behavior: obedience, loyalty, and participation. Of

these, loyalty and participation coincide with this study's definition of citizenship. Citizenship functions as caring extended to general others., Citizenship, of the six CC-EVM constructs, is the value most concerned with the overall greatest good, or utilitarian ethic.

These six variables, their interactions, and conflicts, combine to form the Corporate Character Ethical Value Matrix (CC-EVM). To facilitate relevant research on the CC-EVM, this study moved toward creating measures of the six constructs making up the CC-EVM, and establishing the validity of those measures.

### **Construct Measurement and Validation**

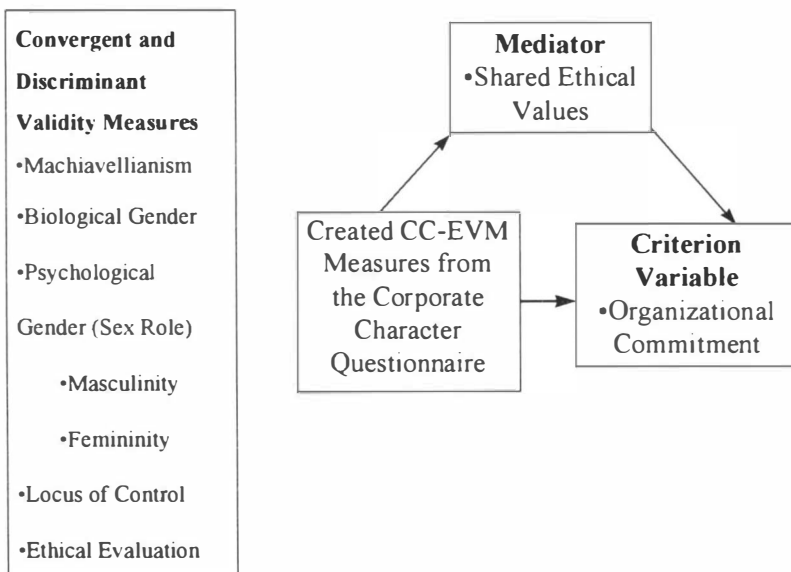
This research tested the proposed CC-EVM theory by (1) testing the uniqueness of the constructs in the CC-EVM, (2) developing a set of measures, and (3) testing these measures against dependent variables of interest, in this case affective organizational commitment. This research predicted the six component constructs of the Corporate Character Construct to be measurable and distinct. In a review of the empirical literature on ethical decision making, Ford and Richardson (1994) expressed a need for clearer constructs and empirical testing of models. Randall and Gibson (1990) expressed concern over the lack of validation of measures used in business ethics research. Examination of relationships between measures of the CC-EVM and other variables and measures expected to be correlates and consequences of these component constructs addressed these concerns and provided evidence of discriminant, convergent and criterion validities.

## Correlates and Consequences of the Corporate Character Ethical Value

### Matrix

Figure 3 represents the expected relationships between the CC-EVM values and the measures to support validity. The choice of the predicted correlates used as evidence to support convergent and discriminant validity was guided by Ford and Richardson's (1994) review. Criterion validity inferences required industry sample results. Multiple linear regression analysis used the CC-EVM value measures as independent variables and Mowday, Steers, and Porter's (1979) Organizational Commitment Questionnaire as the criterion variable. Perception of shared ethical values (Hunt, Wood, and Chonko, 1989) was predicted to act as a mediator between the CC-EVM values and organizational commitment.

**Figure 3: Proposed Correlates and Consequences of the CC-EVM**



### **Significance**

This study outlines a theoretical model which aids in defining ethical values. The Corporate Character Ethical Value Matrix (CC-EVM), a two x three matrix, contains the six core ethical values determined by the Aspen Conference (Hanson, 1992) combined as a value structure.

The CC-EVM theory presented in this study corresponds to the ethical domain level of analysis in Nicholson's (1994) framework, but presents some specific advantages. First the CC-EVM builds upon relevant business theory and presents stronger theoretical classes than Nicholson. Second, the moral agent, the individual, is clearly identifiable as holding the values and making the decision. Third, and perhaps most relevant, the CC-EVM constructs comprise a clearly definable and perhaps measurable set more applicable to empirical research.

The clarifications of ethical value domains, the CC-EVM framework and the developed measures would facilitate the implementation of ethics into the strategic planning process by providing a means to measure the values important to the organization's employees, and by providing direction for corporate ethical development. In addition the measures developed in this study can add to the tools available for meaningful empirical research in business ethics.

Finally, this research represents the first operationalization of the six values put forth by the Josephson Institute. To the extent the CC-EVM held up under this study's empirical scrutiny, it would establish a logical framework for (1) discussing and measuring ethical values in business and (2) continuing empirical research in business ethics.

### **Hypotheses**

Theory building and the creation of initial CC-EVM measures did not lend themselves to testable hypotheses, whereas validity assessment did. Five presented hypotheses were directed at discriminant, convergent, and criterion validity assessments.

In part, discriminant validity deals with whether constructs, more specifically measures of those constructs, discriminate among themselves rather than measure the same construct. The CC-EVM theory predicted exactly six unique underlying latent constructs. To assess the number of underlying constructs, this study used factor analytic methods.

**Hypothesis One ( $H_1$ ): Items in the created measures of ethical values will produce an interpretable six factor solution relating to six substantive categories of ethical values.**

High correlations between tested measures and other measures of similar constructs provided evidence regarding convergent validity. Hypotheses 2a and 2b related to this form of validity. As reviewed by Ford and Richardson (1994), the ethics literature has found a consistent negative correlation between Machiavellianism and ethics, mixed support that locus of control and gender are associated with ethics. Based on the predicted directions of these relationships from the literature,

**Hypothesis Two-a ( $H_{2a}$ ): Machiavellianism will negatively associate with the substantive categories of ethical values.**

**Hypothesis Two-b ( $H_{2b}$ ): External Locus of Control will negatively associate with the substantive categories of ethical values.**

Additional support for discriminant validity comes from measures failing to correlate with variables from which they are conceptually distinct. Hypothesis 2c dealt with the created measures being distinct from gender.

**Hypothesis Two-c ( $H_{3c}$ ): There will exist no relationship between gender and the substantive categories of ethical values.**

Hypothesis 2 addressed convergent and discriminant validity with demographic and personality variables. Hypothesis 3 dealt with convergent validity from the standpoint of a behavioral assessment.

**Hypothesis Three ( $H_3$ ): Assessments of ethical behavior will positively associate with the substantive categories of ethical values.**

A strong relationship between a new measure and a theoretically related dependent variable signifies criterion validity. Findings from Hunt, Wood, and Chonko (1989) indicate a relationship between ethical values and organizational commitment. Based on Hunt et al.'s findings, the current study used organizational commitment mediated through perceptions of shared ethical values to provide evidence supporting criterion validity.

Hypothesis Four replicated for a non-marketing sample the findings of Hunt, Wood, and Chonko (1989). They found that more consistent ethical values throughout an organization correlate with higher levels of organizational commitment.

**Hypothesis Four ( $H_4$ ): Organizational commitment will positively associate with individual's perception of shared ethical values.**

The fifth hypothesis tested the effects of changes in levels of ethical values on organizational commitment through the mediator.

**Hypothesis Five (H<sub>5</sub>): The substantive categories of ethical values will positively affect organizational commitment through the mediator of perception of shared ethical values.**

### **Overview**

This study contains five chapters. Chapter two addresses literature relevant to this study. The trust and organizational citizenship behavior literatures provide background information for the creation and relevance of the Corporate Character Ethical Value Matrix (CC-EVM). The values and ethics literatures establish the importance of the field of study, the current state of empirical research in the field, and the rationale behind the choice of variables. Finally a brief review of the organizational commitment literature establishes its relevance as a criterion variable in the industry sample.

Chapter three presents the methods used in this study. This study gathered questionnaire data in two samples; organizational behavior students, and an financial services industry sample. The data gathered from the student sample provided information on the uniqueness of the constructs in the CC-EVM, including their relationship to measures of Machiavellianism, locus of control, perceived sex-role & ethical assessment. The student sample provided the data used to build measures for each substantive category of ethical values found. Both samples provided demographic variables. Analysis of the industry sample data provided evidence of the stability of the measures across samples, and determined the relationships between the created measures and

organizational commitment as mediated by perceptions of shared ethical values.

Chapter four presents the findings including the results of the factor analysis, correlation analysis, multiple linear regression analysis, and reliability statistics for all measures. Chapter five presents a summary of the research, a discussion of the findings, the limitations of the study, and directions for future research.



## **CHAPTER 2 - LITERATURE**

### **Overview**

This chapter discusses four segments of literature: (1) trust, (2) organizational citizenship, (3) ethics and values, and (4) organizational commitment. The first two segments provide the basis for the proposed corporate character ethical value matrix (CC-EVM) and establish the theoretical connection between the multidimensional constructs of trust and organizational citizenship. The third overviews several theories and definitions of business ethics to explore the significance of the current research and its place in the literature. The third segment also reviews business ethic's relationship to strategy as well as measures to draw inferences about the convergent and discriminant validity of the CC-EVM. The fourth segment provides information on organizational commitment which was used in this study as a dependent variable in investigating the criterion validity of the CC-EVM.

### **Trust**

Four sections comprise this review of the trust literature. The first section reviews several definitions and conceptualizations of trust of a theoretical nature, while the second section considers factors of trust found through empirical study. The third and fourth sections reviews two of these conceptualizations in detail, the third

section considering trust as control, and the fourth considering the affective and cognitive aspects of trust.

### **Definitions Of Organizational Trust**

The trust literature presents several definitions and conceptualizations of organizational trust. Luhmann (1979) viewed trust as a mechanism people use to reduce complexity and uncertainty in their surroundings. Luhmann (1979) also presented trust as bridging time. Performance is expected in assigned roles, and trust allows for the assignment of roles prior to performance. "To show trust is to anticipate the future. It is to behave as though the future were certain" (Luhmann, 1979, p. 10).

Cook and Wall (1980) defined trust as "the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people" (1980, p. 39), and found that trust correlated positively with organizational commitment. Rotter (1980) defined trust as "a generalized expectancy held by an individual that the word, promise, or oral or written statement of another individual can be relied on" (1980, p.1). Gibbs (1993) differentiated between trust and confidence from a marketing viewpoint: trust residing in the personal relationship and confidence in the service delivery system.

Rempel, Holmes & Zanna (1985), in an article on interpersonal rather than organizational trust, conceptualized three components of trust as predictability, dependability and faith. Predictability is the most situation specific, while dependability involves assessment of general performance. Faith is an affective assessment, determined by "an emotional security on the part of individuals which enables them to go beyond the available evidence and feel, with assurance, that their

partner will be responsive and caring despite the vicissitudes of an uncertain future" (Rempel, Holmes & Zanna, 1985, p. 97).

Hosmer (1995) stated a working definition of organizational trust: "the expectation by one person, group, or firm of ethically justifiable behavior -- that is, morally correct decisions and actions based upon ethical principles of analysis -- on the part of the other person, group, or firm in a joint endeavor or economic exchange" (Hosmer, 1995, p. 399).

### Empirical Dimensions Of Trust

Zand (1972) defined trusting behavior "as consisting of actions that (a) increase one's vulnerability, (b) to another whose behavior is not under one's control, (c) in a situation in which the penalty (disutility) one suffers if the other abuses that vulnerability is greater than the benefit (utility) one gains if the other does not abuse that vulnerability" (1976, p. 230). Zand reported findings that interpersonal relations in low-trust groups interfere with problem solving ability, whereas high-trust groups solved problems more effectively. Zand drew an important distinction in group problem solving of separating the problem and the interpersonal relationships.

Butler and Cantrell (1984) found five components of trust: integrity, competence, consistency, openness and loyalty. They found integrity, competence and consistency were more determinant of trust than openness or loyalty.

Butler (1991), exploring the underlying conditions of trust, interviewed 84 managers. From these interviews, Butler identified 10 categories of underlying trust conditions: availability, competence, consistency, discreteness, fairness, integrity, loyalty, openness,

promise fulfillment, receptivity. Four items in each of the categories, along with a four-item generalized trust measure, were combined in a conditions-of-trust inventory (CTI) (Butler, 1991). A sample of 380 students completed the CTI and the results were factor analyzed. Items in the generalized trust measure loaded with the integrity factor, and fairness and loyalty items loaded together for nine factors. Butler decided to retain fairness and loyalty as separate factors, despite the items loading together. Butler defined fairness as "perceived equity", and loyalty as "perceived benevolence" (Butler, 1991, p. 652). Hinkin (1995) categorized Butler's research as an excellent example of research and scale development.

Mayer, Davis, and Schoorman (1995) argued that trends point to an increasing importance of trust in the coming years. Mayer et al. presented a three factor conceptualization of trust as: ability, benevolence, and integrity. Ability included skills, competencies, and characteristics. Benevolence was the perception of a desire to do good to the trustor, or an attachment to the trustor, regardless of profit motive. Integrity involves the perception of shared values between the trustor and the trusted party.

The current research presented in chapter one a two behavior-type by three behavior-target matrix of values called the Corporate Character Ethical Value Matrix (CC-EVM). Significant parallels exist between the trust dimensions and the theorized CC-EVM's task-custodial (ability), task-proactive (integrity), and consideration-specific-proactive (benevolence) values.

### **Trust Functioning As Control**

Barber (1983), in his book The Logic and Limits of Trust, viewed trust as a control mechanism between professionals and clients. Barber called this control mechanism the "moral dimension" of trust, and separated this dimension from technically competent role performance. In addition, Barber viewed trust as a social control function, expressing and maintaining shared values.

Pennings & Woiceshyn (1987) defined institutionalized trust or formal trust as the "mere presence of expectations that particular behaviors will be sustained and repeated" (Pennings & Woiceshyn, 1987, p. 86). In addition to their definition, Pennings & Woiceshyn presented a model explaining how organizational trust becomes established and operates. "As a mode of control, trust and shared values act as constraints on members' behavior; they succeed because members have internalized them through socialization and selection. Selection essentially implies anticipatory socialization (i.e., socialization prior to entry). Unlike personal control, this type of control is intrinsic to the person him-or-herself; it is the member who personally evaluates and reinforces compliance. Indeed, one might say that trust is internalized surveillance." (Pennings & Woiceshyn, 1987, p. 88)

### **Cognitive And Affective Aspects Of Trust**

Lewis & Weigert (1985) reiterated trust is a function of relationships and pointed out that trust has both cognitive and affective elements. In addition, they reinforced the association between trust and risk, and that association's effect on individual behavior. "Behaviorally, to trust is to act as if the uncertain future actions of others were indeed certain in circumstances wherein the

violation of these expectations results in negative consequences for those involved" (Lewis & Weigert, 1985, p. 971).

Drawing on Lewis and Weigert (1985), McAllister (1995) tested for the effect of affect-based and cognition-based trust in relationships among managers (n=194). McAllister's results showed clear factor analytic differences between measures of affect-based and cognition-based trust. McAllister also found a relation between trust measures and several types of organizational citizenship behavior. Items developed and used by McAllister could support the CC-EVM.

### **Conclusions From The Trust Literature**

Hosmer's (1995) review of the trust literature to date drew five conclusions: (1) Trust is generally expressed as an individual's optimistic expectation about an outcome or behavior of a person; (2) Trust generally occurs under conditions of vulnerability and dependence; (3) Trust is generally associated with willing cooperation the resulting benefits of cooperation; (4) Trust is generally difficult to enforce; (5) Trust is generally accompanied by assumption of an acknowledged or accepted duty to protect the rights and interests of others (Hosmer, 1995).

The proactive and custodial behavior-type dimensions of the CC-EVM appear in Hosmer's (1995) explanation of the fifth conclusion; "These voluntarily accepted duties clearly go beyond a negative promise not to harm the interests of the other party; they seem to provide a positive guarantee that the rights and interests of the other party will be included in the final outcome" (p. 392). In addition to support for the behavior-type dimension of the CC-EVM, Mayer, Davis, and Schoorman

(1995) provided support for the elements of the behavior target dimension.

### **Organizational Citizenship Behavior**

Organizational Citizenship Behavior (OCB) research has taken two directions. The first direction conceptualized OCB as primarily organizationally functional extra-role behavior including the factors of altruism, compliance, courtesy, sportsmanship, conscientiousness, and civic virtue (e.g., Bateman & Organ, 1983; Organ & Konovsky, 1989; Moorman, 1991). The second conceptualizes OCB as political citizenship applied to organizations including the factors of obedience, loyalty and participation (e.g., Graham, 1991; Van Dyne, Graham, & Dienesch, 1994). While these streams of research are not mutually exclusive (see Graham & Organ, 1993), there has been difficulty in clearly defining the OCB construct and its dimensions.

#### **Conceptualizations of Organizational Citizenship Behavior**

Bateman and Organ (1983) conceptualized the construct of "organizational citizenship behavior" (OCB) as a way to more closely link job satisfaction and performance. Citizenship behaviors are those behaviors individuals voluntarily undertake to "lubricate the social machinery of the organization but do not inhere directly in the usual notion of task performance" (Bateman & Organ, 1983, p. 588).

Because OCB acts are voluntary, Bateman and Organ (1983) theorized that OCB might provide a strong indicator of job satisfaction, and establish a supportable relationship between satisfaction and performance. Bateman and Organ's work generally supported a stronger connection between satisfaction and OCB than earlier relationships between satisfaction and performance, yet the findings did not support a

causal relationship (Bateman & Organ, 1983). Schnake (1991) presented a review of the OCB literature and concluded that while OCB seemed to be an important construct of interest to researchers, there was no clear definition, nor agreement on what the underlying factors of the construct were or should be.

Graham (1991) reconceptualized citizenship behavior from a political science perspective. Civic citizenship behavior includes all positive community-relevant behaviors of individual citizens. OCB then manifests as all positive organizationally relevant behaviors of individual organization members. There are three primary forms of citizenship behaviors, or "responsibilities of citizenship": (1) organizational obedience (following rules and regulations and structural constraints), (2) organizational loyalty (identification and allegiance to the organization manifested in defense against threats and contributing to reputation), and (3) organizational participation (taking part in organizational affairs, keeping informed, and sharing opinions). Graham theorized these behaviors to manifest in covenantal relationships, where the parties build relationships by choice because of shared values and goals.

Van Dyne, Graham, and Dienesch (1994) presented a construct redefinition of OCB more in line with Graham's (1991) political citizenship model, and found a five-factor structure for OCB. The first two factors were loyalty and obedience, similar to the predictions of political theory. The other three factors were types of participation: social participation comprised of attending meetings and other relationship type items, advocacy participation comprised of items consistent with an internal change agent, and functional participation comprised of task related items. Respondents totaled 950 employees and



169 supervisors. The final outcome of this research was a redefined construct of OCB, and validated measures for the five factors of OCB (Van Dyne et al., 1994).

Graham & Organ (1993) attempted to combine the diverging streams of OCB research stating that in many types of organizations, not all necessary job functions are explicit. Those voluntary not-explicit contributions are forms of citizenship behavior. The current study concentrates on the political citizenship model (Graham, 1991; Van Dyne et al., 1994).

### **Organizational Citizenship Behavior and Trust**

Robinson and Morrison (1995) found organizational trust moderated a relationship between psychological contracts and OCB. Individuals who felt obligations were unfulfilled reduced extra-role behaviors (voluntary behaviors not explicitly required by their job). In another study considering both organizational trust and OCB, Konovsky and Pugh (1994) found trust in one's supervisor to moderate between fairness perceptions and citizenship behaviors. While Konovsky and Pugh's explained variance was small (9%), these research studies established an empirical and theoretical connection between organizational trust and OCB, strengthening the theoretical foundation of the CC-EVM which postulates that a common set of values underlie both trust and OCB.

### **Empirical Factors of Organizational Citizenship Behavior**

Becker & Vance (1993) inferred the construct validity of three types of citizenship behaviors: (1) local altruism defined as behaviors toward individuals with whom the respondent interacts regularly, (2) distant altruism defined as behaviors toward more generalized others,

and (3) conscientiousness defined as compliance with organizational rules and norms. Both types of altruism referred to helpful extra-role behaviors. The empirical distinction Becker and Vance found between local and distant altruism behaviors lends support to the CC-EVM's theorized distinction between consideration-specific and consideration-general behavior targets.

A recent study by Schnake, Cochran, & Dumler, (1995) found relationships between leadership behaviors of initiating structure, consideration, and OCB. Two implications follow from Schnake et al.'s findings: (1) leaders may be able to influence or encourage OCB, and (2) the task/consideration dichotomy is a potential research direction for OCB, such as the proposed CC-EVM. Barr & Pawar (1995) proposed a model including the primary target or beneficiary of OCB to gain a finer focus on OCB. They proposed three domains: coworker, supervisor & organization. The first two targets are similar to the consideration-specific target, while the target of organization corresponds to the consideration-general target of the CC-EVM.

Organ (1994) failed to find a supportable link between personality and citizenship behavior. Organ and Ryan's (1995) meta-analysis of OCB as earlier conceptualized by Bateman and Organ (1993) (altruism, compliance, courtesy, sportsmanship, and civic virtue) reaffirmed that satisfaction related more strongly with OCB than satisfaction's relationship with in-role performance. Organ also found in this meta-analysis a large difference in results between self-versus-other reported measures of OCB. Despite mean rating differences, however, variances do not seem different across subject groups or settings.

Three conclusions emerge from reviewing the OCB literature: (1) Multiple definitions of OCB agree that OCB is a multidimensional

construct; (2) The OCB literature is consistent with the current study's CC-EVM behavior-target dimensions of task, consideration-specific, and consideration-general (e.g., Barr & Pawar, 1995; Becker & Vance, 1993; Schnake, Cochran, & Dumler, 1995); (3) The OCB literature provides the theoretical link between OCB and organizational trust (e.g., Konovsky & Pugh, 1994; Robinson & Morrison, 1995).

### **Ethics and Values**

The empirical study of business ethics began with Baumhart (1961). Baumhart used a questionnaire of executives, and found that while most executives believed "sound ethics is good business in the long run," four of seven "would violate a code of ethics whenever they thought they could avoid detection" (1961, p.19). A correlation between employees' behavior and their supervisor's behavior indicated a strong managerial impact on employee moral behavior.

Glenn & Van Loo (1993) replicated much of Baumhart's (1961) original survey in a study of 1668 students and practitioners. Results showed students making less-ethical decisions than practitioners, and a downward trend in the beliefs that sound ethics is good business in the long run.

Following a review of empirical research in business ethics, Ford and Richardson (1994) stated in their discussion and conclusions that the amount of empirical research in business ethics is "distressingly small" and that two current problems are lack of a "clear definition" of ethical behavior, and "lack of clear constructs upon which cumulative efforts can be built." (1994, 219)

The remainder of the ethics and values section of this review considers several aspects. Following overviews of business ethics and

values, this review considers how these fields relate to strategy. Next is a discussion of several theories of ethical decision making including the contributions of Josephson and the Character Counts Coalition. This section concludes with a discussion of measures found to correlate with business ethics and a brief look at two current issues in business ethics, ethics codes and teaching business ethics.

### **Business Ethics**

Ethics studies attempt to determine right from wrong, yet business ethics scholars define ethics in various ways (Robertson, 1993). The current study considers "philosophical ethics," or ethics separate from "revelation and religious belief" (DeGeorge, 1995, p. 19).

Philosophical ethics has two primary backgrounds, teleology and deontology. Teleology views acts as right or wrong based on their consequences. The ultimate goal of most teleological theories, primarily utilitarianism, is the maximization of good and minimization of bad consequences. Deontology, on the other hand, judges acts in and of themselves. Deontology often concentrates on the concepts of rights and duties; thus, some acts are wrong even if they have positive consequences. Deontologists believe in the existence of universal moral rules (Schlenker & Forsyth, 1977).

While these ideologies are the most common and form the basis for most philosophical ethical theory, Schlenker & Forsyth (1977) listed an additional theory, skepticism, with three sub-schools: emotivism, relativism, and egoism. As a group, all three skepticism theories deny the existence of universal ethical rules or principles. Emotivism posits that because ethics is unmeasurable, it does not exist and therefore has no substance. Relativism, one form of which is

situational ethics, considers all standards relative to the situation or society. Egoism relates all moral action to oneself and one's feelings; therefore, what one feels is appropriate is right.

While "descriptive" ethics limits itself to describing the existing behavior of individuals, "normative" ethics attempts a system of judgments of right and wrong (DeGeorge, 1995). Descriptive ethics draws from the studies of anthropology, psychology and sociology. The current research seeks normative rather than descriptive ethics.

In their review of the empirical business ethics literature, Randall & Gibson (1990) found large problems with both theory and definition. In their review, 64% of the studies did not cite or develop a theoretical framework, 75% offered no hypotheses, and 78% failed to define the measured construct of interest. Also missing was an understanding of the field as a whole. "Rather than offering a wide variety of definitions of ethical beliefs and behavior, the majority of business ethics articles reviewed offered no definition of ethical beliefs or conduct to study participants or readers of the article"(Randall & Gibson, 1990, p. 462). Ford & Richardson (1994) later reiterated this lack of common terminology.

Hill (1995) pointed out a difficulty in defining "business ethics" as separate from "ethics." "'Business ethics,' like so many other subject areas -- 'medical ethics,' 'legal ethics,' and so on -- seems to suggest that there is a unique vocabulary for dealing with moral problems in business, quite unlike the one we use for dealing with 'straight-forward' moral issues in daily life. In other words, one can (in all seriousness) delude oneself into thinking that there is something special about business issues, in a way that does not apply to

(e.g.) a decision to drive one's car while under the influence." (Hill, 1995, p. 585)

More than a decade earlier, Arthur (1984), offered a potential clarification. "Business ethics are applied ethics. They have to come up with an answer not just a debate" (Arthur, 1984, 321) Arthur's definition stated: "Applied business ethics embraces patterns of conduct that are accepted as good within the particular environment where they are applied" (Arthur, 1984, p. 322). He further identified business ethics with: (1) patterns of conduct or behavior, (2) relationships involving more than one party, (3) identification of affected or involved groups, (4) the need for consensus, and (5) the need for implementation, co-ordination and control. (Arthur, 1984, p.326).

Lewis (1985) reviewed definitions of "business ethics" collected from 185 workers and executives (questionnaire data), 158 textbooks (49 of which contained definitions), and 50 articles (20 of which contained definitions). Lewis found 308 concepts expressed, leading to the often quoted title "Defining business ethics: Like nailing Jell-O to a wall". By combining the four most-mentioned concepts, Lewis offered the definition "'business ethics' is rules, standards, codes, or principles which provide guidelines for morally right behavior and truthfulness in specific situations" (Lewis, 1985, p. 381).

Lewis' definition fits well with Rokeach's (1973) values-as-guidelines philosophy. An important distinction in defining "business ethics" is the separation between the guidelines to behavior and the behavior itself. Arthur (1984) phrased this distinction as the difference between perception and implementation. "Moral philosophy or theoretical ethics have to do with important value systems as perceived by various individuals; applied ethics have to do with the ways in which

one or another value system is 'delivered' or implemented" (Arthur, 1984, p. 322).

The current research focused not on applied business ethics (implementation or behavior), but on philosophical (separate from religion) and normative (value system/perception) business ethics.

### **Values And Value Structures**

Rokeach (1973) presented values as beliefs with cognitive, affective and behavioral components. Rokeach stated that while values are enduring, they are changeable; thus, an individual's personality can be both consistent over time, and remain open to individual and social change.

Buller, Kohls & Anderson (1991) considered business ethics from an international perspective. They questioned the existence of a "core of common ethics" (1991, p. 772) "In addition to examining the degree of consensus or divergence of ethical frameworks around the world, it would be useful to examine more closely the source of ethical frameworks" (Buller, Kohls & Anderson, 1991, p. 772). It is possible that the framework of the CC-EVM may be an aid to that examination.

Kabanoff, Waldersee and Cohen (1995) offered their theory of value structures because they felt research into organizational values lacked a theoretical base. "Although a variety of value dimensions have been identified via researchers' intuition, surveys of the literature and factor analysis, there is an absence of well-specified theories of organizational values" (Kabanoff, Waldersee & Cohen, 1995, p.1097).

Kabanoff et al. classified four types of structures: elite, meritocratic, leadership, and collegial; each either strong or weak. Kabanoff et al. developed the classifications using content analysis of

over 1000 documents from 88 large Australian firms. Results indicated that firms self select into these types, and an organization's type affected organizational change efforts.

Empirical research by Akaah & Lund (1994) found a statistically significant relationship between organizational values and ethical behavior for marketing professionals (n=407). Personal values in that study were statistically insignificant, an outcome Akaah & Lund state might arise from a strong relationship between personal and organizational values.

Fritzsche (1995) failed to find a value set that promoted ethical decision making. Different value sets did affect ethical decision-making differently in different types of ethical dilemmas. This finding was consistent with a study by Trevino & Weaver (1996) which found that moral perception can vary dramatically in certain industries. Trevino and Weaver found that among competitive intelligence practitioners the framing of what was and what was not an ethical dilemma varied significantly.

Singhapakdi & Vitell (1993) measured marketers' (n=492) personal and professional values using a nine item list of Rokeach's values and a set of marketing codes of ethics. They found that these values partially explained ethical decision making. Their statistically significant results explained only a small portion of the variance.

### **Strategy & Ethics**

McCoy (1985), in his book Management of Values, stated that values are a required rather than optional element in long-run policy formulation. He called the management of values the "paramount task of executive leadership" (1985, p. 13). A critical point in this concept



of strategy and ethics was that they are inseparable, and that confusion occurs due to the misinterpretation of ethics as restrictive constraints rather than as guides for policy formulation. From McCoy's viewpoint, awareness of the existence and impact of ethics and values on strategic success can only improve the planning process.

Guerrette (1988) expressed similar sentiments stating "corporate ethics are a way of corporate life -- a way of doing business" (1988, p. 374). Guerrette stated that the only source of rebuilding corporate ethics is management. "Its task is one that requires a development plan for designing management strategies for corporate ethics. The first and most important step of this plan is to reformulate the corporate policy and corporate strategy of the company" (1988, p. 376).

Brady (1990) reinforced McCoy's contention that ethics and managerial decision-making are inextricably linked. Brady pointed out that managers can use power for good or evil; and that without an ethical foundation the choice between good or evil is more difficult. Brady viewed this choice as particularly important because managers must directly affect persons' lives and well being, and distribute resources fairly (Brady, 1990).

Jayaraman & Min (1993) wrote a philosophical article linking strategy and ethics along the lines of Kohlberg's Cognitive Moral Development theory (see below) stating that as corporations mature, they have sufficient resources to make more ethical decisions, because day to day survival is no longer a constraining force, as it is in a younger business. Kraft & Hage (1990) found a correlation between socially responsible behavior and performance; however, their findings indicated that this correlation was due to successful firms having more resources to use toward social projects.

Vogel (1992) reasoned that American society's interest in business ethics was explained by the interconnection between American historical culture, business institutions, and heroes; thus, when businesses do not live up to our high expectations they betray the trust of the public. "Because the public's expectations of business conduct are so high, the invariable result is a consistently high level of public dissatisfaction with the actual ethical performance of business"(Vogel, 1992, p. 43).

In a philosophical article which in part reviewed the state of ethics in strategy, Miles (1993) concluded that research had taken two directions, first comparing ethics to performance, and second, a social approach which includes social issues as part of the environment of the firm requiring strategic analysis.

Miles argued from a utilitarian perspective that the market works to maximize the utility of available resources and thus works toward a utilitarian good. Market imperfections exist, but markets are basically not unethical. A strategic approach that seeks to maximize the usefulness of resources works with the ethical aspects of the market and is thus an ethical approach to strategy (Miles, 1993).

O'Neil & Pienta (1994) argued for the use of ethical criteria over economic criteria in decision-making, pointing out that "excellent" (as defined by Peters & Watterman [1982]) companies tend to use ethical criteria. Epstein, McEwen, and Spindle (1994) found that while stockholders would like to see information on corporate ethics and social responsibility in annual reports, in the same study (n=246) most stockholders would not trust the self-report nature of the information.

Hosmer (1994) built the case that ethics should be a central part of strategic planning, concluding that ethical principles are objective, consistent and timeless. Through a series of propositions drawing upon

agency theory, Hosmer (1994) made the case for the strategic planning process to include ethics. To motivate cooperative and innovative behavior by stakeholders outside the formal hierarchy of the firm, the firm must overcome those moral hazards that prevent positive agency relationship outcomes. Building trust, commitment and effort among those agents accomplishes this goal. "Trust generates commitment. Commitment builds effort. Effort that is cooperative, innovative and strategically directed results in success whether measured by stock price, market share, or organizational development" (Hosmer, 1994, 29).

Hosmer's (1994) primary argument was that the connection between trust, commitment, and ethics requires an organization to adhere to ethical principles in order to remain competitive in the long term. Schwab (1996) took issue with Hosmer's argument, contending that non-ethical behavior must be profitable to some extent or it would not occur, and thus ethics and good business may be in conflict. Hosmer (1996) restated his earlier arguments and contended that many strategists tend to neglect the long-term costs of unethical behavior.

The literature on strategy and ethics draws a strong theoretical connection between ethics and performance, however little empirical support for this connection exists. The lack of empirical support may arise from insufficient measures, or a short term research perspective.

### **Theories In Ethical Decision Making**

Hunt & Vitell (1986) presented a model of ethical decision making including both the deontological and teleological aspects issues in the decision-making process. Included in this model as moderators of the decision process were personal experiences, organizational, industrial, and cultural norms. The model received limited empirical support from

Hunt & Vitell (1986). Jones (1991) argued that the model neglected the aspect of "moral intensity" which considers the salience of the moral issue to the individual.

In a longitudinal study of decision-making, Lewis (1989) presented a list of 14 distinct ethical decision making principles: (1) Kant's categorical imperative (2) Carr's conventionalist, (3) the disclosure rule, (4) the golden rule, (5) the hedonistic ethic, (6) Moore's intuition ethic, (7) Smith's market ethic, (8) Machievelli's means-end, (9) Neitzsche/Marx's might-equals-right ethic, (10) the organization ethic, (11) Garrett's principle, (12) the professional ethic, (13) the revelation ethic, and (14) Bentham/Mill's utilitarian ethic. The length and breadth of this list indicates the complexity of ethical decision making, and points to a need for an exploration into an underlying value structure that allows for interplay and conflict among the values.

Kavathatzopoulos (1994) tested participants on both autonomous thinking (the particular problem) and heteronomous thinking (general moral principles) to explore whether training improved ethical decision making. Kavathatzopoulos' experiment centered on the decision-making method rather than the individual's level of cognitive moral development (see below). A study on 17 Swedish pharmaceutical company managers demonstrated that training improved autonomous problem solving skills on moral problems and that the improvement was stable one month after training.

### **Cognitive Moral Development Theory (Kohlberg)**

Lawrence Kohlberg's (1976) Cognitive Moral Development (CMD) theory proposed a progression of ethical growth over an individual's life. According to CMD, there are three levels of moral development,

each subdivided into two stages. In the first, or preconventional level, the individual learns basic notions of "right and wrong." The two stages in the first level are (1) punishment and obedience orientation, and (2) instrumental relativist orientation. In the second, or conventional level, the individual looks for approval from family, friends and nation. The two stages in the second level are (1) "good boy -- nice girl" orientation, and (2) law and order orientation. In the third, or postconventional level, the individual defines moral or universal ethical principles for themselves. The two stages in the third level are (1) Social-Contract legalistic orientation, and (2) Universal Ethical Principle orientation (Elm & Weber, 1984).

Elm and Weber (1994), in a review of the CMD literature, reported that research on this theory indicated (1) moral reasoning follows a clear pattern of development, (2) the stages are invariant, (3) developmental assessment of moral reasoning predicts a gradual upward progression through the stages. The instruments used for most of that research have been the Moral Judgment Interview (MJI) and the Defining Issues Test (DIT) (Elm & Weber, 1994).

Several theoretical attempts have described organizations in terms of Kohlberg's Cognitive Moral Development Theory (e.g., Reidenbach & Robin, 1991; Petrick & Wagley, 1992). Petrick and Wagley (1992) linked Kohlberg's six stages to stages of organizational moral development (1) Social Darwinism, (2) Machiavellianism, (3) Cultural Conformity, (4) Allegiance to authority, (5) Democratic participation, and (6) Organizational integrity. Sridhar & Camburn (1993) attempted to empirically test the moral development of organizations, however they were unable to report any relevant findings.

Elm & Nichols (1993), in a study using the DIT and measuring organizational ethical climate (n=243), found that moral reasoning may decrease with experience. These results found no relation between the decrease in moral reasoning and educational difference or organizational tenure. These results led Elm & Nichols (1993) to speculate about a characteristic of business organizations causing a decrease in moral reasoning. Their speculations may have been premature in light of the criticisms of the DIT and CMD offered by Fraedrich, Thorne & Ferrell (1994) who warned against relying too heavily on CMD in business ethics research. Fraedrich et al. pointed out that biases entered the initial development of the theory and that the stages did not appear as invariant as earlier thought.

The literature on CMD and business ethics has neither overwhelmingly supported nor discredited CMD as a useful theory. While still a viable research area, CMD does not attempt to define the values for decision-making, even at the higher levels where nearly all decision-making is value based.

#### ↓ **Forsyth's Ethics Position Questionnaire (EPQ)**

Forsyth (1980) presented a "taxonomy of ethical ideologies" and developed a corresponding instrument, the Ethics Position Questionnaire (EPQ). The taxonomy contained two dimensions, idealism and relativism. Relativism is an individual's belief in moral absolutes, that things are either right or wrong. Idealism looks at the achievability of a greater good. (See Figure 4)

Figure 4: Forsyth's (1980) Taxonomy of Ethical Ideologies

Idealism	Relativism	
	High	Low
High	<b>Situationists</b> Rejects moral rules: advocates individualistic analysis of each act in each situation; relativistic.	<b>Absolutists</b> Assumes that the best possible outcome can always be achieved by following universal moral rules.
Low	<b>Subjectivists</b> Appraisals based on personal values and perspective rather than universal moral principles; relativistic.	<b>Exceptionists</b> Moral absolutes guide judgments but pragmatically open to exceptions to these standards; utilitarian.

Note. From Forsyth, D. R. (1980). A taxonomy of ethical ideologies.

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Using the EPQ (Forsyth, 1980) in a study of 166 business students, Barnett, Bass & Brown (1994) found ethical philosophy to be a determinant only in evaluating unethical behaviors. Evaluations of ethical behaviors did not vary significantly by ethical philosophy.

Two major differences exist between Forsyth's (1980) taxonomy and the proposed CC-EVM: (1) Forsyth categorizes individuals as opposed to values, and (2) the EPQ measures decision making style rather than measuring underlying values.

### Josephson and the Character Counts Coalition

Josephson conceptualized the ethical decision making process as having three components: "1) *ethical commitment*--the personal resolve to do the right thing; 2) *ethical consciousness* -- the ability to perceive the ethical implications of a situation; 3) *ethical competency* -- the ability to engage in sound moral reasoning and develop problem solving strategies." (Josephson, 1988, p. 82) His initial work proposed ten values as guides to sound moral reasoning: honesty, integrity, promise-

keeping, fidelity, fairness, caring for others, respect for others, responsible citizenship, pursuit of excellence and, accountability.

The Character Counts Coalition established by Josephson's organization (the Joseph & Edna Josephson Institute of Ethics) advocated an ethical decision making model based on "six pillars of character," built in part on Josephson's (1988) earlier work. These pillars, also referred to as "core ethical values," are: Trustworthiness, Respect, Responsibility, Justice & Fairness, Caring, and Citizenship & Social Responsibility (Character Counts Coalition, 1993). Hanson (1992) outlined the proceedings of the "Aspen Conference" where these particular six values emerged from a focus group of educators interested in character education. These six values describe a "common language for character education" (Hanson, 1992). The "Aspen conference" was the genesis of the Character Counts Coalition that has since grown in size and received endorsement of Big Brothers/Big Sisters of America, 4-H, The American Association of Retired Persons, United Way, the United States 103rd Congress [H. J. RES. 366], and other organizations (Character Counts Coalition, 1993).

Josephson's (1988) work agreed with Rokeach (1973) that values will be few in number, relatively stable over time, and used as guides for decision making. Both Josephson (1988) and Rokeach (1973) asserted that individuals hold several values. Josephson's conception of a value system is came to Kabanoff, Waldersee and Cohen's (1995) value structure concept that allows interactions and tensions the between the values.

#### **The Character Counts Coalition's six pillars of character.**

A distinct problem with Josephson's core value model is clarity in defining the values. The six definitions below paraphrase those used by



the Character Counts Coalition (1993). The first pillar, *trustworthiness*, includes: truth, integrity, promise keeping, discretion, and loyalty. The second pillar, *responsibility* includes: accountability, reliability, pursuit of excellence, and self restraint. A lack of clarity and distinctness is apparent in the first two pillars; for instance, the distinction is unclear between reliability and promise keeping.

The third pillar, *respect*, includes: courtesy, judging people on their merits, acceptance of diversity, and not using or taking advantage of others. The fourth pillar, *caring*, includes compassion and empathy. As defined by Josephson, caring is primarily the *Golden Rule* of "do unto others as you would have others do unto you."

The fifth pillar, *fairness*, includes: open-mindedness, listening, consistency, and equitable distribution. The two ethical "justice" schools are present in this pillar: "distributive justice," where each gets a fair share, and "procedural justice" where rules determine each individual's treatment regardless of background. This pillar attempts to combine both fair treatment and fair outcomes in one broad stroke.

Perhaps the broadest construct of the six, the final pillar, *citizenship and social responsibility*, includes: following laws, charity, protecting neighbors, and ecological concerns. This construct combines of several consequentialist theories that concern themselves with consequences of actions and maximizing utility. The pillar as defined encourages awareness but provides limited guidance.

Beyond the six pillars, the Character Counts Coalition (1993) included a three step decision making model. Step one required considering the interests of all relevant parties that the decision affects. This step was consistent with most ethical decision making

theories. Step two stated that the decision maker should value the six pillars above all other values. This section of the model is purely deontological. Finally the model stated that if there was a conflict between two pillars, the decision maker should base their decision on what is best for society in the long run. This final portion was teleological in nature. Josephson's model did not rely on strict definitions of the six pillars, but rather provided names to broad constructs. The lack of clarification added substantial complexity to the model as a whole forcing the user to provide definitions where none existed.

#### **Josephson's usefulness to empirical research.**

Josephson's model has problems; however, it has use as a training tool and as a basis to promote ethical discourse. A substantial problem in the model is the lack of clarity in defining the core ethical values. In addition, the anecdotal method that chose the values (Hanson, 1992) would raise eyebrows in the academic community.

The advantage of Josephson's six core value model is that it taps into the same nomological construct as the theorized CC-EVM. In large part, the logic behind the CC-EVM developed a struggle to explain why the Josephson model gained acceptance and popularity without empirical support. The CC-EVM is the first operationalization of Josephson's model for empirical testing.

#### **Related Measures**

Ford and Richardson's (1994) review of the business ethics literature indicated that most research attention has focused on the individual factors of decision makers. These factors include religion,

nationality, sex, age, education, and employment background. Relationships between individual factors and ethical decision making appear in some studies with inconsistent or inconclusive results. Less research addressed ethical decision making and personality, belief, and values. The strongest empirical relationship emerged between Machiavellianism and ethical decision making (Ford & Richardson, 1994).

### **Machiavellianism**

Machiavellianism measures an individual's agreement with beliefs that people are easy to manipulate, and that often the ends achieved justify the means used to achieve them. Of the relationships between traits and ethics reviewed by Ford & Richardson (1994), the negative relationship between ethical behavior and Machiavellianism received the highest empirical support. Empirical studies support this negative relationship (i.e., Hegarty & Simms, 1978,1979; Singhapakdi & Vitell, 1990). Leary, Knight & Barnes (1986) found Machiavellians to be relativistic and non-idealistic as measured by the EPQ (Forsyth, 1980). Testing the acceptability of workplace behaviors (n=63 business students and 102 retail employees), Mudrack (1993) found "Machiavellians generally regard workplace behaviors of a dubious ethical nature as acceptable" (p. 522).

### **Locus of Control**

Rotter (1966) developed a measure of individual locus of control. Locus of control deals with the beliefs about whether rewards are contingent upon behavior, or controlled by forces independent from the individual. A person with an internal locus of control believes that events are connected to behaviors, while a person with an external locus

of control is more likely to attribute the events to luck or fate (Rotter, 1966). Of the studies reviewed by Ford & Richardson (1994) that considered the impact of locus of control on ethical behavior and decision making, two (Hegarty & Simms, 1978;1979) found a significant negative correlation between external locus of control and ethical behavior, and one, (Zahra, 1989) found a significant positive correlation between an external locus of control and the acceptance of organizational politics. These studies indicate that an external locus of control is likely to correlate negatively with ethical values.

### **Biological and Psychological Gender**

Researchers have found little connection between biological gender and ethical decision making. Two studies by Hegarty and Simms (1978,1979) failed to find any significant correlation between gender and ethical decision making. Ferrell and Skinner (1988) found that females exhibited a higher level of ethical behavior. Only six of fourteen articles reviewed by Ford and Richardson found any significant relationship between gender and ethics; however, in each of the six cases the direction of the findings indicated that females were more likely to exhibit ethical behavior. Barnett and Karson(1989), in a study including results from the Bem Sex Role Inventory (Bem 1974) found mixed results on the effect of gender and decision making. Barnett and Karson's study of insurance company salaried employees (n=513) found main effects for gender in only six of ten decision making scenarios.

### **Reidenbach & Robin's Multidimensional Ethics Scale (MES)**

Reidenbach and Robin (1988, 1990, 1995) developed and tested a multidimensional ethics scale for the evaluation of ethical and

unethical behavior in business. This scale depends on the concept that "individuals use more than one rationale in making ethical judgments, and that the importance of those rationales is a function of the problem situation faced by the individual" (Reidenbach & Robin, 1990, p. 639). They drew initial items based on five normative philosophies: justice, relativism, utilitarianism, egoism, and deontology. They developed an initial 33-item instrument from the initial item pool (Reidenbach & Robin, 1988) which they narrowed to a final eight-item semantic differential scale that they entitled the Multidimensional Ethics Scale (MES) (Reidenbach & Robin, 1990). Each participant reads a scenario including a "setting" and an "action". Participants then rate the action on each of the items in the scale. These items created a three factor solution, and had an average reliability coefficient alpha of .80 (Reidenbach & Robin, 1990).

The first dimension is a "broad based moral equity dimension" and contains four of the eight items: 1) fair/unfair, 2) just/unjust, 3) acceptable/unacceptable to my family, and 4) morally/not morally right. The second dimension represents relativism, and includes the items: 1) traditionally acceptable/unacceptable, and 2) culturally acceptable/unacceptable. The third dimension, purely deontological, represents contractualism and includes the factors: 1) violates/does not violate an unspoken promise, and 2) violates/does not violate an unwritten contract (Reidenbach & Robin, 1990).

Of the three factors, the broad-based moral equity dimension explained the greatest variance in Reidenbach & Robin's initial studies (1990), and the other two dimensions supported the first. Despite their inclusion in the initial item pool, all teleological (utilitarian and

egoist) items failed to load significantly for inclusion in the final MES instrument.

In a validation of Reidenbach & Robin's MES, Cohen, Pant & Sharp (1993) supported the usefulness and validity of the scale in business ethics research. Skipper & Hyman (1993) questioned the validity and use of the MES, yet presented no empirical data in their critique. Reidenbach & Robin (1995) provided additional empirical support for the MES as useful tool for the business ethics agenda reemphasizing that "the scale measures opinions mediated or moderated by an individuals values, experience, level of comprehension, and a host of other factors which can be hypothesized and empirically tested" (Reidenbach & Robin, 1995, p. 159). While the MES looks at underlying factors in evaluating ethical decisions rather than specifically at values, similarity between the constructs it attempts to measure and the proposed CC-EVM to justify its use in testing the convergent validity of the CC-EVM measures.

### **Issues In Business Ethics**

While there are numerous issues in the field of business ethics, two have particular relevance to researching ethics as value structures and to implanting ethics into the strategic management process. These are codes of ethics and business ethics education. The logical framework provided by the current study's theorized CC-EVM may help clarify the values underlying ethical behavior, and may provide a logical basis for discussion and research.

### **Codes of Ethics**

Murphy (1995) reviewed the state of codes of ethics in three categories: corporate credos, codes of ethics and value statements. Most

codes were rule-based rather than values-based, and included sanctions for code violations. Codes have gained popularity over the second half of this century with only 15-40% of large companies having codes in the 1950s and 1960s, increasing to approximately 75% in the 1970s and 1980s. The most current data report over 90% of large companies have ethics codes (Murphy, 1995). Murphy's survey of 235 companies found 91% of surveyed companies to have a written code of ethics, 53% to have a value statement and, 34% to have a corporate credo. About 21% have all three types of statements. Of these 245 companies, 80% have revised their codes since 1990.

Murphy argued that the lack of dissemination of codes beyond the firm indicated legal rather than ethical statements. Arthur (1984) pointed out that ethical codes deal only with situations that are common or have occurred before, yet ethical decisions may involve new or novel situations. In new situations an ethical code is at best a guideline, and may provide little guidance at all. Gibbs (1993) proposed that corporate codes should market organizations' values to their stakeholders. Kjonstad & Willmott (1995) argued that codes may restrict the moral development of employees. In an empirical study of 1668 students, Glen & Van Loo (1993) found that codes of ethics had less impact on behavior than the individual's value system and the behavior of the individual's superior. In a review article Milton-Smith (1995) reiterated the importance of ethical leadership, rather than codes, in creating a positive corporate culture.

### **Teaching Ethics**

Evidence of the lack of clarity in business ethics manifests in the controversy over how to teach it. Frequently business ethics

instruction involves experts in the traditional fields of normative ethics: philosophy and religion (Nash, 1981; McDonald & Donleavy, 1995). Nash was not complimentary of this method of teaching ethics. "Like some Triassic reptile, the theoretical view of ethics lumbers along in the far past of Sunday School and Philosophy 1, while the reality of practical business concerns is constantly measuring a wide range of competing claims on time and resources against the unrelenting and objective marketplace" (Nash, 1981, p. 80).

Derry & Green (1989) reviewed 25 leading business ethics texts and concluded that there was a serious lack of theory on how to apply ethical theory to case analysis, and that this lack undermined ethics education as a whole. Hunt & Bullis (1991) presented a model for teaching business ethics in conjunction with Gestalt psychology. Little additional work exists in this direction. Most frequently, however, the teaching method used is (1)an explanation of the two primary fields of normative ethics, deontology and teleology, and (2)a series of case analyses and discussion. MacDonald & Beck-Dudley (1994) pointed out that there are many problems inherent in this approach, including potential confusion for the students. "Invariably, the apparent contradiction between deontology and teleology is emphasized, each approach is subjected to battering-ram criticism, and, in the rubble that remains, bewildered students, marveling at so much effort squandered with so little to show for it, scavenge for something useful to carry away" (MacDonald & Beck-Dudley, 1994, p. 615-6).

### **Conclusions From The Business Ethics Literature**

Three conclusions emerge from reviewing the business ethics literature. First, there is a lack of direction for empirical research



and a need to clarify definitions and methods. Second, despite agreement on the importance of values as a whole, the identification and exploration of specific values has often been ignored. Finally, business ethics suffers from an inability to clarify itself as a field separate and distinct from philosophical ethics.

### **Organizational Commitment**

A relevant variable interest was required to test the criterion validity of the CC-EVM. The review of the ethics and strategy literature indicated that while a strong link between ethics and strategy was theorized (e. g., Hosmer, 1994, 1995, 1996; McCoy, 1985), a strong empirical link between ethics and firm performance has not been established. Hunt, Wood, and Chonko (1989) found a correlation between shared values and organizational commitment, and called for additional research on the specific values underlying this relationship. This section considers organizational commitment as a relevant and theoretically supported variable of interest toward making inferences about the criterion validity of the CC-EVM.

Meyer, Allen & Smith (1993) conceptualized three types of organizational commitment, affective (based on attachment), continuance (based on cost of leaving), and normative (based on perceived obligation). "Employees with a strong affective commitment remain with the organization because they want to, those with a strong continuance commitment remain because they need to, and those with a strong normative commitment remain because they feel they ought to do so" (Meyer, Allen & Smith, 1993, p. 539).

Results from Meyer, Paunonen, Gellatly, Goffen, & Jackson, (1990) indicated that the nature of the commitment may be more important than

the level of commitment to relevant performance outcomes, and that affective commitment had the most direct relationship. That study considered only affective organizational commitment, leaving the other two forms for future research.

Mowday, Steers, and Porter (1979) were among the earliest to conceptualize "commitment as an attitude" potentially important to organizational outcomes. They investigated "attitudinal commitment," defined as an individual's identification with a particular organization and its goals. Commitment involves identification and active participation. "Hence, to an observer, commitment could be inferred not only from the expressions of an individual's beliefs and opinions but also from his or her actions" (Mowday et al., 1979, p. 226). Because organizational commitment is an attachment to the organization and its goals, the authors predicted that organizational commitment should be more stable over time than job satisfaction that can fluctuate with occupational demands. Mowday et al. (1979) also predicted a relationship between organizational commitment and turnover.

Mowday et al. (1979) designed an instrument to measure organizational commitment called the Organizational Commitment Questionnaire (OCQ). Since its creation, the OCQ has become the most widely used and accepted instrument to measure affective organizational commitment (Brett, Cron & Slocum, 1995). Recent examples of empirical research using the OCQ include: Ashford, Lee, and Bobko (1989); Meyer, Paunonen, Gellatly, Goffen, and Jackson, (1990); Van Dyne et al. (1994); Dunham, Grube, & Castaneda (1994); Brett, Cron & Slocum (1995) and; Shore, Barksdale, and Shore (1995).

Mowday et al. warned researchers using the instrument to be aware that employees may distort responses "if they feel, for example,

threatened by completing the questionnaire or are unsure how their responses will be used" (1979, p. 244). That requires an assurance of confidentiality, and if possible anonymity, from the researcher to the respondent.

In a study of marketers, Hunt, Wood and Chonko (1989) found consistency of ethical values positively related to organizational commitment. Their findings established a connection between values and commitment without determining which values had the greatest effect. In their conclusions they called for additional research to determine what specific values relate to commitment. Hunt, Wood & Chonko (1989) developed a short instrument, the Shared Ethical Value Questionnaire (EVQ) to measure the perceived consistency of personal and organizational values (see Appendix 2). While they warn that organizational commitment may "blind some employees to the ethical problems in their firms" (Hunt, Wood & Chonko, 1989, p. 87), they concluded that communicating a firms ethical values, and refining them to be consistent with employees values, may increase organizational commitment.

Mathieu & Zajac (1990) published the most comprehensive review of organizational commitment to date. They found that the most commonly used measure of organizational commitment was the OCQ. Ninety of the samples reviewed used the 15-item OCQ with 80 ( $n=24,258$ ) reporting an average internal consistency reliability of .88 ( $SD = .04$ ).

General findings in Mathieu & Zajac's (1990) review and meta-analysis included that there was no consistent relationship between sex and organizational commitment, and that organizational tenure related more strongly to organizational commitment than position tenure. Both effects were small. The only antecedent to organizational commitment

found to have a high correlation in the meta-analysis was perceived competence (average  $r=.63$ ). The results on performance outcomes were limited. In the meta-analysis, commitment and performance were shown to have little relationship, while a strong correlation appeared with turnover. While specific results at that point were disappointing to Mathieu and Zajac, they encouraged more research on organizational commitment and its correlates, antecedents and results. Mathieu and Zajac also speculated that organizational commitment may correlate positively with extra-role behaviors whose benefits are more difficult to measure.

Graham & Organ (1993) predicted a relationship between organizational commitment and "covenantal" type of organization; one based on shared values. They predicted that this type of organization is the most likely to elicit organizational citizenship behavior, indicating a theoretical link between citizenship behavior and commitment.

Hunt & Morgan (1994) looked at differences between global commitment (to the organization as a whole) and constituency specific commitment (to individual supervisors or workgroups). Results of the study ( $n=763$ ) indicated that constituency specific commitments contribute to global commitment. Only commitment to work-group was independent of global commitment. "Therefore, our model and our study's results suggest that organizations benefit from employees' developing constituency-specific commitments and that managers should not fear the development of such commitments." (Hunt & Morgan, 1994, p. 1585) The global/constituency specific commitment conceptualization bears a resemblance to the CC-EVM theory and consideration-specific and consideration-general dimensions.

Early research by Cook & Wall (1980) on the relationship between commitment and trust found a positive correlation in its British all-male sample. Results from Shore, Barksdale & Shore (1995) showed a strong correlation between organizational citizenship behavior and affective commitment, but also indicated that the two constructs were distinct. Those findings support the argument for a relationship between affective organizational commitment and the CC-EVM values which are theorized to underlie OCB and trust.

### **Conclusions from the literature**

Four conclusions emerged from the reviewed literature. (1) Trust and organizational citizenship behavior are both multidimensional constructs, and there are indications that there may be a shared system of values underlying these dimensions. (2) Organizational commitment has a positive relationship with important organizational outcomes, notably absenteeism and turnover, and has a predicted relationship with ethical values. Organizational commitment is thus a reasonable choice as dependent variable to explore the criterion validity of the CC-EVM. (3) Ethics may have an effect on external measures of organizational performance, difficult to measure reliably, indicating that an internal measure, such as organizational commitment, may be more appropriate. (4) The set of six values established in the Josephson model represent a legitimate starting point for study for investigating these issues.

Jones (1991) argued that a significant reason why more research in the business ethics area is not done is "that few scholars are interested in both ethics and organizational behavior and decision making. The models that have emerged are the products of scholars in psychology or psychology-based disciplines, including organizational

behavior and marketing" (Jones, 1991, p.367) Jones also stated that an ideological reluctance to study value-based issues, and methodological problems contribute to the lack of research in this area (Jones, 1991). The next chapter presents the methods used in the current research.

### CHAPTER 3: METHOD

This chapter outlines the methods used to explore the uniqueness of the constructs in the proposed corporate character ethical value matrix (CC-EVM). This study considered these constructs by creating a set of measures and investigating those measures' validity and reliability. That process addressed four of Robertson's (1993) seven recommendations for improvement in business ethics empirical research: (1) basing empirical research on normative foundations, (2) focusing empirical research on theory building, (3) pursuing systematic research, and (4) broadening the methodological base.

Details of how the current study accomplished these ends constitute the remainder of this chapter. Study participants came from two populations, a student sample and an industry sample. They responded to a pool of items drawn from the literature combined as the corporate character questionnaire (CCQ) developed for this study. The student sample also responded to existing measures of Machiavellianism (Christie & Geis, 1970), locus of control (Rotter, 1966), psychological gender (Bem, 1974), and ethical evaluation (Reidenbach & Robin, 1990). In addition to the CCQ, the industry sample responded to existing measures of shared ethical values (Hunt, Wood & Chonko, 1989) and organizational commitment (Mowday Steers & Porter, 1979). An item reduction procedure using the student sample, including factor analysis and reliability assessment, culminated in a set of measures. Retained items would (1) load significantly on only one factor, and (2) load on a

factor with at least one other item. Retained measures came from sets of items that (1) loaded together on a factor, and (2) equally weighted produced a reliability (Cronbach's 1951 coefficient alpha) in excess of .70 (Nunnally, 1978). Hypothesis testing proceeded on these created measures, and addressed discriminant, convergent, and criterion validities.

### **Participants**

#### **The Student Sample**

The student sample included 238 undergraduate and 86 graduate students in organizational behavior courses taught by six instructors in 10 undergraduate and two graduate sections. Four sections met in the fall semester of 1996, and eight met in the spring semester of 1997. As part of their regular course work, students filled out individual personal assessment packages. Each of the six instructors distributed with the personal assessment package the scales under development in the corporate character questionnaire (CCQ). Of the 324 students providing responses to the CCQ, 316 also filled out the personal assessment. A smaller portion of this sample, limited to the undergraduate classes in the spring semester (6 sections,  $n=142$ ), also provided responses to Reidenbach & Robin's (1990) multidimensional ethics scale (MES). The combined student sample size of 315 exceeded the 150 minimum suggested by Hinkin (1995) for scale development, except for the MES results ( $n=142$ ).

#### **The Industry Sample**

The industry sample was drawn from the population of employees of the 50 independent insurance agencies with members on the National Board



of Directors of the Independent Insurance Agents of America (IIAA). Each agency received 10 surveys, a potential sample of 500. By the return date requested in the cover letter (January 5, 1997), there were 79 responses representing a 15.8% response rate for individuals. These came from 19 states indicating at least one response from 38% of the agencies receiving packages. A follow-up letter went out January 7, 1997. The cutoff date for the acceptance of surveys was February 21. By that date, 129 individuals responded, representing a 25.8% response rate based on individual surveys. In total, returns from 27 states represented at least one response from 54% of agencies receiving packages. Of the 27 agencies responding, 14 sent back five or more surveys and two sent back all ten surveys. Six agencies sent back only one response.

Two industry respondents answered every scale question in the survey with sevens, prompting their removal as careless respondents. (One of these respondents wrote on the survey: "this is a stupid survey.") Missing or incomplete data eliminated fifteen additional surveys. Analysis continued on the remaining 112 responses, a useable response rate of 22.4%.

The average age of the respondents in the industry sample was 42.62 (sd=10.93) years. Of the respondents, 65(58%)were female and 47(42%) were male. Average experience in the insurance industry was 17.62 (sd=11.21) years with an organizational tenure of 9.08 (sd=8.39) years and a position tenure of 11.1 (sd=9.2)years. Data from the Bureau of Labor Statistics and the Bureau of the Census (Annual Demographic Survey, March 1997 supplement) indicates an industry average of 37% male and 63% female employees in the industry, an average age of 40.22 years and an average organizational tenure for the median age as 5.3 years.

### **Measures**

The current research consisted of six survey questionnaires, one ethical evaluation instrument, and demographic questions. The first was the 68 item Corporate Character Questionnaire (CCQ), developed for this study using items modified from other studies in the trust (McAllister, 1995; Scott, 1965)), organizational citizenship (Van Dyne, Graham & Deinesch, 1994) and ethics literatures (Character Counts Coalition, 1993). All other measures used in this study came from instruments developed by others, and except where noted, appeared in their original wording.

In addition to the CCQ, the student sample responded to three personality measures: (1) Bem's (1974) sex role inventory (BSRI), (2) Rotter's (1966) internal-external locus of control scale and (3) Christie & Geis' (1970) Machiavellianism (MACH-IV) scale. The student sample also responded to a measure of ethical evaluation, Reidenbach & Robin's (1990) multidimensional ethics scale (MES).

In addition to the CCQ, the industry sample responded to (1) Mowday, Steers, & Porter's (1979) Organizational Commitment Questionnaire (OCQ), and (2) Hunt, Wood and Chonko's (1989) corporate shared ethical values questionnaire (EVQ). Both samples provided demographic data. The next sections describe the process of creating the CCQ, and present the other instruments in more detail.

### **Corporate Character Questionnaire**

#### **Item Selection**

A researcher can generate items inductively or deductively. The term "item," as used in this study, refers to statements to which

respondents indicate some level of agreement. Constructs are underlying (latent) groupings of ideas or concepts. Inductive item generation attempts to identify constructs from a large pool of items without a theoretical base for item choice. The deductive approach develops items from a theoretical base following a thorough literature review. A theoretical base and resulting improvements in construct validity make the deductive approach preferable (Hinkin, 1995). The current research generated items deductively.

The initial item pool included 68 items from four sources: source one was the organizational citizenship literature, sources two and three were the trust literature, and source four was the ethics literature. Construct domain coverage (Nunnally, 1978) and measure reliability (Crano & Brewer, 1986) both require a sufficient number of items in the measure. Hinkin (1995), in a review of scale development practices, recommended that measures contain five items. Using this five-item standard, the expected six substantive categories of ethical values would produce a set of measures containing 30 items in total.

The item pool included thirty-four items from the organizational citizenship behavior scales developed by Van Dyne, Graham & Dienesch (1994). Citizenship behavior measures from their study included factors they named Loyalty (seven items), Obedience (ten items), and three forms of participation: functional (five items), advocacy (seven items) and social (five items).

The item pool included eleven statements McAllister (1995) developed to measure affect-based trust (five items) and cognition-based trust (six items). Included in the item pool were two items Scott (1965) developed to measure honesty and self-control (more recently in Akaah & Lund, 1994).

The final twenty-one items in the 68-item pool came from a 100-item statement set which described the Character Counts Coalition's six pillars of character (Character Counts Coalition, 1993). The researcher conducted a pre-test on 109 undergraduates and MBA students in organizational behavior. Factor analysis and item reduction techniques following standards set by Van Dyne, Graham & Dienesch (1994) resulted in 21 items discriminating (difference in loading  $>.20$ ) between the six retained rotated factors (eigenvalue  $> 1$ , Promax rotation).

### **EVM Statement Parameters**

Following O'Reilly, Chatman & Caldwell (1991), desirable characteristics of items include: (1) generality sufficient to describe any person or organization (to improve generalizability), (2) differentiation among individual responses (to improve discriminability), and (3) ease to understanding. Each statement or item in the current research should both describe a behavior with an ethical component and bear a general relationship to business. The CCQ asked respondents to respond to statements on a seven point Likert scale, ranging from "strongly disagree" to "strongly agree." The researcher rephrased the statements as necessary to fit the questionnaire format and instructions (see Appendix 1).

The researcher and several other qualified individuals (including a bank senior vice-president, a lawyer, a professional engineer, a former independent insurance agency owner, and a minister) reviewed the items to clarify and revise ambiguous wording. Rephrasing items from negative to positive phrasing eliminated reverse scoring as recommended by Hinkin (1995). Rephrasing all items as plural removed item gender specificity. Items appeared in random order on the questionnaire.

### **Additional Measures: Student Sample**

Three additional measures came from the student personal assessment package. Results from these measures aided in constructing the nomological net (Cronbach & Meehl, 1955) required to suggest construct validity for the CCQ measures.

#### **Machiavellianism (MACH IV)**

The ethics literature has established a strong negative relationship between Machiavellianism and ethical decision-making (e.g. Hegarty & Simms, 1978, 1979). Machiavellianism measures an individual's agreement with the beliefs that people are easy to manipulate, and that often the ends achieved justify the means used to achieve them. A twenty-item Likert-scale questionnaire, the MACH IV (Christie & Geis, 1970), provided a reliable and generally accepted measure of Machiavellianism (see Appendix 7).

#### **Bem Sex-Role Inventory (BSRI)**

The Bem Sex-Role Inventory (BSRI) scores and compares "masculinity" (MALE) and "femininity" (FEMALE) (Bem, 1974). Two scales allow individuals to score both masculine and feminine concurrently, the concept of psychological androgyny. Androgyny requires a multi-dimensional concept of sex roles as opposed to the more traditional continuous-spectrum approach (Constantinople, 1973).

The BSRI consists of sixty characteristics that respondents rate as self descriptive on a seven-point Likert scale. Of the sixty items, 20 score as masculine, 20 score as feminine and 20 score as gender neutral (10 positive and 10 negative in social desirability) (Bem, 1974). Appendix 11 presents the BSRI items in the order they appeared on the

instrument. Bem(1974) developed the BSRI using 100 undergraduate psychology students, and validated the instrument on 723 introductory psychology students and 194 junior college students.

### **Rotter's Internal/External Scale**

The Rotter internal-external locus of control scale (Rotter, 1966) measures an individual's perception that rewards result from the individual's actions rather than from control by outside forces (Rotter 1966). The literature indicates a negative relationship between an external locus of control and ethical behavior (Ford & Richardson, 1994). The scale consists of 26 forced-choice question pairs, 23 of which create a single measure (EXT) of external locus of control. A low score on this scale indicated an internal locus of control. The forced choice format helped prevent common method variance.

### **Reidenbach & Robin's Multidimensional Ethics Scale**

Reidenbach & Robin's eight-item multidimensional ethics scale (MES) measures an individual's reactions to a behavior (Reidenbach & Robin, 1988, 1990, 1995). The eight items provide measures of: (1) broad based equity (BBE, 4 items), (2) relativism (REL, 2 items), and (3) contractualism (CONT, 2 items) (see Appendix 6). Reidenbach & Robin (1990) used three scenarios in developing the MES, each of which appeared in the current research. A significant correlation (Cronbach & Meehl, 1955) between the CC-EVM measures and the underlying MES dimensions scores (broad based equity, relativism, and contractualism) would partially indicate construct validity. Two versions of the scale exist, a seven-point Likert scale and a semantic differential scale

(opposite word pairs). To avoid common method variance, the current research used the semantic differential version.

### **Additional Measures: Criterion Validity**

Two measures aided in building a case for criterion related validity of the corporate character ethical value matrix (CC-EVM) measures in the industry sample. These measures were Hunt, Wood & Chonko's (1989) shared ethical values questionnaire (EVQ) score and Mowday, Steers & Porter's (1978) organizational commitment questionnaire (OCQ) score.

#### **Hunt, Wood & Chonko's Corporate Shared Ethical Values Questionnaire**

Hunt, Wood & Chonko's (1989) Corporate Shared Ethical Values Questionnaire (EVQ) consists of five Likert-type items measuring an individual's perception that the individual and their organization have similar values. The EVQ does not determine the number of values or value content. The instrument items developed and used by Hunt, Wood & Chonko (1989) appear in Appendix 2. Hunt, Wood & Chonko (1989) found these five items to be unidimensional and to have acceptable reliability (reported reliability  $\alpha=.78$ : Hunt, Wood & Chonko, 1989).

#### **Mowday Steers & Porter's Organizational Commitment Questionnaire**

To measure Organizational Commitment the current study used the Organizational Commitment Questionnaire (OCQ) developed by Mowday, Steers & Porter (1979) (see Appendix 5). Reported reliability for the OCQ has been high ( $\alpha = .91$ ) (Mathieu & Zajac, 1990). In their review of the organizational commitment literature, Mathieu & Zajac (1990)

reported the OCQ to be the most used measure of affective organizational commitment.

### **Procedures**

Data collection took place between the beginning of September 1996 and the end of February 1997, with most data collected in the last three months of that time period. Figure 5 presents the data collection timeline.

**Figure 5: Data collection Timeline**

- September-October 1996: personal assessment data collected from Fall 96 OB students.
- Week of December 2, 1996: Fall OB students completed the CCQ.
- December 16, 1996: Surveys mailed to IIAA members.
- December 27, 1996: First Surveys arrived for data entry.
- January 7, 1997: Reminder notice mailed to IIAA members.
- Week of January 27, 1997: Personal assessment packages distributed to spring OB students including CCQ.
- February 21, 1997: Final date CCQ data accepted from students or IIAA. Last date incomplete PA data accepted.
- February 25-27, 1997: MES data collected from spring undergraduate students.

### **Questionnaire Administration: Student Sample**

As part of their organizational behavior course requirements, students completed a multiple-instrument personal assessment package during the second week of class. Included in the standard personal assessment packages were the Bem sex role inventory (BSRI: Bem, 1974), Rotter's (1966) internal-external locus of control scale and the Machiavellianism (MACH-IV) scale developed by Christie & Geis (1970), as well as other instruments and demographic data. The researcher added to this package the 68-item Corporate Character Questionnaire (CCQ)



developed for this study in a format identical to the personal assessment package.

The researcher introduced the personal assessment to each section of students, and instructed students to complete the package and return it within one week. Students responded to the CCQ and personal assessment instruments using computer-readable scan sheets, substantially easing data entry. Participating students filled out the assessment package and the CCQ on their own time. Collection of personal assessment and CCQ data closed on February 21, 1997, for this study. The following week, six undergraduate sections completed Reidenbach & Robin's MES (1990) on all three scenarios as part of an in-class exercise.

#### **Questionnaire Administration: Industry Sample**

The researcher mailed the industry surveys December 16, 1996, with a requested return date of January 5, 1997. Surveys included the CCQ, Mowday Steers & Porter's OCQ (1979), Hunt, Wood and Chonko's (1989) EVQ, and demographic questions. No packages came back as undeliverable. To improve response rate, a notice of the professional organization's support for this study accompanied the questionnaire, as did an addressed, postage-paid envelope returning the survey directly to the researcher. On January 7, 1997, a follow-up was mailed to each agency in the sample. This follow-up letter thanked respondents for sending back the questionnaire, or requested that they do so. The cutoff date for acceptance of surveys was February 21, 1997.

Questionnaire instructions reinforced anonymity to promote accurate response and reduced social desirability bias (Crano & Brewer,

1986). Additional requested information included the respondent's state, position level, and other demographic information.

For agency size, the data entry procedure changed responses of unknown to missing. Gender re-coding reflected consistency with student data (male=1, female=2). For position code, adding an additional code for individuals designating themselves as managers, and re-coding reflected a rough measure of managerial level:

Position	Code
Owner or principle agent	1
Manager	2
Licensed agent	3
Claims adjuster or claims service	4
Customer service representative	5
Other	6

Position as coded above (POS\_NUM) was included with other industry demographic variables in correlation analysis if the industry data.

### **Data Analysis**

This research used several statistical procedures. The item reduction procedures used factor analysis and reliability analysis. The tests of hypotheses used correlation analysis and multiple linear regression analysis. All procedures used appear frequently in the management and social sciences literature.

### **Factor Analysis**

The first step in data analysis was a factor analysis with the purpose of item reduction and latent variable (value dimension) identification. Several multivariate statistical methods consider the interrelationships among a large number of variables with the purpose of summarizing and reducing the data. These methods collectively are

"factor analysis." All variables are dependent on all other variables, and the methods identify dimensions known as "factors" which group observable variables according to underlying or latent characteristics (Nunnally, 1978). This study used a principle components method, retaining factors with an eigenvalue greater than 1.0, and an orthogonal rotation (VERIMAX). Appendix 10 provides additional detail on the factor analytic techniques and rotations used in this study.

### **Item reduction procedure**

The initial procedure followed that used by Van Dyne, Graham and Dienesch (1994). This procedure eliminates most of the specific and error variance, leaving factors explaining common variance. At the same time, this procedure reduces the number of items (variables) included in subsequent analysis. An initial principle-components analysis with VERIMAX rotation provided the initial factor matrix for the procedure. The analysis kept for rotation only factors with eigenvalues above 1.0. By eliminating factors with eigenvalues below one, this procedure removed much of the error variance (Hair et al., 1992).

The next step removed items that failed to discriminate between factors, as determined by factor loadings. The researcher sorted, in descending order, each item's loadings on all factors. An item which discriminated between factors would have a significant differential (difference) in loading from the highest loading to the second highest loading. If this differential in highest and subsequent loading was less than .20 for any item, that item dropped as not sufficiently discriminant. This multiple-loading criterion for exclusion eliminated ambiguous items, those that loaded significantly ( $>.40$ ) on more than one factor. Remaining items loaded on only one factor.

If a factor had only one item with a significant ( $>.40$ ) loading, that factor likely explained variance specific to that item, rather than common variance. Subsequent analysis dropped this factor as measuring specific rather than common variance. Because the item did not contribute significantly to common variance, that item also dropped from further analysis. The retained items thus discriminated by loading significantly on only one factor, and each retained factor considered variance common to at least two items.

The item reduction procedure continued on the remaining items until no items met the elimination criterion. Based on these results, a repetition of this procedure (1) used a differential of .10 and (2) used as a starting set the more recently validated items from the trust and organizational citizenship literatures (11 items from McAllister, 1995; and 34 items from Van Dyne, Graham & Deinesch, 1994), then (3) added the 21 Character Counts Coalition (1993) items and two Scott (1966) items to the initial results to verify adequate domain coverage. Chapter four presents these results.

### **Discriminant Validity**

A clear factor structure should be robust to changes in rotation. With the ambiguous and non-discriminant items removed, a clearer picture of the underlying latent factors (substantive categories of ethical values) emerged from a final principle-components analysis with several rotations on the remaining items. At this point, analysis would support hypothesis one (see chapter one) if exactly six factors emerged with eigenvalues above or equal to one, and these six factors were interpretable in accordance with the corporate character ethical value matrix (CC-EVM) theory.

### Creation of The Final Measures, Reliability and Internal Consistency

The final number of measures was contingent on the number of retained factors emerging from the final principle-components analysis and VERIMAX rotation. The initial set of items included in each measure was the five highest loading items on the measure's corresponding factor, or if fewer than five items loaded on the factor, the entire set of items on that factor. The reliability of a measure is the proportion of the variance in measure scores due to true score variability (Crano & Brewer, 1986).

One important measure of reliability is internal consistency, or the extent to which the items in a measure relate to each other. Cronbach's (1951) coefficient alpha on the items (as determined by factor loading) in each measure determined the internal consistency of the measures. Figure 6 presents the formula for alpha ( $\alpha$ ).

**Figure 6: Cronbach's coefficient alpha**

$$\alpha = \frac{k}{k-1} \left( 1 - \frac{\sum \sigma_i^2}{\sigma_y^2} \right)$$

where  $k$  = the number of items

$\sum \sigma_i^2$  = the sum of the variance of the individual items,

$\sigma_y^2$  = the variance of the total scale (Crano & Brewer, 1986).

Because the calculation of alpha considers both variance and number of items in a measure, internal consistency reliability improves with additional items in the measure. To improve reliability the researcher had the option of adding items loading on the factor to the measure. An alpha greater than .70 is sufficient for the early stages of research (Nunnally, 1978).

Upon determination of the items to be included in each measure of each latent ethical value measure, the sum of the items equally weighted became the score for the measure. Notation for the current study represented the specific measure or substantive category of ethical value with  $\eta_j$ , (for  $j=1$  to  $i$ ); where  $i$  equals the number of substantive categories of ethical values.

### **Convergent Validity**

Convergent validity is "the extent to which responses from alternative measurements of the same construct share variance" (Schwab, 1980), and is important in supporting construct validity. While there was not a current measure of the constructs predicted by the proposed CC-EVM matrix, there were measures of similar constructs. Theoretically related measures included Machiavellianism, locus of control, psychological and biological gender and ethical evaluations. Examination of the correlations among the theoretically related measures and the created measures would lend support to the convergent validity of the CC-EVM measures.

### **Machiavellianism.**

The literature found a consistent negative relationship between Machiavellianism and measures of ethical values and behavior (Ford & Richardson, 1994; Hegarty & Simms, 1978, 1979). Hypothesis 2a (chapter one) considered the relationships between the CC-EVM construct measures and Machiavellianism, and would be supported if analysis showed a similar negative relationship. A significant negative correlation between the MACH IV (MACH) measure and the substantive ethical value

would provide support for convergent validity. The test for Hypothesis 2a is:

Hypothesis 2a is supported if  $r_{MACH,j} < 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).<sup>1</sup>

### **Locus of control.**

The literature found a negative relationship between an external locus of control and measures of ethical values and behavior (Ford & Richardson, 1994; Hegarty & Simms, 1978; Zahra, 1989). Hypothesis 2b (chapter one) considered the relationships between the CC-EVM construct measures and locus of control, and would be supported if analysis showed a similar negative relationship. A significant negative correlation between Rotter's (1966) External Locus of Control measure (EXT) and the substantive ethical value would provide support for convergent validity. The test for Hypothesis 2b is:

Hypothesis 2b is supported if  $r_{EXT,j} < 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

### **Biological and psychological gender.**

The literature found mixed results concerning the relationship between gender and measures of ethical values and behavior. Ford & Richardson (1994) cited fourteen studies comparing gender and ethical beliefs. Seven of these studies indicated that females were more ethical (e.g. Ferrell & Skinner, 1988) while the other seven found no significant relationship between gender and ethics (e.g. Hegarty & Simms, 1978, 1979). All of these studies considered biological rather than psychological gender. Hypotheses 2c-e (chapter one) considered the

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<sup>1</sup> Subscript 'j' refers to the substantive category of CC-EVM value numbered from 1 to 'i'.

relationships between the CC-EVM construct measures and gender, predicting that neither biological nor psychological gender will have a significant relationship with ethical values. Biological gender was coded numerically (1=male, 2=female), for correlation analysis. The dichotomous nature of the GENDER variable permits inferences only about the existence and of a relationship between gender and the created measures, but prohibits inferences about that relationship's magnitude. For hypothesis 2c, a one-way analysis of variance (ANOVA) indicating no significant ( $p > .05$ ) statistical difference between the means of males and females for the substantive ethical values would provide evidence to reject the null hypothesis. For hypothesis 2d a significant correlation between either of the two psychological gender measures (MALE, FEMALE) and the substantive ethical value would provide evidence to reject the null hypotheses. These tests follow, one for biological gender and one each for the measures of male and female psychological gender.

Hypothesis 2c is supported if  $r_{\text{GENDER},j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

Hypothesis 2d<sub>MALE</sub> is supported if  $r_{\text{MALE},j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

Hypothesis 2c<sub>FEMALE</sub> is supported if  $r_{\text{FEMALE},j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

### **Ethical evaluations.**

Reidenbach and Robin's (1990) Multidimensional Ethics Scale (MES) measures an individual's assessments of ethical actions presented in a written scenario. This measure is composed of three underlying dimensions, broad based equity, (BBE) relativism (REL), and contractualism (CONT). Hypothesis three considered the relationship of the CC-EVM value measures and the MES dimensions. A correlation analysis of the CC-EVM values against each dimension of the MES answered



the question of support in hypothesis 3 (chapter one). The tests of hypotheses 3 are:

Hypothesis 3a is supported if  $r_{BBE,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

Hypothesis 3b is supported if  $r_{REL,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

Hypothesis 3c is supported if  $r_{CONT,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

### **Industry sample.**

The final analysis concerns criterion related validity in the industry sample, seeking support for hypotheses four and five. These tests used multiple linear regression analysis.

### **Perception of shared ethical values.**

Hypothesis four, which replicated a portion of Hunt, Wood, and Chonko's (1989) analysis with a different sample, required a simple regression using the scores from the corporate shared ethical value questionnaire ( $\eta_{EVQ}$ ) and the scores from Mowday, Steers, and Porter's (1979) organizational commitment questionnaire ( $\eta_{OCQ}$ ). The regression model takes the form<sup>2</sup>:

$$(4) \quad \eta_{OCQ} = B_{EVQ}^{(4)} \eta_{EVQ} + \zeta_{OCQ}^{(4)}$$

A significant and positive value for  $B_{EVQ}^{(4)}$  would support hypothesis four.

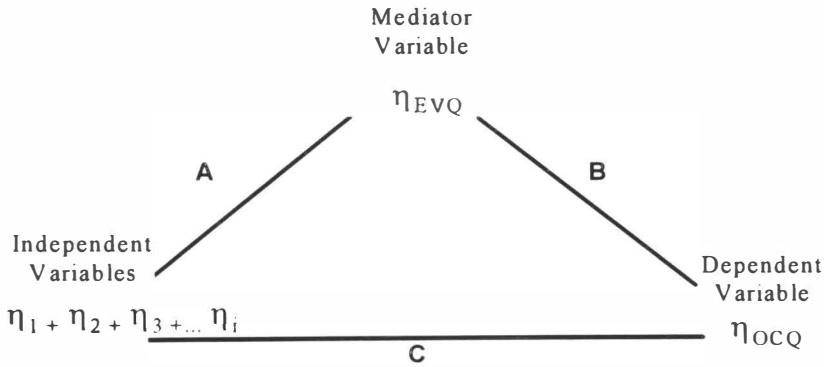
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<sup>2</sup> Superscript numbers in parentheses following coefficient (B) and latent error ( $\zeta$ ) terms refer to formula numbers. Subscript 'j' refers to the substantive category of CC-EVM value numbered from 1 to 'i'.

### Organizational commitment.

Hypothesis five proposed a relationship between the substantive categories of the CC-EVM measures and organizational commitment, mediated by the perception of shared ethical values. Figure 7 represents the mediated model. The test of hypothesis five required several regression steps.

**Figure 7: Mediated Model**



Baron & Kenny (1986) outlined the regressions required for the test of mediation.

1. The mediator ( $\eta_{EVQ}$ ) is regressed on the independent variables.

$$(5a) \quad \eta_{EVQ} = B_1^{(5a)} \eta_1 + B_2^{(5a)} \eta_2 + \dots + B_i^{(5a)} \eta_i + \zeta_{EVQ}^{(5a)}$$

2. The dependent variable ( $\eta_{OCQ}$ ) is regressed on the independent variable.

$$(5b) \quad \eta_{OCQ} = B_1^{(5b)} \eta_1 + B_2^{(5b)} \eta_2 + \dots + B_i^{(5b)} \eta_i + \zeta_{OCQ}^{(5b)}$$

3. The dependent variable ( $\eta_{OCQ}$ ) is regressed simultaneously on both the independent variables ( $\eta_1, \eta_2 \dots \eta_i$ ) and the mediator ( $\eta_{EVQ}$ ).

$$(5c) \quad \eta_{OCQ} = B_1^{(5c)} \eta_1 + B_2^{(5c)} \eta_2 + \dots + B_i^{(5c)} \eta_i + B_{EVQ}^{(5c)} \eta_{EVQ} + \zeta_{OCQ}^{(5c)}$$

According to Baron & Kenny (1986), mediation exists for an independent variable - mediator - dependent variable relationship if it meets the following conditions.

1. The independent variable must affect the mediator in the first equation ( $B_j^{(5a)}\eta_j < 0$ ).

2. The independent variable must affect the dependent variable in the second equation ( $B_j^{(5b)}\eta_j < 0$ ).

3. The mediator must affect the dependent variable in the third equation ( $B_{EVC}^{(5c)}\eta_{EVQ} < 0$ ).

4. The effect of the independent variable on the dependent variable must be less in the third equation than in the second equation ( $B_j^{(5b)}\eta_j > B_j^{(5c)}\eta_j$ ).

Full mediation would be indicated if the effect of the independent variable on the dependent variable in the third equation ( $B_j^{(5c)}$ ) equals zero (Baron & Kenny, 1986). Hypothesis five is supported for any CC-EVM value measure ( $\eta_j$ ;  $j=1$  to  $i$ ) or for the model as a whole if results meet all four criteria.

### Chapter Summary

Methods used in the current research followed several of Robertson's (1993) recommendations for improvement in business ethics research. Specifically the current study (1) built on the normative foundation established by the trust and organizational citizenship literature and the Aspen Conference (Hanson, 1992), (2) focused on building the CC-EVM theory, (3) pursued a systematic design, and (4) broadened the methodological base through factorial survey design and validity assessment.

Students and industry participants responded to a pool of items drawn from the trust, business ethics and organizational citizenship literatures. Item reduction, including factor analysis and reliability assessment, culminated in a set of measures. Hypothesis testing using these created measures addressed discriminant, convergent, and criterion validities. Chapter four presents the results of the item reduction procedures and tests of hypotheses.

## **CHAPTER 4: RESULTS**

The purpose of this study was (1) to test the uniqueness of the constructs in the proposed corporate character ethical value matrix (CC-EVM), (2) to develop a measure for each substantive category (unique construct) found, and (3) to begin establishing these measures' reliability, and their convergent, discriminant and criterion validity. A 68-item survey instrument was developed for this study, composed of items modified from previous measures. This survey, distributed to both a student and an industry sample, provided the underlying data for exploring the corporate character ethical value matrix (CC-EVM) constructs. Each sample provided responses to several other demographic and psychological measures to allow validity assessment.

This chapter reports the results and analysis of those survey instruments to (1) determine the number of interpretable factors and the items therein, (2) determine the reliability of the created measures, (3) evaluate the convergent and discriminant validity of the created measures with other measures from the student sample, (4) test the structure and reliability of the measures on a separate industry sample, and (5) evaluate the criterion validity of the created measures against the dependent variable of organizational commitment as mediated by the perception of shared ethical values.

This chapter progresses through three main sections. The first section concerns the item reduction procedures used to create the scales for further testing, and addresses scale reliability and discriminant

validity. The second section addresses convergent validity concerning the created scales with existing scales and demographic data in the student sample. The final section concerns the relationship of the created scales to organizational commitment in an industry sample and addresses criterion validity and the stability of the created measures across samples.

### **Analysis Of Prior-Measure Survey Items**

The first step in data analysis was factor analyzing the student responses to the 68-item corporate character questionnaire (CCQ). As presented in chapter three, the 68 items contained 34 items from the Van Dyne, Graham, and Dienesch's (1994) organizational citizenship scales, 11 items from McAllister's (1995) cognitive-based and affective-based trust scales, 21 items developed for this study from statements from Character Counts Coalition (1993), and two items from Scott's (1965) self-control and honesty scales. As a preliminary step, the researcher analyzed the item responses from each of the prior scales. A principle components analysis with orthogonal (VERIMAX) rotation on each prior scale retained factors with eigenvalues exceeding one. This procedure provided evidence concerning (1) the effect of item wording changes, and (2) stability of the scale applied to the current sample.

The 34 items from Van Dyne et al.'s (1994) original five factors loaded on six factors in this study (see Table 1). Van Dyne et al. reported that no items loaded on multiple factors. Five items loaded above .40 on multiple factors in the current study. The first factor contained nine of the ten items originally reported in the obedience factor, as well as two functional participation items and one social participation item. The second factor contained six of the seven items

originally reported in the advocacy participation factor, as well as one social participation item. The third factor contained four of the seven items originally reported in the loyalty factor as well as two social participation items, one obedience item, and one advocacy participation item. The fourth factor contained three of the five items originally reported on the functional participation factor and one loyalty item. The fifth factor contained two items, one from the original loyalty factor, and one item from the original social participation factor. The sixth factor contained only one loyalty item, "They urge co-workers to invest money in their organization."<sup>3</sup>

**Table 1: Item loadings, Van Dyne, Graham & Dienesch (1994) items**

Wording	Original Factor	Factors (extraction order)					
		1	2	3	4	5	6
They never miss work without good reason.	Obedience	.69					
They always come to work on time.	Obedience	.69					
They meet deadlines set by organization.	Obedience	.68					
They follow work rules and instructions with extreme care.	Obedience	.64					
They are mentally alert and ready to work when they arrive.	Obedience	.63					
Regardless of circumstances, they produce their highest quality work.	Obedience	.60					
They keep their work areas clean and neat.	Obedience	.58					
At all times these individuals produce as much as they are capable of	Obedience	.53	.45				

<sup>3</sup> Original wording from Van Dyne, Graham & Dienesch (1994) "Would not urge co-workers to invest money in organization." The item was reverse scored in the original.

Wording	Original Factor	Factors (extraction order)					
		1	2	3	4	5	6
producing.							
These individuals rarely waste organizational resources.	Obedience	.47					
These individuals pursue additional training to improve performance.	Functional Particip.	.45	.42				
These individuals work beyond what is required.	Functional Particip.	.44					
They work to keep their personal appearances attractive and appropriate.	Social Particip.	.43					
These individuals push superiors' performance to higher standards.	Advocacy Particip.		.74				
They encourage management to keep their knowledge and skills current.	Advocacy Particip.		.71				
These individuals encourage others to speak up at meetings.	Advocacy Particip.		.69				
They help coworkers think for themselves.	Advocacy Particip.		.66				
They share ideas for new projects or improvements widely.	Social Particip.		.61				
These individuals frequently make creative suggestions to coworkers.	Advocacy Particip.		.51				
They keep well informed where their opinion might benefit the organization.	Advocacy Particip.		.45		.42		
They tell outsiders this is a good place to work.	Loyalty			.70			
These individuals actively promote the organization's products and services.	Loyalty			.69			
They defend the organization when employees criticize it.	Loyalty			.66			
These individuals go out of their way to defend the organization against outside threats.	Loyalty			.62			
They keep informed about products and services and share the information with others.	Social Particip.			.57			



Wording	Original Factor	Factors (extraction order)					
		1	2	3	4	5	6
These individuals are involved in outside groups for the benefit of the organization.	Social Particip.			.55			
These individuals rarely waste time while at work.	Obedience	.40		.46			
They use professional judgment to assess right or wrong for the organization.	Advocacy Particip.			.41			
They rarely avoid extra duties and responsibilities at work.	Functional Particip.				.70		
They volunteer for overtime work when needed.	Functional Particip.				.56		
They have little difficulty cooperating with others on projects.	Functional Particip.		.48		.50		
They represent the organization favorably to outsiders.	Loyalty				.44		
They would not accept a job in a competing organization simply for more money.	Loyalty					.76	
They attend work-related meetings not required by their jobs.	Social Particip.					.49	
They urge co-workers to invest money in their organization.	Loyalty						.79

Note. Item loadings above .40 reported.

The items from McAllister (1995) reproduced the two originally reported factors, cognitive-based trust (CBT) and affective-based trust (ABT) for ten of the eleven original items (see Table 2). One item<sup>4</sup>, "If people knew more about these individuals and their background, people would be less concerned and monitor these individual's performance less

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<sup>4</sup> Wording from McAllister (1995). If people knew more about this individual and his/her background, they would be more concerned and monitor his/her performance more closely. The item was reverse scored in the original.

closely" loaded originally as CBT, but loaded higher on ABT in the current study.

**Table 2: Item loadings, McAllister (1995) items**

Wording	Original Factor	Factors	
		1	2
I can rely on them not to make my job more difficult by careless work.	CBT	.78	
They approach their jobs with professionalism and dedication.	CBT	.72	
Most people, even those who are not close friends of these individuals, trust and respect them as coworkers.	CBT	.72	
My other work associates who interact with these individuals consider them to be trustworthy.	CBT	.69	
Given their track record, I see no reason to doubt their competence and preparation for the job.	CBT	.63	
If I shared my problems with them, I know they would respond constructively and caringly.	ABT		.73
I would have to say that we have all made considerable emotional investments in our working relationship.	ABT		.70
I can talk freely to these individuals about difficulties I am having at work and know that they will want to listen.	ABT		.67
We have a sharing relationship. We can all freely share our ideas, feelings, and hopes.	ABT		.66
We would all feel a sense of loss if one of us was transferred and we could no longer work together.	ABT		.50
If people knew more about these individuals and their background, people would be less concerned and monitor these individuals' performance less closely.	CBT		.42

Note. Item loadings above .40 reported.

The 21 items developed from the Character Counts Coalition (1993) produced four factors (Table 3). Interpretation of the first two factors was not clear. Each of the four items with the highest loadings on factor two contained the word "never", raising the prospect that factor two reflected wording effects rather than some underlying latent

construct. Items in factors three and four emphasized relationships. The five items in factor three referred to country, family, charity and empathy; the two items in factor four specifically referred to relationships with friends.

**Table 3: Factor Loadings, Character Counts Coalition (1993) items**

Wording	Original Factor	Factors			
		1	2	3	4
They always use appropriate considerations in decision making.	Character	.75			
They always pursue excellence.	Character	.75			
They always stay informed.	Character	.74			
They always do their best.	Character	.68			
They never quit easily.	Character	.59			
These individuals always make all they do worthy of pride.	Character	.59			
They always demonstrate integrity.	Character	.58	.49		
These individuals treat others the way they want others to treat them.	Character	.58	.45		
They never make excuses or take credit for others' work.	Character	.57	.56		
Before they act, these individuals always think about the consequences.	Character	.53	.40		
They are always consistent.	Character	.42			
These individuals are never tricky.	Character		.82		
They never deceive anyone.	Character		.75		
They never take unfair advantage of mistakes.	Character	.48	.62		
They always protect their country.	Character			.85	
These individuals always stand by their country.	Character			.79	
They always stand by their family.	Character			.58	
They are always charitable.	Character			.54	
They show they care about others through empathy.	Character			.41	
These individuals always stand by their friends.	Character				.84
They always support their friends.	Character				.86

Note. Item loadings above .40 reported.

## Scale creation: discriminant validity

### Item Reduction

The purpose of the item reduction procedure was to identify a set of items from which to create scales for further testing. Each scale should (1) include multiple items from a single underlying construct, and (2) compose a scale with sufficient ( $\alpha > .70$ ; Nunnally, 1978) internal consistency reliability for further research. The item reduction procedure used a combination of factor analytic techniques and reliability testing. For retention, items must (1) load on factors containing at least two items, (2) load significantly on only one factor as indicated by the differential between factor loads, and (3) compose an equally weighted scale with a coefficient of reliability exceeding Nunnally's (1978) minimum Cronbach's (1951) alpha level of .70. The researcher set the cutoff point for acceptable factor loadings at .40. Hinkin (1995) referred to loadings below this level as very poor. The selection criteria for the retention of a factor was an eigenvalue greater than one.

### Item Reduction Procedure 1

The initial item reduction procedure followed, in part, Van Dyne et al. (1994). The procedure's first step was a principle components analysis with orthogonal (VERIMAX) rotation of the 68-items in the Corporate Character Questionnaire (CCQ). Item retention required an item's highest loading exceed that item's loading on all other retained factors by at least .20. This .20 differential eliminated 37 items which failed to discriminate between factors. Remaining items were again subjected to a principle components analysis and VERIMAX rotation.

At the second iteration of this procedure, two additional items failed the .20 differential criterion, and two other additional items failed to load significantly ( $>.40$ ) on any of the 7 retained factors. The remaining 27 items produced a seven factor solution, with no items loading significantly ( $>.40$ ) on multiple factors. With equal item weights, these 27 items formed seven preliminary scales of items which loaded on the seven factors. Cronbach's (1951) coefficient alpha ( $\alpha$ ) for these sets of items as scales indicated that only four of the seven scales, composed of a total of 19 items, produced reliabilities acceptable ( $\alpha >.70$ ) for exploratory research (Nunnally, 1978) (see Figure 8).

### **Item Reduction Procedure 2**

Procedure one factor analyzed the full set of 68 items with elimination criteria requiring (1) a .20 differential between factor loads, and (2) at least two items load on a retained factor. A second item reduction procedure relaxed the elimination criteria slightly by reducing the differential required between item loadings on multiple factors from .20 to .10. This procedure required five iterations. The first iteration eliminated 17 items failing the .10 differential criterion. The second iteration eliminated five items due to the differential criterion and one item which loaded on a factor with no other items. The third iteration eliminated four items, three for failing the .10 differential criterion, and one which failed to load significantly ( $>.40$ ) on any retained factor. The fourth iteration eliminated two items failing the .10 differential criterion. At that point, the 39 remaining items produced an eight-factor solution, with no items meeting the elimination criteria. These items formed eight

preliminary scales with equal item weights from items loading on each factor. Cronbach's (1951) coefficient alpha ( $\alpha$ ) on these sets of items as scales again indicated that only four of the scales, composed of 26 items, produced reliabilities acceptable ( $\alpha > .70$ ) for exploratory research (Nunnally, 1978). The 26 items in these four scales included all 19 items in the four scales from the first procedure in an identical factor pattern.

### **Item Reduction Procedure 3**

Item reduction procedures one and two started from the entire 68 items in the corporate character questionnaire (CCQ). Two of the four factors producing acceptable scales in procedures one and two came solely from items developed from the Character Counts Coalition (CCC) (1993). Because the principle components procedure retains factors based on variance explained, and the CCC items were contributing substantially to that variance, procedure three began with a starting set including only the 45 items from Van Dyne et al. (1994) and McAllister (1995). This procedure, using the .10 differential criterion, took four iterations. The first iteration eliminated six items, four failing the .10 differential criterion, and two loading on factors with no other items. The second iteration eliminated eight items which failed the .10 differential criterion. The third iteration dropped five more items which failed the .10 differential criterion. The fourth iteration dropped one additional item which loaded on a factor with no other items. At that point, the remaining 25 items produced a four-factor solution, with no items meeting the elimination criterion. These items formed four preliminary scales with equal item weights from items loading on each factor. Cronbach's (1951) coefficient

alpha ( $\alpha$ ) on these sets of items as scales indicated that only three of the scales, composed of 22 items, produced reliabilities acceptable ( $\alpha > .70$ ) for exploratory research (Nunnally, 1978). Two of these scales included similar items in a pattern similar to two of the previous scales, with 14 of the 17 items in these two scales identical to the scales in item reduction procedure two. The third scale contained five items not retained as a scale in the previous procedures, but with factor loadings for all five items exceeding .60, and the reliability ( $\alpha$ ) for these items as an equally weighted scale exceeding .80. Three of these items had loaded together on a retained factor in the second procedure, but with a three-item scale reliability ( $\alpha = .68$ ) below the cutoff point ( $\alpha > .70$ ). Four of these five items came originally from the Van Dyne et al. (1994) loyalty measure.

#### **Item Reduction Procedure 4**

The third item reduction procedure considered only the 45 items from Van Dyne et al. (1994) and McAllister (1995). A final item reduction procedure started with the 25 items retained in the four-factor solution from the third procedure, and added the 21 Character Counts Coalition (1993) items and the two Scott (1966) items (48 items total). Again using the .10 differential criterion, the first iteration eliminated six items failing the .10 differential test. The second iteration eliminated three additional items which failed to load significantly ( $> .40$ ) on any retained factor. The remaining 39 items produced a seven-factor solution, with no items meeting the elimination criteria. These items created seven preliminary scales with equal item weights from items loading on each factor. Cronbach's (1951)

coefficient alpha ( $\alpha$ ) on these items as scales indicated that five of the scales, composed of 34 items, produced reliabilities acceptable ( $\alpha > .70$ ) for exploratory research (Nunnally, 1978). The 29 items in four of these scales included all 19 items in the four scales from the first procedure in an identical factor pattern. The five items in the fifth scale were identical to the 5 items in the scale retained in the third procedure made up primarily of Van Dyne et al. (1994) loyalty items.

#### Summary of Item Reduction Procedures

**Table 4: results from item reduction -- student data**

Procedure #: starting item count	Iterations	# Factors	# Items	# of scales from items $\alpha \geq .7$ from Factors	# items in scale sets for $\alpha \geq .7$
Procedure 1: 68	2	7	27	4	19
Procedure 2: 68	5	8	39	4	26
Procedure 3: 45	4	4	25	3	22
Procedure 4: 48	2	7	39	5	29

Table 4 presents a summary of the item reduction procedures. Procedures one and two started with the entire set of 68 items. Procedure three started with the 34 items from Van Dyne et al. (1994) and 11 items from McAllister. Procedure four added the 23 items not used in procedure three to the ending 25 items in the retained factors from procedure three. Two similar factors containing reliable sets of scale items emerged in all four procedures. Two more factors containing reliable sets of scale items emerged in every procedure which included the Character Counts Coalition (1993) items (item reduction procedures 1, 2 & 4). A factor containing a reliable set of scale items emerged in both procedures three and four, with three of the five items in that factor emerging as a factor in procedure two. The results of these four



item reduction procedures provided the information required for the creation of the final scales.

### **Final scale items, labels, and scale reliabilities**

In the four item reduction procedures, 29 of the 68 items loaded on a factor containing a reliable scale set two or more times. These 29 items, the identical item set as the results of the fourth procedure, produced five factors. The first factor contained 15 of the 29 items, the second and third factors each had five items, and the fourth and fifth factors contained two items each. The target number of items in the final scales was set at five or the total set of items in the factor producing the highest reliability, whichever was lower (see chapter three). By this criterion, of the 19 items in the first factor the five items with the highest factor loadings became the initial set of items in the first scale. The second and third scales contained all five items in each set, and the fourth and fifth scales both contained two items.

As a final step to check that the items in the scales were robust to changes in rotation, the 19 items in the five scales underwent four principle components factor analyses, each analysis with a different rotation method. Orthogonal rotation methods included VERIMAX, EQUIMAX, and QUARTIMAX. In each orthogonal rotation the factor structure was identical with only changes in loading. No item loaded below .50 in any of the three orthogonal rotations. An oblique rotation (Direct OBLIMIN) produced a four-factor solution. Items in scales two and four loaded together on a single factor. The items from scale two had positive loadings on this factor while the items from scale four had negative loadings. The absolute value of all these loadings exceeded .40. This

pattern indicated discrimination between the two sets of items. The VERIMAX rotation often gives a clearer separation of factors than other methods (Hair et al., 1992), and Table 5 presents the factor loadings of the final 19 items following a VERIMAX rotation.

**Table 5: Factor loadings, final 19 items, VERIMAX rotation.**

Wording	Original Factor	Factors				
		1	2	3	4	5
They meet deadlines set by organization.	Obedience	.82				
They always do their best.	Character	.79				
They approach their jobs with professionalism and dedication.	CBT	.75				
They are mentally alert and ready to work when they arrive.	Obedience	.72				
I can rely on them not to make my job more difficult by careless work.	CBT	.65				
These individuals push superiors' performance to higher standards.	Advocacy		.78			
These individuals encourage others to speak up at meetings.	Advocacy		.75			
They encourage management to keep their knowledge and skills current.	Advocacy		.71			
They help coworkers think for themselves.	Advocacy		.70			
They always stay informed.	Character		.60			
They defend the organization when employees criticize it.	Loyalty			.77		
They tell outsiders this is a good place to work.	Loyalty			.74		
These individuals go out of their way to defend the organization against outside threats.	Loyalty			.69		
These individuals actively promote the organization's products and services.	Loyalty			.63		
These individuals are involved in outside groups for the benefit of the organization.	Social			.58		
They always support their friends.	Character				.88	
These individuals always stand by their friends.	Character				.87	
They always protect their country.	Character					.91

Wording	Original Factor	Factors				
		1	2	3	4	5
These individuals always stand by their country.	Character					.85

Note. Item loadings above .40 reported.

The first scale includes two cognitive-based trust items (McAllister, 1995), two obedience items (Van Dyne et al., 1994), and one Character Counts Coalition (1993) (CCC) item. Each of these items refers to the job or work itself prompting a scale label of TASK. The second scale contains four advocacy participation items (Van Dyne et al., 1994), and one CCC item prompting a scale label of ADVOCACY. The items in ADVOCACY all refer to specific work relationships between coworkers and managers. The third scale contains four loyalty items and one social participation item (Van Dyne et al., 1994) prompting a scale label of LOYALTY. The items in LOYALTY all refer to the relationships an individual would have with an organization as a whole rather than with specific groups within an organization. The fourth and fifth scales are constituency specific. The fourth scale items refer directly to relationships with friends, and the items in the fifth scale refer directly to relationships with country prompting labels of FRIENDS and COUNTRY respectively.

Cronbach's (1951) coefficient alpha for the first three scales with ranged from .80 to .87 for the student data. The alpha (or correlations for the two-item scales) for all five scales was well above the .70 level suggested by Nunnally (1978) as acceptable for continued research. Table 6 presents the scale reliabilities for the five final scales.

**Table 6: Reliabilities of created scales, student data**

Scale label	Cronbach's Alpha	# Items in scale
TASK	.87	5
ADVOCACY	.84	5
LOYALTY	.80	5
FRIENDS	.85*	2
COUNTRY	.81*	2

Note. \*Cronbach's Alpha is undefined for a two-item scale. Number represents the correlation between the two items.

### Results For Hypothesis One (H<sub>1</sub>)

#### **Hypothesis 1**

**Hypothesis One (H<sub>1</sub>): Items in the created measures of ethical values will produce an interpretable six-factor solution relating to six substantive categories of ethical values.**

The item reduction procedure indicated that five rather than the predicted six factors emerged from the student data. A five-factor solution failed to support hypothesis one (H<sub>1</sub>). The first three factors TASK, ADVOCACY and LOYALTY corresponded to the three behavior targets, task, consideration-specific and consideration-general, which form one dimension of the CC-EVM (see Chapter 1). Apart from the hypothesis one results, however, the reliability of the measures and their robustness to changes in rotation lends initial support to the discriminant validity of the five created measures.

#### **Convergent Validity: created measure's relationship to existing measures**

If a new measure exhibits expected relationships with other existing measures, a researcher can make inferences regarding convergent validity. This process builds a nomological net (Cronbach & Meehl,

1955) which serves to support the validity of the new measure. The current study took steps toward building a nomological net for the created measures in the student sample by examining the created measures' relationships with demographic variables, psychological measures, and measures of ethical evaluation.

### **Results Of Correlations With Created Measures**

Figure 9 presents the correlations among (1) the substantive categories of ethical values as measured by the created scales and (2) the student demographic data. Figure 10 presents the correlations among the five created scales and the students' scores on the measures of Machiavellianism (MACH; Christie & Geis, 1970), external locus of control (EXT; Rotter, 1966) and the psychological measures of gender (MALE and FEMALE; Bem, 1974). Figure 11 presents the correlations among the five created measures and the students scores of ethical evaluation as measured by Reidenbach & Robin's (1990) multidimensional ethics scale (MES). The MES contains three measures: broad-based equity (BBE), relativism (REL), and contractualism (CONT) (see chapter three). Calculating Cronbach's (1951) coefficient alpha for each of the scales created in the student portion of the research indicated acceptable reliability ( $\alpha > .70$ ) for each of the scales (Nunnally, 1978). Table seven presents the reliabilities for the existing psychological scales. Table 8 presents the reliabilities for the three MES measures.

**Table 7: Reliabilities of existing scales, student data**

Scale	Cronbach's Alpha	# Items in scale
Machiavellianism	.71	20
BSRI-Female	.79	20
BSRI-Male	.87	20
Rotter's Extern	.78	23

**Table 8: Reliabilities of the multidimensional ethics scale, student data**

Scale	Cronbach's Alpha	# Items in scale
Broad Based Equity	.78	12
Relativism	.78	6
Contractualism	.82	6

### Results For Hypothesis Two (H<sub>2a</sub>-H<sub>2d</sub>)

#### **Hypothesis 2**

**Hypothesis Two-a (H<sub>2a</sub>): Machiavellianism will negatively associate with the substantive categories of ethical values.**

**Hypothesis 2a is supported if  $r_{MACH,j} < 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).**

No significant correlations ( $p < .05$ ) were indicated for the student sample among the five created scales and age, level of education (EDU) or work experience (YRJ). The correlations between Machiavellianism (Christie & Geis, 1970) and each of the created scales was significant ( $p < .05$ ) for only the first two scales, TASK and ADVOCACY. For both of these scales the relationship was in the predicted direction, indicating that a decrease in Machiavellianism corresponded to an increase in the created measure.

**Hypothesis Two-b (H<sub>2b</sub>): External Locus of Control will negatively associate with the substantive categories of ethical values.**

**Hypothesis 2b is supported if  $r_{EXT,j} < 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).**

The correlation between External Locus of Control (Rotter, 1966) and the created measures was significant ( $p < .05$ ) and in the predicted negative direction with each of the five created scales. These

correlations indicated that a decrease in an individual's external locus of control (an increase in internal locus of control) corresponded to an increase on the created scales.

**Hypothesis Two-c ( $H_{2c}$ ): There will exist no relationship between biological gender and the substantive categories of ethical values.**

**Hypothesis 2c is supported if  $r_{\text{GENDER},j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).**

Table 9 presents the results for a one-way analysis of variance comparing the means for males and females of scale scores on the five scales. A significant ( $p < .05$ ) mean difference existed for only two of the five scales, FRIENDS and COUNTRY. In both cases, these relationships indicated that males had higher scores on these scales for this student sample.

**Table 9: ANOVA results for hypothesis two-c**

Scale	Male		Female		p-value
	Mean	Std. Dev.	Mean	Std. Dev.	
TASK	5.97	0.89	6.07	0.86	0.33
ADVOCACY	5.70	0.91	5.57	0.89	0.20
LOYALTY	5.29	0.86	5.19	0.88	0.32
FRIENDS	5.31	1.09	5.03	1.16	0.03
COUNTRY	4.83	1.32	4.55	1.14	0.04

The correlation between biological gender and the created scales was significant ( $p < .05$ ) for only two of the five scales, FRIENDS and COUNTRY. In both cases, these relationships indicated that males had higher scores on these scales for this student sample.

**Hypothesis Two-d ( $H_{2d}$ ):** There will exist no relationship between psychological gender and the substantive categories of ethical values.

**Hypothesis 2d<sub>MALE</sub>** is supported if  $r_{MALE,j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

**Hypothesis 2c<sub>FEMALE</sub>** is supported if  $r_{FEMALE,j} = 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

Psychological gender measures from the Bem Sex Role Inventory (Bem, 1974) indicated no significant relationship between the psychological FEMALE measure and the created scales. Four of the five created scales correlated positively ( $p < .05$ ) with the psychological MALE measure. The exception was the measure of TASK, which exhibited no relationship with any of the psychological or biological gender measures.

### Results For Hypothesis Three ( $H_3$ )

#### **Hypothesis 3**

**Hypothesis Three ( $H_3$ ):** Assessments of ethical behavior will positively associate with the substantive categories of ethical values.

**Hypothesis 3a** is supported if  $r_{BBE,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

**Hypothesis 3b** is supported if  $r_{REL,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

**Hypothesis 3c** is supported if  $r_{CONT,j} > 0$ ,  $p < .05$  (for  $j=1$  to  $i$ ).

An examination of the correlations between the created measures and Reidenbach & Robin' (1990) Multidimensional Ethics Scale (MES) evaluations indicated a significant relationship in only four of the 15 possible correlations (see Figure 11). The broad-based equity scale correlated negatively with the TASK scale, indicating a higher score on the TASK measure corresponds to a decreased broad-based equity



evaluation. The relationship between the TASK scale and assessments of contractualism indicated that a higher TASK score corresponded to a decreased contractualism evaluation. Contractualism also correlated significantly with LOYALTY and FRIENDS. In both cases, as the created scale score increased, the contractualism evaluation decreased.

#### **Student Sample: summary**

The item reduction procedure produced a set of 19 items in five scales which were labeled: TASK, ADVOCACY, LOYALTY, FRIENDS, and COUNTRY. Each of the five scales was robust to changes in rotation and showed a reliability in excess of .80 for the student sample. Because item reduction produced five rather than the predicted six scales, there was no support for hypothesis one.

Hypotheses two and three sought support for convergent and discriminant validity. The data provided limited support for hypotheses two and three. Each of the five scales correlated significantly ( $p < .05$ ) with locus of control in the predicted direction. Two of the five scales correlated significantly ( $p < .05$ ) with Machiavellianism in the predicted direction. Two of the five showed a significant ( $p < .05$ ) correlation with biological gender, but not in the predicted direction. None correlated significantly with the psychological FEMALE measure, while four of the five correlated positively with the psychological MALE measure.

Of the three measures of ethical evaluation, only TASK correlated with the evaluation of broad-based equity. None of the created measures correlated significantly with the relativism scale, and three of the five created measures correlated with evaluations of contractualism. In

every case the direction of the correlation indicated that the higher the scale score the more negative the evaluation.

### **Confirmatory analysis: created measures applied to industry sample**

The first step in the analysis of the industry data was to verify the factor structure of (1)the developed scales, (2)the scales used to measure organizational commitment, and (3) the scales used to measure shared ethical values. A confirmatory factor analysis of the 19 items in the five developed scales produced a four-factor solution. The two items from COUNTRY collapsed with ADVOCACY and FRIENDS. All other 17 items remained in the same factors that emerged in the student sample. Each of the five scales developed using the student data maintained satisfactory ( $\alpha > .80$ ) reliability (Nunnally, 1978) in the industry sample. Table 10 presents the confirmatory factor analysis results of the scale items in the industry data.

Table 11 presents the internal consistency reliability results, Cronbach's (1951) coefficient alpha.

**Table 10: Scale item factor loadings, industry data**

Wording	Developed Scale	Factors			
		1	2	3	4
They meet deadlines set by organization.	TASK	.81			
They are mentally alert and ready to work when they arrive.	TASK	.80			
They always do their best.	TASK	.79			
I can rely on them not to make my job more difficult by careless work.	TASK	.69			
They approach their jobs with professionalism and dedication.	TASK	.63			
They help coworkers think for themselves.	ADVOCACY		.79		
These individuals push superiors' performance to higher standards.	ADVOCACY		.77		
They encourage management to keep	ADVOCACY		.75		

Wording	Developed Scale	Factors			
		1	2	3	4
their knowledge and skills current.					
They always protect their country.	COUNTRY		.65		
These individuals encourage others to speak up at meetings.	ADVOCACY		.65		
These individuals always stand by their country.	COUNTRY		.51		.53
They always stay informed.	ADVOCACY		.50		
These individuals are involved in outside groups for the benefit of the organization.	LOYALTY			.78	
They defend the organization when employees criticize it.	LOYALTY			.75	
These individuals actively promote the organization's products and services.	LOYALTY			.64	
These individuals go out of their way to defend the organization against outside threats.	LOYALTY			.63	
They tell outsiders this is a good place to work.	LOYALTY			.60	
These individuals always stand by their friends.	FRIENDS				.91
They always support their friends.	FRIENDS				.89
<u>Note.</u> Item loadings above .40 reported.					

**Table 11: Created scale reliabilities, industry data**

Scale	Cronbach's Alpha	# Items in scale
TASK	.84	5
ADVOCACY	.84	5
LOYALTY	.84	5
FRIENDS	.91*	2
COUNTRY	.87*	2

Note. \*Cronbach's Alpha is undefined for a two-item scale. Number represents the correlation between the two items.

### Confirmatory Analysis Of Organizational Commitment And Shared Values

#### Scales

A confirmatory factor analysis of the five items from Hunt, Wood, and Chonko's (1989) Shared Ethical Values Questionnaire (EVQ) and the 15-item Mowday, Steers, and Porter (1979) Organizational Commitment

Questionnaire (OCQ) (20 items total) produced a 3-factor solution. This result was contrary to the expected two-factor solution. Items in the OCQ tended to load significantly ( $>.40$ ) on one main factor as expected. The other two factors contain items from the EVQ and OCQ. The second of these three factors contains three items from the EVQ. The third factor contained the two other EVQ items, and two OCQ items which also loaded on the organizational commitment main factor. Table 12 presents the item loadings on the three factors.

**Table 12: Factor loadings - OCQ and EVQ scales**

Wording	Original Scale	Factors		
		1	2	3
Managers in my company rarely engage in behaviors that I consider to be unethical.	EVQ1			.71
In order to succeed in my company, it is rarely necessary to compromise one's ethics.	EVQ2			.80
Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.	EVQ3		.68	
If a manager in my company is discovered to have engaged in unethical behavior that results primarily in personal gain (rather than corporate gain), he or she will be promptly reprimanded.	EVQ4		.89	
If a manager in my company is discovered to have engaged in unethical behavior that results primarily in corporate gain (rather than personal gain), he or she will be promptly reprimanded.	EVQ5		.90	
I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	OCQ01	.35		
I talk up this organization to my friends as a great organization to work for.	OCQ02	.79		
I feel great loyalty to this organization.	OCQ03	.77		
I would accept almost any type of job assignment in order to keep working for this organization.	OCQ04	.63		
I find that my values and the organizations values are very similar.	OCQ05	.60		.61*
I am proud to tell others that I am part of	OCQ06	.78		

Wording	Original Scale	Factors		
		1	2	3
this organization.				
I would not be as well off working for a different organization even if the type of work was similar.	OCQ07	.82		
This organization really inspires the very best in me in the way of job performance.	OCQ08	.78		
It would take a great change in my present circumstances to cause me to leave this organization.	OCQ09	.82		
I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	OCQ10	.85		
There's much to be gained by sticking with this organization indefinitely.	OCQ11	.72		
I rarely find it difficult to agree with this organization's policies on important matters relating to employees.	OCQ12	.55		.54*
I really care about the fate of this organization.	OCQ13	.52		
For me this is the best of all possible organizations for which to work.	OCQ14	.86		
Deciding to work for this organization was definitely not a mistake on my part.	OCQ15	.80		
<u>Note.</u> Item loadings above .40 reported.				

\* A significant loading (>.40) emerged on multiple factors. Domain issues influenced assignment of factor.

The three items in the second factor all specifically referred to management's response to unethical behaviors prompting a label of Perceived Managerial Enforcement (PME). The items in the third factor more specifically refer to the concept of shared values between the individual and the company, prompting a factor label of Shared Ethical Values (SEV). Table 13 presents the reliabilities of (1) the three scales suggested by the factor analysis and (2) the two original scales.

**Table 13: Reliabilities for commitment and shared values scales**

Original Scale	Cronbach's Alpha	# Items
EVQ: Ethical Values Questionnaire	.83	5

OCQ: Organizational Commitment Questionnaire	.96	15
Scale suggested by factor analysis	Cronbach's Alpha	# Items
SEV: Shared Ethical Values	.83	4
PME: Perceived Managerial Enforcement	.87	3
OCQ13Itm: 13 item version of the OCQ	.95	13

The scales suggested by the factor analysis of the items showed sufficient reliability ( $\alpha > .70$ ) for continued research (Nunnally, 1978), and items in these measures were conceptually interpretable. Subsequent tests of mediation used these scales in addition to the original EVQ and OCQ measures.

#### **Examination Of Correlation Matrices: Industry Data**

Figure 15 through Figure 12 present the correlation matrices for the substantive categories of ethical values, the shared values measures, commitment measures, and several demographic characteristics. Four sections briefly review significant correlations of interest ( $p < .05$ ).

#### **Correlations among personal and professional demographics**

The two most obvious results Figure 12 portrays are that agency size (AGSIZE) does not correlate at a significant level ( $p < .05$ ) with any of the other demographic variables, and that gender does correlate significantly ( $p < .05$ ) with four of the remaining five demographic variables. These correlations indicate that males tend to have more tenure and hold higher positions (POS\_NUM) in their agencies. No significant correlation exists in this insurance industry sample between gender and the number of professional designations held (NO\_PD). Significant inter-correlations ( $p < .05$ ) among age, industry tenure

(YRSIND), position tenure (YRSCP), company tenure (YRSCC) and position level emerged as expected for this sample.

### **Correlations among shared values, organizational commitment and demographics**

No relationship emerged (see Figure 13) in this insurance industry sample between any of the measures of shared values or organizational commitment and the variables of age, gender, or number of professional designations (NO\_PD). Consistent negative correlations ( $p > .05$ ) between agency size (AGSIZE) and all five measures of shared values and commitment, indicated a relationship between increasing agency size and lower shared values and lower commitment (see Figure 14).

None of the tenure demographic variables (company, position, and industry tenure) correlated significantly with either measure of organizational commitment. Both industry tenure and position tenure correlated positively ( $p < .05$ ) with Hunt, Wood, and Chonko's (1989) original EVQ scale. A significant ( $p < .05$ ) correlation also emerged between position tenure and perceived managerial enforcement, indicating that as position tenure increases the perception that management enforces ethical standards increases (see Figure 14).

Level in the organization (POS\_NUM) correlated positively ( $p < .05$ ) with both the original shared ethical values scale and each of the two sub-scales, PME and SEV. This correlation indicated that individuals higher in the organizational hierarchy were more likely to share the values of the organization. However, for this sample organizational level (POS\_NUM) did not correlate significantly with either version of the organizational commitment measure (see Figure 13).

### Correlations among new measures and demographics

Results presented in Figure 15 and Figure 16 indicated that of the demographic measures only two significant correlations ( $p < .05$ ) emerged. In Figure 15, a positive correlation indicated that as age increased there was an increase in the COUNTRY value for the industry sample. Figure 16 portrays a significant negative correlation between agency size and the FRIENDS value.

### Correlations among new measures and criterion validity measures

Figure 17 shows significant levels of correlation ( $p < .05$ ) among the five measures developed in the current study and the five measures of organizational commitment and shared values, with three exceptions out of the 25 correlations. The four-item shared ethical value measure (SEV) did not correlate significantly with either TASK or ADVOCACY; and the three-item perceived managerial enforcement measure (PME) did not correlate significantly with FRIENDS. All 25 correlations were significant at the  $p > .01$  level.

The high correlations (.14 to .61) among the created measures roughly paralleled those found in the student sample. Omitting correlated variables in regression equations can confound results, while including correlated variables together in one equation can help avoid these omitted variable effects. Subsequent tests of mediation included all five created scales in the regression equations.

An interesting point to note in Figure 17 is the .995 correlation between the full 15-item OCQ and the shorter 13-item version indicated by the previous factor analysis. This result indicated little change in the underlying construct. Also interesting are the correlations among the original EVQ scale developed to measure shared values and the two



sub-scales PME and SEV indicated by the previous factor analysis. Both correlations are significant ( $p < .01$ ). By inspection the correlation between the original and PME is higher than between the original and SEV, however the items from the original OCQ (Mowday, Steers, & Porter, 1979) loading on SEV (e.g. "I find that my values and the organizations values are very similar") were closer to the original definition of the construct behind the EVQ.

**Criterion validity: the created measures' relationship to organizational commitment**

Criterion validity concerns the effect a construct has on a dependent construct of concern. The industry sample provided the data for this stage of analysis.

**Results For Hypothesis Four (H<sub>4</sub>)**

**Hypothesis 4**

**Hypothesis Four (H<sub>4</sub>): Organizational commitment will positively associate with individual's perception of shared ethical values.**

$$(4) \quad \eta_{ocq} = B_{evq}^{(4)} \eta_{evq} + \zeta_{ocq}^{(4)}$$

Hypothesis four predicted a positive and significant relationship between shared ethical values and organizational commitment. The emergence of multiple measures of shared ethical values required five regressions to test hypothesis four properly. The first regression used the 15-item OCQ as the dependent variable and the five-item EVQ as the independent variable. Each of the next regressions used the 13-item OCQ as the dependent variable. Regressions two and three considered SEV and PME alone. A fourth regression considered both together, and is

reported twice, once for each variable with the other as a control.

Results of these four equations appear in Table 14.

**Table 14: Regression results - hypothesis four**

Regression	Ind.Var.	Dep. Var.	Control	Standardized Beta	p-value	Adj. R <sup>2</sup>
1	EVQ	OCQ	n/a	.646	.000	.413
2	SEV	OCQ13	n/a	.771	.000	.591
3	PME	OCQ13	n/a	.532	.000	.277
4	SEV	OCQ13	PME	.680	.000	.609
4	PME	OCQ13	SEV	.170	.016	.609

Table 14 shows that regardless of the combination of variable or control variables, there was a significant positive relationship between the measures of shared values and the measures of organizational commitment. This set of results indicated support for hypothesis four.

#### Results For Hypothesis Five (H<sub>5</sub>)

##### Hypothesis 5

**Hypothesis Five (H<sub>5</sub>):** The substantive categories of ethical values will positively affect organizational commitment through the mediator of perception of shared ethical values.

$$(5a) \eta_{evq} = B_1^{(5a)}\eta_1 + B_2^{(5a)}\eta_2 + \dots + B_i^{(5a)}\eta_i + \zeta_{evq}^{(5a)}$$

$$(5b) \eta_{ocq} = B_1^{(5b)}\eta_1 + B_2^{(5b)}\eta_2 + \dots + B_i^{(5b)}\eta_i + \zeta_{ocq}^{(5b)}$$

$$(5c) \eta_{ocq} = B_1^{(5c)}\eta_1 + B_2^{(5c)}\eta_2 + \dots + B_i^{(5c)}\eta_i + B_{evq}^{(5c)}\eta_{evq} + \zeta_{ocq}^{(5c)}$$

Table 15: Tests of mediation (Baron &amp; Kenny, 1986)

<b>Mediation is indicated for <math>\eta_j</math> if 1,2,3 &amp; 4 are true.</b>
1. $B_j^{(5a)} \eta_j < > 0$ .
2. $B_j^{(5b)} \eta_j < > 0$ .
3. $B_{evq}^{(5c)} \eta_{evq} < > 0$ .
4. $B_j^{(5b)} \eta_j > B_j^{(5c)} \eta_j$ .
<b>Full mediation is indicated for <math>\eta_j</math> if <math>B_j(5c) \eta_j = 0</math>.</b>

Because multiple factors emerged from the prior analysis of the EVQ, proper analysis of the data required five separate sets of regressions. The first regressions used the original EVQ and OCQ measures. Because two items from the original OCQ were included in the created SEV measure for content reasons, sets two through four used the shortened 13-item OCQ measure. Sets two and three (Figure 19 & Figure 20) used SEV as the mediator (set three controlled for PME). Sets four and five (Figure 21 & Figure 22) used PME as the mediator (set four controlled for SEV).

To support mediation, all the four tests (see table 14) for any substantive category of ethical value must pass. Mediation was supported only twice, both times (1) LOYALTY was the independent variable, (2) the shorter OCQ13-item measure was the dependent variable, and (3) the four-item SEV was the mediator (Figure 11). The only difference in these two sets of tests supporting mediation was PME as a control, which had no effect on the mediation tests. Two points are of note: (1) LOYALTY's effect on commitment was significant in every test, regardless of mediator, and (2) the effect of mediation was never full. A significant main effect between LOYALTY and commitment remained in every set of tests. Hypothesis five, that shared values would mediate the relationship between the new measures and commitment, received very limited support. Mediation was found only between commitment and (1) one

of the five created measures, LOYALTY, and (2) using the four-item SEV measure as the mediator variable.

### **Industry data - summary**

Confirmatory analysis of the developed scales using an industry sample indicated that the scales demonstrated sufficient reliability and reproducibility to continue analysis. Cronbach's alpha for all five scales exceeded .80 for each of the five created scales in the industry sample.

A confirmatory analysis of the structure of the original corporate shared ethical value questionnaire (EVQ) (Hunt, Wood, & Chonko, 1989) and the organizational commitment questionnaire (OCQ) (Mowday, Steers, & Porter, 1978) indicated three rather than two factors, with the items from the EVQ splitting into two sub-scales labeled shared ethical values (SEV) and perceived managerial enforcement (PME). Reliabilities for both the original and the new sub-scales were high (>.80), and analysis continued with both the new and original scales.

Results indicated support for hypothesis four, replicating previous findings that shared values positively correlate with commitment (Hunt, Wood and Chonko, 1989) for this insurance industry sample. Mixed support emerged for hypothesis five, with partial mediation by SEV found between only one of the values (LOYALTY) and commitment.

### **Chapter summary**

This chapter reported results and analysis of data gathered in two samples, a student sample and an industry sample. Support for the hypotheses was mixed. The item reduction procedure resulted in five

independent scales rather than the six predicted by hypothesis one. All five of the scales exhibited high reliability ( $\alpha > .80$ ).

Hypothesis two received mixed support from correlations of the created scales with existing measures. Significant ( $p < .05$ ) correlations were in the hypothesized direction with the exception of gender measures. Hypothesis three received support in only four of the fifteen possible relationships between the created measures and student ethical evaluations.

A confirmatory factor analysis of the items in the organizational commitment measure (Mowday Steers & Porter, 1979) combined with the shared ethical values measure (Hunt, Wood & Chonko, 1988) revealed three factors rather than the expected two. These factors were labeled (1) organizational commitment, (2) perceived managerial enforcement and (3) shared ethical values. Equally weighted scales created for these three factors, and the original organizational commitment and shared value scales (five scales in all) provided data for testing hypotheses four and five.

The results supported hypothesis four, indicating a significant relationship ( $p < .05$ ) among three of the shared values measures and the two organizational commitment measures. This finding replicates previously reported results (Hunt, Wood & Chonko, 1989).

Hypotheses five, concerning the relationship between the created measures and organizational commitment mediated by shared values, received partial support. The test of mediation failed in all cases with the exception that the newer shared ethical values measure partially mediated the relationship between the LOYALTY measure and organizational commitment factor. This result did not vary with control for perceived managerial enforcement. A significant regression

coefficient ( $p > .05$ ) for the created LOYALTY measure and the dependent organizational commitment emerged in every test of mediation. A significant regression coefficient ( $P > .05$ ) for the created ADVOCACY measure and the dependent organizational commitment emerged when shared values measures were not in the equation. No other significant regression coefficients emerged between any of the five created measures and the dependent organizational commitment.

Chapter five reviews the study, presents conclusions concerning results, discusses the limitations of this study, and considers the implications of these findings for both research and practice.

Item	Original source	Original measure	Factor name (extraction order)				Item included in final scale
			Procedure 1	Procedure 2	Procedure 3	Procedure 4	
Before they act, these individuals always think about the consequences.	CCC	Character	Task(1)	Task(1)		Task(1)	
These individuals always make all they do worthy of pride.	CCC	Character					
These individuals always stand by their country.	CCC	Character	Country(4)	Country(8)		Country(5)	COUNTRY
These individuals always stand by their friends.	CCC	Character	Friends(5)	Friends(3)		Friends(7)	FRIENDS
These individuals are never tricky.	CCC	Character		retained(5)		retained(6)	
These individuals treat others the way they want others to treat them.	CCC	Character		Task(1)		Task(1)	
They always demonstrate integrity.	CCC	Character					
They always do their best.	CCC	Character	Task(1)	Task(1)		Task(1)	TASK
They always protect their country.	CCC	Character	Country(4)	Country(8)		Country(5)	COUNTRY
They always pursue excellence.	CCC	Character					
They always stand by their family.	CCC	Character				Country(5)	
They always stay informed.	CCC	Character	Advocacy (2)	Advocacy (2)		Advocacy (2)	ADVOCACY
They always support their friends.	CCC	Character	Friends(5)	Friends(3)		Friends(7)	FRIENDS
They always use appropriate considerations in decision making.	CCC	Character				Task(1)	
They are always charitable.	CCC	Character					
They are always consistent	CCC	Character					
They never deceive anyone.	CCC	Character		retained(5)		Task(1)	
They never make excuses or take credit for others' work.	CCC	Character				Task(1)	
They never quit easily.	CCC	Character	Task(1)	Task(1)		Task(1)	
They never take unfair advantage of mistakes.	CCC	Character				Task(1)	
They show they care about others through empathy.	CCC	Character					
I can talk freely to these individuals about difficulties I am having at work and know that they will want to listen.	McAllister	Affective-based Trust					
I would have to say that we have all made considerable emotional investments in our working relationship.	McAllister	Affective-based Trust	retained(6)	retained(6)	retained(4)	retained(4)	
If I shared my problems with them, I know they would respond constructively and caringly.	McAllister	Affective-based Trust		retained(3)			
We have a sharing relationship. We can all freely share our ideas, feelings, and hopes.	McAllister	Affective-based Trust					
We would all feel a sense of loss if one of us was transferred and we could no longer work together.	McAllister	Affective-based Trust			Advocacy (2)	retained(6)	
Given their track record, I see no reason to doubt their competence and preparation for the job.	McAllister	Cognitive-based Trust		retained(4)			
If people knew more about these individuals and their background, people would be less concerned and monitor these individuals' performance less closely.	McAllister	Cognitive-based Trust	retained(7)	retained(4)			
I can rely on them not to make my job more difficult by careless work.	McAllister	Cognitive-based Trust	Task(1)	Task(1)	Task(1)	Task(1)	TASK
Most people, even those who are not close friends of these individuals, trust and respect them as coworkers.	McAllister	Cognitive-based Trust	Task(1)	Task(1)	Task(1)	Task(1)	
My other work associates who interact with these individuals consider them to be trustworthy.	McAllister	Cognitive-based Trust			Task(1)		

Figure 8 : Item reduction procedure results

Item reduction procedure results

Item	Original source	Original measure	Factor name (extraction order)				Item included in final scale
			Procedure 1	Procedure 2	Procedure 3	Procedure 4	
They approach their jobs with professionalism and dedication.	McAllister	Cognitive-based Trust	Task(1)	Task(1)	Task(1)	Task(1)	TASK
They always tell the truth even though it may hurt themselves or others.	Scott	Honesty		Task(1)			
They practice self-control.	Scott	Self-Control					
These individuals encourage others to speak up at meetings.	Van Dyne et al.	Advocacy	Advocacy (2)	Advocacy (2)	Advocacy (2)	Advocacy (2)	ADVOCACY
These individuals frequently make creative suggestions to coworkers.	Van Dyne et al.	Participation		Advocacy (2)			
These individuals push superiors' performance to higher standards.	Van Dyne et al.	Advocacy	Advocacy (2)	Advocacy (2)	Advocacy (2)	Advocacy (2)	ADVOCACY
They encourage management to keep their knowledge and skills current.	Van Dyne et al.	Participation	Advocacy (2)	Advocacy (2)	Advocacy (2)	Advocacy (2)	ADVOCACY
They help coworkers think for themselves.	Van Dyne et al.	Advocacy	Advocacy (2)	Advocacy (2)	Advocacy (2)	Advocacy (2)	ADVOCACY
They keep well informed where their opinion might benefit the organization.	Van Dyne et al.	Participation					
They use professional judgment to assess right or wrong for the organization.	Van Dyne et al.	Advocacy					
These individuals pursue additional training to improve performance.	Van Dyne et al.	Participation			Task(1)	Task(1)	
These individuals work beyond what is required.	Van Dyne et al.	Functional		Task(1)	Task(1)	Task(1)	
They have little difficulty cooperating with others on projects.	Van Dyne et al.	Participation					
They rarely avoid extra duties and responsibilities at work.	Van Dyne et al.	Functional	retained(3)	retained(4)			
They volunteer for overtime work when needed.	Van Dyne et al.	Participation	retained(3)	retained(4)	Task(1)	Task(1)	
These individuals actively promote the organization's products and services.	Van Dyne et al.	Loyalty		Loyalty (7)	Loyalty (3)	Loyalty (3)	LOYALTY
These individuals go out of their way to defend the organization against outside threats.	Van Dyne et al.	Loyalty		Loyalty (7)	Loyalty (3)	Loyalty (3)	LOYALTY
They defend the organization when employees criticize it.	Van Dyne et al.	Loyalty			Loyalty (3)	Loyalty (3)	LOYALTY
They represent the organization favorably to outsiders.	Van Dyne et al.	Loyalty			Loyalty (3)	Loyalty (3)	LOYALTY
They tell outsiders this is a good place to work.	Van Dyne et al.	Loyalty			Loyalty (3)	Loyalty (3)	LOYALTY
They urge co-workers to invest money in their organization.	Van Dyne et al.	Loyalty	retained(7)				
They would not accept a job in a competing organization simply for more money.	Van Dyne et al.	Loyalty	retained(3)	retained(5)			
At all times these individuals produce as much as they are capable of producing.	Van Dyne et al.	Obedience					
Regardless of circumstances, they produce their highest quality work.	Van Dyne et al.	Obedience		Task(1)	Task(1)	Task(1)	
These individuals rarely waste organizational resources.	Van Dyne et al.	Obedience	Task(1)	Task(1)	Task(1)	Task(1)	
These individuals rarely waste time while at work.	Van Dyne et al.	Obedience					
They always come to work on time.	Van Dyne et al.	Obedience					



# Item reduction procedure results

Item	Original source	Original measure	Factor name (extraction order)				Item included in final scale
			Procedure 1	Procedure 2	Procedure 3	Procedure 4	
They are mentally alert and ready to work when they arrive.	Van Dyne et al.	Obedience	Task(1)	Task(1)	Task(1)	Task(1)	TASK
They follow work rules and instructions with extreme care.	Van Dyne et al.	Obedience					
They keep their work areas clean and neat.	Van Dyne et al.	Obedience	retained(6)	retained(6)	retained(4)	retained(4)	
They meet deadlines set by organization.	Van Dyne et al.	Obedience	Task(1)	Task(1)	Task(1)	Task(1)	TASK
They never miss work without good reason.	Van Dyne et al.	Obedience	Task(1)	Task(1)	Task(1)	Task(1)	
These individuals are involved in outside groups for the benefit of the organization.	Van Dyne et al.	Social Participation		Loyalty (7)	Loyalty (3)	Loyalty (3)	LOYALTY
They attend work-related meetings not required by their jobs.	Van Dyne et al.	Social Participation	retained(3)				
They keep informed about products and services and share the information with others.	Van Dyne et al.	Social Participation		Advocacy (2)			
They share ideas for new projects or improvements widely.	Van Dyne et al.	Social Participation					
They work to keep their personal appearances attractive and appropriate.	Van Dyne et al.	Social Participation		retained(6)	retained(4)	retained(4)	
Item reduction procedure summary information							
			Procedure 1	Procedure 2	Procedure 3	Procedure 4	Final Scales
Task Cronbach's alpha:			.90	.92	.90	.94	.87
number of items in factor			10	14	12	19	5
Advocacy Cronbach's alpha:			.84	.85	.79	.84	.84
number of items in factor			5	7	5	5	5
Loyalty Cronbach's alpha:				.68	.80	.80	.80
number of items in factor				3	5	5	5
Friends Cronbach's alpha:			.85	.79		.85	.85
number of items in factor			2	3		2	2
Country Cronbach's alpha:			.81	.81		.72	.81
number of items in factor			2	2		3	2
Factor 3 Cronbach's alpha:			.60				
number of items in factor			4				
Factor 4 Cronbach's alpha:				.57	.63	.66	
number of items in factor				4	3	3	
Factor 5 Cronbach's alpha:				.67			
number of items in factor				3			
Factor 6 Cronbach's alpha:			.57	.63		.41	
number of items in factor			2	3		2	
Factor 7 Cronbach's alpha:			.32				
number of items in factor			2				
Number of factors: alpha > .70			4	4	3	5	5
Total items			27	39	25	39	19

Unnamed retained factors are listed in order of extraction.

Items for unnamed retained factors are not comparable across rows.

Figure 9 : Correlation matrix -- Student value scales and demographic items 117

		<table><tr><th>Scale</th><th>Measures</th><th>Source</th></tr><tr><td>TASK</td><td>Task value</td><td>Current study</td></tr><tr><td>ADVOCACY</td><td>Advocacy value</td><td>Current study</td></tr><tr><td>LOYALTY</td><td>Loyalty Value</td><td>Current study</td></tr><tr><td>FRIENDS</td><td>Friends Value</td><td>Current study</td></tr><tr><td>COUNTRY</td><td>Country Value</td><td>Current study</td></tr><tr><td>GENDER</td><td>Biological Gender</td><td>Self reported</td></tr><tr><td>AGE</td><td>Age</td><td>Self reported</td></tr><tr><td>EDU</td><td>Level of education</td><td>Self reported</td></tr><tr><td>YRJ</td><td>Years In a regular job</td><td>Self reported</td></tr></table>								Scale	Measures	Source	TASK	Task value	Current study	ADVOCACY	Advocacy value	Current study	LOYALTY	Loyalty Value	Current study	FRIENDS	Friends Value	Current study	COUNTRY	Country Value	Current study	GENDER	Biological Gender	Self reported	AGE	Age	Self reported	EDU	Level of education	Self reported	YRJ	Years In a regular job	Self reported
Scale	Measures	Source																																					
TASK	Task value	Current study																																					
ADVOCACY	Advocacy value	Current study																																					
LOYALTY	Loyalty Value	Current study																																					
FRIENDS	Friends Value	Current study																																					
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GENDER	Biological Gender	Self reported																																					
AGE	Age	Self reported																																					
EDU	Level of education	Self reported																																					
YRJ	Years In a regular job	Self reported																																					
		Bold type indicates significant correlations (p<.05)																																					
TASK	n=324																																						
ADVOCACY	.602	n=324																																					
p=	.000																																						
LOYALTY	.513	.501	n=324																																				
p=	.000	.000																																					
FRIENDS	.326	.329	.398	n=324																																			
p=	.000	.000	.000																																				
COUNTRY	.153	.276	.393	.354	n=324																																		
p=	.006	.000	.000	.000																																			
GENDER	.057	-.076	-.062	-.129	-.114	n=315																																	
p=	.317	.182	.272	.022	.043																																		
AGE	.025	.072	-.044	-.055	.054	-.066	n=314																																
p=	.656	.201	.439	.332	.340	.244																																	
EDU	-.053	.005	-.115	-.073	.010	-.190	.314	n=316																															
p=	.347	.932	.041	.197	.854	.001	.000																																
YRJ	.040	.071	.003	-.099	.034	-.007	.859	.130	n=310																														
p=	.483	.212	.958	.083	.549	.900	.000	.022																															
	TASK	ADVOCACY	LOYALTY	FRIENDS	COUNTRY	GENDER	AGE	EDU	YRJ																														

Figure 10: Correlation matrix -- Student value scales and convergent validity measures

				Scale		Measures		Source	
				TASK		Task value		Current study	
				ADVOCACY		Advocacy value		Current study	
				LOYALTY		Loyalty Value		Current study	
				FRIENDS		Friends Value		Current study	
				COUNTRY		Country Value		Current study	
				EXT		External Locus of Control		Rotter, 1966	
				FEMALE		Psychological Gender		Bem, 1974	
				MALE		Psychological Gender		Bem, 1974	
MACH		Machiavellianism		Christie & Geis, 1970					
Bold type indicates significant correlations (p< .05)									
LOYALTY	.513	.501	n=324						
p=	.000	.000							
FRIENDS	.326	.329	.398	n=324					
p=	.000	.000	.000						
COUNTRY	.153	.276	.393	.354	n=324				
p=	.006	.000	.000	.000					
EXT	-.175	-.169	-.171	-.133	-.125	n=315			
p=	.002	.003	.002	.018	.027				
MALE	.058	.164	.210	.186	.207	-.324	n=316		
p=	.308	.004	.000	.001	.000	.000			
FEMALE	.032	.019	.088	.053	.079	.039	-.092	n=316	
p=	.575	.735	.120	.352	.164	.488	.104		
MACH	-.159	-.123	-.106	-.068	.013	.339	-.101	-.180	n=316
p=	.005	.028	.059	.229	.814	.000	.073	.001	
	TASK	ADVOCACY	LOYALTY	FRIENDS	COUNTRY	EXT	MALE	FEMALE	MACH

Figure 11: Correlation Matrix -- Student value scales and multidimensional ethics scale (MES) measures

TASK		n=324		Scale		Measures		Source	
				TASK		Task value		Current study	
				ADVOCACY		Advocacy value		Current study	
				LOYALTY		Loyalty Value		Current study	
				FRIENDS		Friends Value		Current study	
				COUNTRY		Country Value		Current study	
				BBE		Broad-based equity		Reidenbach & Robin,1990	
				REL		Relativism		Reidenbach & Robin,1990	
CONT		Contractualism		Reidenbach & Robin,1990					
Bold type indicates significant correlations (p<.05)									
ADVOCACY		.602		n=324					
p=		.000							
LOYALTY		.513		.501		n=324			
p=		.000		.000					
FRIENDS		.326		.329		.398		n=324	
p=		.000		.000		.000			
COUNTRY		.153		.276		.393		.354	
p=		.006		.000		.000		.000	
BBE		-.217		-.096		.011		-.074	
p=		.010		.258		.900		.380	
REL		-.162		-.120		-.048		-.043	
p=		.054		.157		.574		.609	
CONT		-.199		-.142		-.209		-.191	
p=		.018		.092		.013		.023	
		TASK		ADVOCACY		LOYALTY		FRIENDS	
						COUNTRY		BBE	
								REL	
								CONT	

Figure 12: Correlation Matrix -- Industry personal, tenure, and agency size dempgraphics

Scale	Measures	Source
AGE	Age	Self reported
GENDER	Biological Gender	Self reported
NO_PD	Number of professional designations	Self reported
POS_NUM	Organizational level	Self reported
YRSCC	Current company tenure	Self reported
YRSCP	Current position tenure	Self reported
YRSIND	Industry tenure	Self reported
AGSIZE	Agency size	Self reported

Bold type indicates significant correlations (p&lt;.05)

AGE	n=102							
GENDER	-.431	n=112						
p=	.000							
NO_PD	.299	-.139	n=112					
p=	.002	.144						
POS_NUM	-.386	.444	-.101	n=112				
p=	.000	.000	.291					
YRSCC	.516	-.187	.163	-.547	n=112			
p=	.000	.048	.087	.000				
YRSCP	.568	-.250	.120	-.487	.787	n=112		
p=	.000	.008	.209	.000	.000			
YRSIND	.869	-.492	.278	-.486	.582	.586	n=112	
p=	.000	.000	.003	.000	.000	.000		
AGSIZE	.045	-.150	.164	-.103	-.017	-.096	.136	n=102
p=	.668	.133	.099	.304	.869	.338	.174	
	AGE	GENDER	NO_PD	POS_NUM	YRSCC	YRSCP	YRSIND	AGSIZE

Figure 13: Correlation Matrix -- Industry shared values, organizational commitment measures, and personal demographics

Scale	Measures	Source
SEV	Shared ethical values	Two Items from EVQ, two Items from OCQ
PME	Perceived managerial enforcement	Three Items from EVQ
OCQ13ITM	Organizational commitment	13 Items from OCQ
EVQ	Shared Ethical Values Questionnaire	Hunt, Wood & Chonko, 1989
OCQ	Organizational Commitment	Mowday, Steers & Porter, 1979
AGE	Age	Self reported
GENDER	Biological Gender	Self reported
NO_PD	Number of professional designations	Self reported
POS_NUM	Organizational level	Self reported

Bold type indicates significant correlations ( $p < .05$ )

SEV	n=112								
PME	.531	n=112							
p=	.000								
OCQ13ITM	.771	.532	n=112						
p=	.000	.000							
EVQ	.751	.929	.629	n=112					
p=	.000	.000	.000						
OCQ	.822	.540	.995	.647	n=112				
p=	.000	.000	.000	.000					
AGE	.080	.156	-.030	.168	-.021	n=112			
p=	.423	.118	.762	.091	.836				
GENDER	-.044	-.156	.013	-.126	.003	-.431	n=112		
p=	.647	.100	.895	.186	.972	.000			
NO_PD	.008	.017	.007	.048	-.001	.299	-.139	n=112	
p=	.932	.861	.939	.613	.993	.002	.144		
POS_NUM	-.190	-.217	-.182	-.234	-.185	-.386	.444	-.101	n=112
p=	.045	.021	.055	.013	.051	.000	.000	.291	
	SEV	PME	OCQ13ITM	EVQ	OCQ	AGE	GENDER	NO_PD	POS_NUM

Figure 14: Correlation Matrix -- Industry shared values, organizational commitment measures, tenure and agency size demographics

Scale	Measures	Source
SEV	Shared ethical values	Two items from EVQ, two items from OCQ
PME	Perceived managerial enforcement	Three items from EVQ
OCQ13ITM	Organizational commitment	13 items from OCQ
EVQ	Shared Ethical Values Questionnaire	Hunt, Wood & Chonko, 1989
OCQ	Organizational Commitment	Mowday, Steers & Porter, 1979
YRSCC	Current company tenure	Self reported
YRSCP	Current position tenure	Self reported
YRSIND	Industry tenure	Self reported
AGSIZE	Agency size	Self reported

Bold type indicates significant correlations ( $p < .05$ )

SEV	n=112								
PME	.531	n=112							
p=	.000								
OCQ13ITM	.771	.532	n=112						
p=	.000	.000							
EVQ	.751	.929	.629	n=112					
p=	.000	.000	.000						
OCQ	.822	.540	.995	.647	n=112				
p=	.000	.000	.000	.000					
YRSCC	.110	.182	.162	.176	.156	n=112			
p=	.250	.055	.088	.064	.100				
YRSCP	.120	.197	.163	.203	.155	.787	n=112		
p=	.206	.038	.087	.032	.102	.000			
YRSIND	.059	.174	-.029	.189	-.026	.582	.586	n=112	
p=	.534	.067	.765	.046	.784	.000	.000		
AGSIZE	-.307	-.309	-.284	-.327	-.295	-.017	-.096	.136	n=102
p=	.002	.002	.004	.001	.003	.869	.338	.174	
	SEV	PME	OCQ13ITM	EVQ	OCQ	YRSCC	YRSCP	YRSIND	AGSIZE

Figure 15: Correlation Matrix -- Industry value scales and personal demographics

				Scale		Measures		Source	
				TASK		Task value		Current study	
				ADVOCACY		Advocacy value		Current study	
				LOYALTY		Loyalty Value		Current study	
				FRIENDS		Friends Value		Current study	
				COUNTRY		Country Value		Current study	
				AGE		Age		Self reported	
				GENDER		Biological Gender		Self reported	
				NO_PD		Number of professional designati		Self reported	
				POS_NUM		Organizational level		Self reported	
Bold type indicates significant correlations (p<.05)									
TASK	n=112								
ADVOCACY	<b>.446</b>	n=112							
p=	<b>.000</b>								
LOYALTY	<b>.448</b>	<b>.613</b>	n=112						
p=	<b>.000</b>	<b>.000</b>							
FRIENDS	<b>.201</b>	<b>.339</b>	<b>.332</b>	n=112					
p=	<b>.034</b>	<b>.000</b>	<b>.000</b>						
COUNTRY	<b>.144</b>	<b>.590</b>	<b>.468</b>	<b>.489</b>	n=112				
p=	<b>.129</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>					
AGE	<b>-.143</b>	<b>.051</b>	<b>.073</b>	<b>-.064</b>	<b>.209</b>	n=102			
p=	<b>.151</b>	<b>.610</b>	<b>.466</b>	<b>.523</b>	<b>.035</b>				
GENDER	<b>.045</b>	<b>.054</b>	<b>-.053</b>	<b>.131</b>	<b>-.025</b>	<b>-.431</b>	n=112		
p=	<b>.640</b>	<b>.569</b>	<b>.581</b>	<b>.168</b>	<b>.798</b>	<b>.000</b>			
NO_PD	<b>.077</b>	<b>-.030</b>	<b>.004</b>	<b>-.050</b>	<b>-.013</b>	<b>.299</b>	<b>-.139</b>	n=112	
p=	<b>.419</b>	<b>.753</b>	<b>.971</b>	<b>.601</b>	<b>.895</b>	<b>.002</b>	<b>.144</b>		
POS_NUM	<b>.040</b>	<b>.004</b>	<b>-.178</b>	<b>.127</b>	<b>.020</b>	<b>-.386</b>	<b>.444</b>	<b>-.101</b>	n=112
p=	<b>.680</b>	<b>.970</b>	<b>.060</b>	<b>.184</b>	<b>.835</b>	<b>.000</b>	<b>.000</b>	<b>.291</b>	
	TASK	ADVOCACY	LOYALTY	FRIENDS	COUNTRY	AGE	GENDER	NO_PD	POS_NUM



Figure 16: Correlation Matrix -- Industry value scales, tenure, and agency size demographics

		<table><tr><th>Scale</th><th>Measures</th><th>Source</th></tr><tr><td>TASK</td><td>Task value</td><td>Current study</td></tr><tr><td>ADVOCACY</td><td>Advocacy value</td><td>Current study</td></tr><tr><td>LOYALTY</td><td>Loyalty Value</td><td>Current study</td></tr><tr><td>FRIENDS</td><td>Friends Value</td><td>Current study</td></tr><tr><td>COUNTRY</td><td>Country Value</td><td>Current study</td></tr><tr><td>YRSCC</td><td>Current company tenure</td><td>Self reported</td></tr><tr><td>YRSCP</td><td>Current position tenure</td><td>Self reported</td></tr><tr><td>YRSIND</td><td>Industry tenure</td><td>Self reported</td></tr><tr><td>AGSIZE</td><td>Agency size</td><td>Self reported</td></tr></table>								Scale	Measures	Source	TASK	Task value	Current study	ADVOCACY	Advocacy value	Current study	LOYALTY	Loyalty Value	Current study	FRIENDS	Friends Value	Current study	COUNTRY	Country Value	Current study	YRSCC	Current company tenure	Self reported	YRSCP	Current position tenure	Self reported	YRSIND	Industry tenure	Self reported	AGSIZE	Agency size	Self reported
Scale	Measures	Source																																					
TASK	Task value	Current study																																					
ADVOCACY	Advocacy value	Current study																																					
LOYALTY	Loyalty Value	Current study																																					
FRIENDS	Friends Value	Current study																																					
COUNTRY	Country Value	Current study																																					
YRSCC	Current company tenure	Self reported																																					
YRSCP	Current position tenure	Self reported																																					
YRSIND	Industry tenure	Self reported																																					
AGSIZE	Agency size	Self reported																																					
		Bold type indicates significant correlations (p<.05)																																					
TASK	n=112																																						
ADVOCACY	.446	n=112																																					
p=	.000																																						
LOYALTY	.448	.613	n=112																																				
p=	.000	.000																																					
FRIENDS	.201	.339	.332	n=112																																			
p=	.034	.000	.000																																				
COUNTRY	.144	.590	.468	.489	n=112																																		
p=	.129	.000	.000	.000																																			
YRSCC	-.175	-.103	.094	-.140	.027	n=112																																	
p=	.065	.279	.322	.142	.776																																		
YRSCP	-.149	-.113	.031	-.079	.016	.787	n=112																																
p=	.116	.235	.747	.405	.869	.000																																	
YRSIND	-.174	-.039	.040	-.160	.069	.582	.586	n=112																															
p=	.067	.680	.679	.092	.470	.000	.000																																
AGSIZE	.030	-.108	.010	-.303	-.141	-.017	-.096	.136	n=102																														
p=	.768	.280	.925	.002	.156	.869	.338	.174																															
	TASK	ADVOCACY	LOYALTY	FRIENDS	COUNTRY	YRSCC	YRSCP	YRSIND	AGSIZE																														

Figure 17: Correlation Matrix -- Industry value scales and organizational commitment measures

		Scale		Measures		Source				
TASK		TASK		Task value		Current study				
ADVOCACY		ADVOCACY		Advocacy value		Current study				
LOYALTY		LOYALTY		Loyalty Value		Current study				
FRIENDS		FRIENDS		Friends Value		Current study				
COUNTRY		COUNTRY		Country Value		Current study				
SEV		SEV		Shared ethical values		Two items from EVQ, two items from OCQ				
PME		PME		Perceived managerial enforcement		Three items from EVQ				
OCQ13ITM		OCQ13ITM		Organizational commitmnt		13 items from OCQ				
EVQ		EVQ		Shared Ethical Values Questionnaire		Hunt, Wood & Chonko, 1989				
OCQ		OCQ		Organizational Commitment		Mowday, Steers & Porter, 1979				
Bold type indicates significant correlations (p<.05)										
ADVOCACY	.446	n=112								
p=	.000									
LOYALTY	.448	.613	n=112							
p=	.000	.000								
FRIENDS	.201	.339	.332	n=112						
p=	.034	.000	.000							
COUNTRY	.144	.590	.468	.489	n=112					
p=	.129	.000	.000	.000						
SEV	.166	.185	.418	.314	.191	n=112				
p=	.081	.051	.000	.001	.044					
PME	.308	.229	.308	.186	.273	.531	n=112			
p=	.001	.015	.001	.050	.004	.000				
OCQ13ITM	.263	.187	.482	.199	.221	.771	.532	n=112		
p=	.005	.048	.000	.035	.019	.000	.000			
EVQ	.271	.233	.328	.240	.270	.751	.929	.629	n=112	
p=	.004	.013	.000	.011	.004	.000	.000	.000		
OCQ	.256	.191	.494	.223	.220	.822	.540	.995	.647	
p=	.006	.044	.000	.018	.020	.000	.000	.000	.000	
	TASK	ADVOCACY	LOYALTY	FRIENDS	COUNTRY	SEV	PME	OCQ13ITM	EVQ	OCQ

**Figure 18: Tests of EVQ as a mediator between the created measures and organizational commitment**

<b>Variables:</b>	<b>Source:</b>
Mediator: EVQ	Shared ethical values questionnaire (Hunt, Wood & Chonko, 1989)
Dependent: OCQ	Organizational commitment questionnaire (Mowday, Steers & Porter, 1979)
Independent: TASK, ADVOCACY, LOYALTY, FRIENDS, COUNTRY	Current study

**Tests:** ( $p < .05$ )

Test 1: Independent must effect mediator in Formula 5a.

Test 2: Independent must effect dependent in Formula 5b.

Test 3: Mediator must effect dependent in Formula 5c.

Test 4: If tests 1,2 & 3 pass, independent's effect on dependent must be less in 5c than in 5b.

Formula 5a

$$(5a) \quad \eta_{evq} = B_1^{(5a)} \eta_1 + B_2^{(5a)} \eta_2 + \dots + B_i^{(5a)} \eta_i + \zeta_{evq}^{(5a)}$$

EVQ = .184 TASK -.100 ADVOCACY + .200 LOYALTY + .080 FRIENDS + .166 COUNTRY

p-value(.084)      (.451)      (.098)      (.389)      (.184)

Test 1: fail\*      fail      fail\*      fail      fail

Model statistics:

$R^2 = .158$       Adjusted  $R^2 = .119$

$F = 3.993$       Significance of  $F = .002$

Formula 5b

$$(5b) \quad \eta_{ocq} = B_1^{(5b)} \eta_1 + B_2^{(5b)} \eta_2 + \dots + B_i^{(5b)} \eta_i + \zeta_{ocq}^{(5b)}$$

OCQ = .098 TASK -.252 ADVOCACY + .552 LOYALTY + .077 FRIENDS + .059 COUNTRY

p-value(.321)      (.041)      (.000)      (.422)      (.607)

Test 2: fail      pass      pass      fail      fail

Model statistics:

$R^2 = .280$       Adjusted  $R^2 = .246$

$F = 8.242$       Significance of  $F = .000$

Formula 5c

$$(5c) \quad \eta_{ocq} = B_1^{(5c)} \eta_1 + B_2^{(5c)} \eta_2 + \dots + B_i^{(5c)} \eta_i + B_{evq}^{(5c)} \eta_{evq} + \zeta_{ocq}^{(5c)}$$

OCQ = -.004 TASK -.197 ADVOCACY + .442 LOYALTY + .028 FRIENDS -.032 COUNTRY + .551 EVQ

p-value(.960)      (.048)      (.000)      (.719)      (.730)      (.000)

Test3:                               pass

Test4: no test      no test      no test\*\*      no test      no test

Model statistics:

$R^2 = .535$       Adjusted  $R^2 = .509$

$F = 20.152$       Significance of  $F = .000$

\* passes test at the  $p < .10$  significance level

\*\* passes test of partial mediation at the  $p < .10$  significance level

**Figure 19: Tests of SEV as a mediator between the created measures and organizational commitment**

<b>Variables:</b>	<b>Source:</b>
Mediator: SEV	Four-item shared ethical values scale (2 items from Hunt, Wood & Chonko, 1989, two items from Mowday, Steers & Porter, 1979)
Dependent: OCQ(13)	Thirteen items from Mowday, Steers & Porter's (1979) OCQ
Independent: TASK, ADVOCACY, LOYALTY, FRIENDS, COUNTRY	Current study

**Tests:** ( $p < .05$ )

Test 1: Independent must effect mediator in Formula 5a.

Test 2: Independent must effect dependent in Formula 5b.

Test 3: Mediator must effect dependent in Formula 5c.

Test 4: If tests 1, 2 & 3 pass, independent's effect on dependent must be less in 5c than in 5b.

**Formula 5a**

$$(5a) \quad \eta_{sev} = B_1^{(5a)} \eta_1 + B_2^{(5a)} \eta_2 + \dots + B_I^{(5a)} \eta_i + \zeta_{sev}^{(5a)}$$

SEV = -.019 TASK -.133 ADVOCACY + .456 LOYALTY + .240 FRIENDS -.058 COUNTRY

p-value (.854) (.293) (.000) (.017) (.624)

Test 1: fail fail pass pass fail

Model statistics:

$R^2 = .227$  Adjusted  $R^2 = .191$

$F = 6.230$  Significance of  $F = .000$

**Formula 5b**

$$(5b) \quad \eta_{ocq(13)} = B_1^{(5b)} \eta_1 + B_2^{(5b)} \eta_2 + \dots + B_I^{(5b)} \eta_i + \zeta_{ocq(13)}^{(5b)}$$

OCQ(13) = .118 TASK -.257 ADVOCACY + .532 LOYALTY + .045 FRIENDS + .085 COUNTRY

p-value (.237) (.039) (.000) (.646) (.465)

Test 2: fail pass pass fail fail

Model statistics:

$R^2 = .267$  Adjusted  $R^2 = .233$

$F = 7.726$  Significance of  $F = .000$

**Formula 5c**

$$(5c) \quad \eta_{ocq(13)} = B_1^{(5c)} \eta_1 + B_2^{(5c)} \eta_2 + \dots + B_I^{(5c)} \eta_i + B_{sev}^{(5c)} \eta_{sev} + \zeta_{ocq(13)}^{(5c)}$$

OCQ(13) = .131 TASK -.162 ADVOCACY + .210 LOYALTY -.125 FRIENDS + .126 COUNTRY + .707 SEV

p-value (.058) (.060) (.012) (.071) (.118) (.000)

Test 3: pass

Test 4: no test no test pass no test no test

Mediation: no test no test partial no test no test

(full mediation exists if independent's effect = 0 in Formula 5c)

Model statistics:

$R^2 = .654$  Adjusted  $R^2 = .634$

$F = 33.016$  Significance of  $F = .000$

**Figure 20: Tests of SEV as a mediator between the created measures and organizational commitment (controlling for PME)**

Variables:	Source:
Mediator: SEV	Four-item shared ethical values scale (2 items from Hunt, Wood & Chonko, 1989, two items from Mowday, Steers & Porter, 1979)
Dependent: OCQ(13)	Thirteen items from Mowday, Steers & Porter's (1979) OCQ
Independent: TASK, ADVOCACY, LOYALTY, FRIENDS, COUNTRY	Current study
Control: PME	Perceived managerial enforcement (3 items: Hunt, Wood & Chonko, 1989)

**Tests: (p<.05)**

Test 1: Independent must effect mediator in Formula 5a.

Test 2: Independent must effect dependent in Formula 5b.

Test 3: Mediator must effect dependent in Formula 5c.

Test 4: If tests 1,2 & 3 pass, independent's effect on dependent must be less in 5c than in 5b.

**Formula 5a**

$$(5a) \quad \eta_{sev} = B_1^{(5a)}\eta_1 + B_2^{(5a)}\eta_2 + \dots + B_i^{(5a)}\eta_i + B_{pme}^{(5a)}\eta_{pme} + \zeta_{sev}^{(5a)}$$

SEV = -.141 TASK -.076 ADVC. + .382 LOYALTY + .235 FRIENDS - .167 COUNTRY + .476 PME

p-value (.124) (.493) (.000) (.008) (.115) (.026)

Test 1: fail fail pass pass fail

Model statistics:

R<sup>2</sup> = .417 Adjusted R<sup>2</sup> = .383

F = 12.494 Significance of F = .000

**Formula 5b**

$$(5b) \quad \eta_{ocq(13)} = B_1^{(5b)}\eta_1 + B_2^{(5b)}\eta_2 + \dots + B_i^{(5b)}\eta_i + B_{pme}^{(5b)}\eta_{pme} + \zeta_{ocq(13)}^{(5b)}$$

OCQ(13) = .007 TASK -.205 ADVC. + .466 LOYALTY + .040 FRIENDS -.014 COUNTRY + .430 PME

p-value (.937) (.065) (.000) (.647) (.897) (.000)

Test 2: fail fail\* pass fail fail

Model statistics:

R<sup>2</sup> = .423 Adjusted R<sup>2</sup> = .389

F = 12.757 Significance of F = .000

**Formula 5c**

$$(5c) \quad \eta_{ocq(13)} = B_1^{(5c)}\eta_1 + B_2^{(5c)}\eta_2 + \dots + B_i^{(5c)}\eta_i + B_{sev}^{(5c)}\eta_{sev} + B_{pme}^{(5c)}\eta_{pme} + \zeta_{ocq(13)}^{(5c)}$$

OCQ(13) = .098 TASK -.156 ADVC. + .220 LOYALTY -.111 FRIENDS + .094 COUNTRY + .643 SEV + .124 PME

p-value (.167) (.068) (.009) (.107) (.250) (.000) (.088)

Test 3: pass

Test 4: no test no test pass no test no test

Mediation: no test no test partial no test no test

(full mediation exists if independent's effect = 0 in Formula 5c)

Model statistics:

R<sup>2</sup> = .663 Adjusted R<sup>2</sup> = .641

F = 29.258 Significance of F = .000

\* passes test at the p<.10 significance level

**Figure 21: Tests of PME as a mediator between the created measures and organizational commitment**

<u>Variables:</u>	<u>Source:</u>
Mediator: PME	Perceived managerial enforcement (3 items: Hunt, Wood & Chonko, 1989)
Dependent: OCQ(13)	Thirteen items from Mowday, Steers & Porter's (1979) OCQ
Independent: TASK, ADVOCACY, LOYALTY, FRIENDS, COUNTRY	Current study

Tests: ( $p < .05$ )

Test 1: Independent must effect mediator in Formula 5a.

Test 2: Independent must effect dependent in Formula 5b.

Test 3: Mediator must effect dependent in Formula 5c.

Test 4: If tests 1,2 & 3 pass, independent's effect on dependent must be less in 5c than in 5b.

Formula 5a

$$(5a) \quad \eta_{pme} = B_1^{(5a)} \eta_1 + B_2^{(5a)} \eta_2 + \dots + B_i^{(5a)} \eta_i + \zeta_{pme}^{(5a)}$$

PME = .157 TASK - .120 ADVOCACY + .156 LOYALTY + .011 FRIENDS + .229 COUNTRY

p-value (.017)      (.363)      (.195)      (.913)      (.066)

Test 1: pass      fail      fail      fail      fail\*

Model statistics:

$R^2 = .164$       Adjusted  $R^2 = .125$

$F = 4.160$       Significance of  $F = .002$

Formula 5b

$$(5b) \quad \eta_{ocq(13)} = B_1^{(5b)} \eta_1 + B_2^{(5b)} \eta_2 + \dots + B_i^{(5b)} \eta_i + \zeta_{ocq(13)}^{(5b)}$$

OCQ(13) = .118 TASK - .257 ADVOCACY + .532 LOYALTY + .045 FRIENDS + .085 COUNTRY

p-value (.237)      (.039)      (.000)      (.646)      (.465)

Test 2: fail      pass      pass      fail      fail

Model statistics:

$R^2 = .267$       Adjusted  $R^2 = .233$

$F = 7.726$       Significance of  $F = .000$

Formula 5c

$$(5c) \quad \eta_{ocq(13)} = B_1^{(5c)} \eta_1 + B_2^{(5c)} \eta_2 + \dots + B_i^{(5c)} \eta_i + B_{pme}^{(5c)} \eta_{pme} + \zeta_{ocq(13)}^{(5c)}$$

OCQ(13) = .007 TASK - .205 ADVOC. + .466 LOYALTY + .040 FRIENDS - .014 COUNTRY + .430 PME

p-value (.937)      (.065)      (.000)      (.647)      (.897)      (.000)

Test 3:                               pass

Test 4: no test      no test      no test      no test      no test

Model statistics:

$R^2 = .423$       Adjusted  $R^2 = .389$

$F = 12.757$       Significance of  $F = .000$

\* passes test at the  $p < .10$  significance level

**Figure 22: Tests of PME as a mediator between the created measures and organizational commitment (controlling for SEV)**

**Variables:**

**Source:**

Mediator: PME	Perceived managerial enforcement (3 items: Hunt, Wood & Chonko, 1989)
Dependent: OCQ(13)	Thirteen items from Mowday, Steers & Porter's (1979) OCQ
Independent: TASK, ADVOCACY, LOYALTY, FRIENDS, COUNTRY	Current study
Control: SEV	Four-item shared ethical values scale (2 items from Hunt, Wood & Chonko, 1989, two items from Mowday, Steers & Porter, 1979)

Tests: ( $p < .05$ )

Test 1: Independent must effect mediator in Formula 5a.

Test 2: Independent must effect dependent in Formula 5b.

Test 3: Mediator must effect dependent in Formula 5c.

Test 4: If tests 1,2 & 3 pass, independent's effect on dependent must be less in 5c than in 5b.

**Formula 5a**

$$(5a) \quad \eta_{pme} = B_1^{(5a)} \eta_1 + B_2^{(5a)} \eta_2 + \dots + B_i^{(5a)} \eta_i + B_{sev}^{(5a)} \eta_{sev} + \zeta_{pme}^{(5a)}$$

PME = .266 TASK -.051 ADVOCACY -.079 LOYALTY -.112 FRIENDS + .259 COUNTRY + .515 SEV

p-value(.005) (.657) (.480) (.228) (.018) (.000)

Test 1: pass fail fail fail pass

Model statistics:

$R^2 = .369$  Adjusted  $R^2 = .333$

$F = 10.230$  Significance of  $F = .000$

**Formula 5b**

$$(5b) \quad \eta_{ocq(13)} = B_1^{(5b)} \eta_1 + B_2^{(5b)} \eta_2 + \dots + B_i^{(5b)} \eta_i + B_{sev}^{(5b)} \eta_{sev} + \zeta_{ocq(13)}^{(5b)}$$

OCQ(13) = .131 TASK -.162 ADVC. + .210 LOYALTY -.125 FRIENDS + .126 COUNTRY + .707 SEV

p-value (.058) (.060) (.012) (.071) (.118) (.000)

Test 2: fail\* fail\* pass fail\* fail

Model statistics:

$R^2 = .654$  Adjusted  $R^2 = .634$

$F = 33.016$  Significance of  $F = .000$

**Formula 5c**

$$(5c) \quad \eta_{ocq(13)} = B_1^{(5c)} \eta_1 + B_2^{(5c)} \eta_2 + \dots + B_i^{(5c)} \eta_i + B_{pme}^{(5c)} \eta_{pme} + B_{sev}^{(5c)} \eta_{sev} + \zeta_{ocq(13)}^{(5c)}$$

OCQ(13) = .098 TASK -.156 Advc. + .220 LOYALTY -.111 FRIENDS + .094 COUNTRY + .124 PME + .643 SEV

p-value (.167) (.068) (.009) (.107) (.250) (.088) (.000)

Test 3: fail\*

Test 4: no test\*\* no test no test no test no test

Model statistics:

$R^2 = .663$  Adjusted  $R^2 = .641$

$F = 29.258$  Significance of  $F = .000$

\* passes test at the  $p < .10$  significance level

\*\* passes tests of full mediation at the  $p < .10$  significance level

## CHAPTER 5 - SUMMARY AND CONCLUSIONS

### Overview

The purpose of this study was to explore the proposed corporate character ethical value matrix (CC-EVM), and test the uniqueness of its constructs. Specifically, this study developed a survey instrument from items in the existing literature, administered the instrument to both student and industry samples, and compared the underlying factors of that instrument to the constructs suggested by the proposed matrix. This research developed scales from these underlying factors, assessed the reliability of those scales, and made inferences concerning those measures' validity using existing measures.

This chapter reviews the study and its results, then presents a discussion of those results and the researcher's conclusions. This chapter also presents the limitations of the study and implications for both researchers and practitioners.

### The Nicholson Framework

Nicholson (1994) proposed a four-level framework for research in business ethics. The second level, ethical domains, contains both the exogenous and endogenous focus of the organization's interests and goals. A significant problem, as stated by Nicholson (1994), was a lack of clarity in the definitions and classifications within the ethical domain analysis level of the framework.



### Problem and Purpose

This research addressed the weaknesses in the Nicholson (1994) framework by defining an ethical value and presenting a classification structure for ethical values known as the Corporate Character Ethical Value Matrix or CC-EVM. The research explored the proposed CC-EVM theory by 1) analyzing the uniqueness of the constructs in the CC-EVM, 2) developing a measure for each, and 3) considering the validity and reliability of these measures against known variables of interest.

The current study limited its focus to Nicholson's second level of analysis, ethical domains, as being separate from the ethical environment, ethical functioning or ethical process of the firm. Nicholson's endogenous domains, values and interpersonal, are similar in scope to the current study. The current study's definitions and classifications add clarity to Nicholson's (1994) definitions of these domains.

### Significance

The current study's CC-EVM theory improves the clarity of Nicholson's (1994) framework. The CC-EVM (1) presents stronger theoretical classes than Nicholson; (2) clearly identifies the moral agent as the individual holding the values and making the decision; and (3) the constructs comprising the CC-EVM comprise a clearly definable set more applicable to empirical research.

In addition, this research represents the first operationalization of the six values put forth by the Josephson Institute, presenting a logical framework for (1) discussing and measuring ethical values in business and (2) continuing empirical research in business ethics.

### **Theory and Definition -- The corporate character ethical value matrix**

The current study drew heavily on Rokeach (1973) in defining an ethical value as **a guide or standard for right or good interpersonal behavior**. The Corporate Character Ethical Value Matrix (CC-EVM) theory considered those values guiding interpersonal behavior within an organizational context. The CC-EVM sought to define the underlying values that guide behavior in both the organizational trust and organizational citizenship literature. The two dimensions of the CC-EVM were ethical behavior types and ethical behavior targets.

#### **Behavior Types Dimension**

The behavior types dimension defined an ethical behavior's impact on the status quo. Assuming an existing (positive) status quo, ethical behaviors would either maintain or improve the status quo. Those behaviors serving only to maintain the status quo were defined in this theory as **custodial**. Those behaviors improving the status quo were defined in the theory as **proactive**. The status quo changes negatively due to the absence of a custodial behavior, or positively due to the presence of a proactive behavior. Custodial values would guide custodial behaviors, and proactive values would guide proactive behaviors.

#### **Behavior Targets Dimension**

The ethical behavior targets dimension defined at what or whom the ethical behavior is directed. Building upon the Michigan and Ohio State leadership studies (Yukl, 1994) the two primary behavior targets were **task** and **consideration**. In general, targets of consideration could include identifiable individuals, groups, or the organization as a whole. The CC-EVM further broke consideration down along those lines to

**consideration-specific**, dealing with identifiable individuals, and **consideration-general**, dealing with larger groups or the organization as a whole.

### **The Corporate Character Ethical Value Matrix**

The behavior types and targets dimensions combined to create a two x three matrix of ethical values. Labels for the six cells of the matrix were taken from the Character Counts Coalition's six pillars of character (Hanson, 1992).

**Figure 2: The Corporate Character Ethical Values Matrix (CC-EVM)**

<b>Targets Types</b>	<b>Task</b>	<b>Consideration-specific</b>	<b>Consideration-general</b>
<b>Custodial</b>	<b>Trustworthiness</b>	<b>Respect</b>	<b>Justice &amp; Fairness</b>
<b>Proactive</b>	<b>Responsibility</b>	<b>Caring</b>	<b>Citizenship &amp; Civic Virtue</b>

### **Hypotheses**

Tests of the five research hypotheses would provide evidence to support or not support the construct validity of the developed measures. Testing these hypotheses required factor analysis, reliability analysis, correlation, one-way ANOVA, and regression analysis. Types of validity considered included discriminant ( $H_1$ ), convergent ( $H_{2a-d}$ ,  $H_3$ ), and criterion ( $H_4$ ,  $H_5$ ). The hypotheses appear in the affirmative.

**Hypothesis One ( $H_1$ ):** Items in the created measures of ethical values will produce an interpretable six factor solution relating to six substantive categories of ethical values.

**Hypothesis Two-a ( $H_{2a}$ ):** Machiavellianism will negatively associate with the substantive categories of ethical values.

Hypothesis Two-b ( $H_{2b}$ ): External Locus of Control will negatively associate with the substantive categories of ethical values.
Hypothesis Two-c ( $H_{2c}$ ): There will exist no relationship between biological gender and the substantive categories of ethical values.
Hypothesis Two-d ( $H_{2d}$ ): There will exist no relationship between psychological gender and the substantive categories of ethical values.
Hypothesis Three ( $H_3$ ): Assessments of ethical behavior will positively associate with the substantive categories of ethical values.
Hypothesis Four ( $H_4$ ): Organizational commitment will positively associate with individual's perception of shared ethical values.
Hypothesis Five ( $H_5$ ): The substantive categories of ethical values will positively affect organizational commitment through the mediator of perception of shared ethical values.

### **Literature**

The literature review in chapter two contained four main streams of literature: organizational trust, organizational citizenship behavior, values and ethics, and organizational commitment. The first three literatures provided the theoretical base for the CC-EVM theory and indicated relevant measures regarding convergent and discriminant validity. The organizational commitment (OC) literature explored OC as a relevant dependent variable for criterion validity.

### **Trust**

The trust literature considered definitions and empirical dimensions of organizational trust. Organizational trust may function as control (Barber, 1983) and has both cognitive and affective

components (McAllister, 1995). The trust literature provided support for the potential existence of the behavior-type and behavior-target dimensions of the CC-EVM.

### **Organizational Citizenship Behavior**

The organizational citizenship behavior literature has had two major conceptualizations. Organ and Bateman (1983) defined OCB as extra-role behavior taken to "lubricate the social machinery of the organization (p. 588). Graham (1991) conceptualized OCB as political citizenship applied to covenantal organizations. Some research has considered both trust and OCB, however trust has been viewed as a moderator rather than part of an interrelated construct (e. g., Konovsky & Pugh, 1984; Robinson & Morrison, 1995). Van Dyne, Graham and Dienesch(1994) found five factors of OCB along Graham's(1991) conceptualization: obedience, loyalty, advocacy participation, social participation, and functional participation. Chapter two's review of the OCB literature draws a theoretical connection between OCB and the trust literature, and supports the theorized three behavior targets of the CC-EVM.

### **Values and Ethics**

The business ethics literature attempts to define and determine right from wrong in a business setting, but offers little empirical research (Ford & Richardson, 1994). Inconsistent definitions of business ethics led Lewis (1985) to state that defining business ethics was "like nailing Jell-O to a wall" (Lewis, 1985, p. 223). The review of the values literature started with Rokeach (1973) who presented values as behavior guides and standards. Kanbanoff, Waldersee, and Cohen (1995)

separated a value system from a value hierarchy, the former presenting a priority based ordering of values, and the latter allowing interaction and conflict among the values. Several theorists and researchers have considered the impact of values on corporate strategy. Most of the theorists agree with McCoy (1985) that values and strategy are inextricably linked. Empirical research has not found a strong relationship between ethics and dependent variables external to the organization (Jayaraman & Min, 1993).

Several theories in ethical decision making exist in the literature. The two theories most explored in the ethics literature have been Kohlberg's (1976) Cognitive Moral Development theory, and Forsyth's (1980) taxonomy of ideologies. The decision making model proposed by Josephson and the Character Counts Coalition (1993) has gained a great deal of public recognition. Despite this recognition, there has been no empirical research on the Josephson model prior to this study.

The literature review found four measures related to ethical behavior or values as a basis to consider the construct validity of the CC-EVM: Machiavellianism (Christie & Geis, 1970), Locus of control (Rotter, 1966), biological and psychological gender (Bem, 1974), and ethical evaluations (Reidenbach & Robin, 1990). Two additional issues in business were explored, Codes of ethics, and business ethics education. The review of the ethics and values literature found a lack of clarity and direction in empirical research.

### **Organizational Commitment**

Findings in the literature indicate that organizational commitment, as conceptualized by Mowday, Steers & Porter (1979)

correlates with important organizational outcomes, most notably turnover and absenteeism (Mathieu & Zajac, 1990). Hunt, Wood, and Chonko (1989) found a perception of shared ethical values correlated with organizational commitment, but did not identify or classify those values.

The literature review noted a possible link between trust and OCB, both of which are multidimensional constructs. As the field of business ethics lacks clear definition and direction for empirical research, the Josephson values, as classified by the CC-EVM, may provide needed direction. Finally, because the link has not been clearly established between ethics and performance, an internal measure such as organizational commitment may be more appropriate as a criterion validity variable.

## **Methods**

### **Participants**

The samples used in this study came from two distinct populations. The first sample (n=324) was drawn from students in graduate and undergraduate organizational behavior classes at a major urban South-East university over two semesters. The second sample (n=112) came from a national population of employees from 50 independent insurance agencies with representatives on the Independent Insurance Agents of America (IIAA) Board of Directors.

## **Measures**

### **The Corporate Character Questionnaire**

The initial Corporate Character Questionnaire (CCQ) developed for this study contained 68 items drawn from the trust and organizational citizenship literature. The largest set of items (34) came from Van Dyne, Graham & Dienesch's (1994) reported five measures of organizational citizenship behavior from a political citizenship perspective: obedience, loyalty, social participation, advocacy participation, and functional participation. Eleven items came from McAllister's (1995) scales measuring cognitive-based trust (CBT) and affective-based trust (ABT). Twenty-one items developed for the current study came from statements published by the Character Count's Coalition (1993). Two additional items came from Scott (1965) measuring honesty and self-control. The researcher reworded all negatively phrased items to positive as recommended by Hinkin (1995), and rephrased each item in the plural to avoid gender bias.

### **Other Measures**

The student sample responded to three personality measures: the Bem Sex Role Inventory (Bem, 1974), Rotter's (1966) internal-external locus of control scale, and Christie & Geis' (1970) Machiavellianism (Mach-IV) scale. In addition, a subset of the student sample provided responses to Reidenbach & Robin's (1990) multidimensional ethics scale (MES) measuring ethical evaluation. The industry sample provided responses to Mowday Steers & Porter's (1979) organizational commitment questionnaire (OCQ) and Hunt, Wood and Chonko's (1989) corporate shared



ethical values questionnaire (EVQ). Both samples provided demographic data.

## **Procedures**

### **Data Collection**

Data collection took place from September 1996 to February 1997. Students provided responses to all measures with the exception of the multidimensional ethics scale (MES: Reidenbach & Robin, 1990) and the corporate character questionnaire (CCQ: developed for this study) as part of a personal assessment package included in their course work. The researcher distributed the CCQ with the personal assessment package in an identical format. An in-class exercise provided the MES data.

The data collection procedure for the industry data included 50 packages of 10 surveys to each of the IIAA Board of Director's agencies. Each package contained a cover letter from the researcher and an additional cover letter from a professional representative of the industry group requesting participation. An included stamped envelope addressed each survey directly to the researcher. A reminder/thank-you letter went to each of the agencies three weeks later.

## **Results**

### **Item Reduction**

The item reduction procedure consisted of four series of factor analyses. Each factor analysis began with a principle components analysis retaining factors with eigenvalues greater than one, with VERIMAX rotation. Items which failed to discriminate between the factors at a determined level (.20 in the first series, .10 in the other

three) dropped from further analysis. The process repeated until no items met the reduction criterion. The procedure used three starting sets of items. Seven interpretable factors emerged. By plan, the initial scales contained no more than five items from each interpretable factor.

#### **Internal Consistency Reliability: Cronbach's Alpha**

Reliability assessment on the initial scales using Cronbach's coefficient alpha ( $\alpha$ ) revealed that only five of the seven scales met the accepted criterion for continued research ( $\alpha > .70$ ) (Nunnally, 1978). The alpha for each of these five scales exceeded .80. The researcher labeled these five scales TASK, ADVOCACY, LOYALTY, FRIENDS, and COUNTRY.

#### **Hypothesis Testing: Evidence Of Validity**

A confirmatory factor analysis of the 19 items in the five created scales reproduced the five-factor structure for the student sample, and produced four factors in the industry sample. In the industry sample, items from COUNTRY scale combined with the ADVOCACY and FRIENDS scales. Reliability of all five scales in both samples exceeded of .80. Hypothesis one was not supported, however, because the predicted six-factor solution did not emerge.

Correlation analysis provided support for (1) hypothesis two-a (relationship with Machiavellianism) for two of the five created scales, TASK and ADVOCACY, and (2) hypothesis two-b (relationship with locus of control) for all five of the created scales. Hypothesis two-c (no relationship with biological gender) was supported using a one-way analysis of variance finding no statistical difference in gender means for three of the scales (TASK, ADVOCACY, and LOYALTY). A significant

difference in means ( $p < .05$ ) existed for FRIENDS and COUNTRY with males scoring higher than females on those scales. Hypothesis two-d (no relationship with psychological gender) was supported by non-significant correlations for all five measures with the psychological female measure. The psychological male measure correlated significantly and positively with four of the created scales: ADVOCACY, LOYALTY, FRIENDS and COUNTRY.

Hypothesis three predicted that evaluations of ethical behavior would correlate significantly with the created scales. All three components of Reidenbach and Robin's (1990) multidimensional ethics scale (broad based equity, relativism, and contractualism) inter-correlated significantly ( $p > .01$ ). The correlations of these ethical evaluation measures with the created measures provided mixed support for hypothesis three. Broad-based equity correlated significantly ( $p > .01$ ) with TASK only. The relativism measure did not correlate with any of the created measures, and the contractualism measure correlated significantly with only TASK, LOYALTY and FRIENDS.

Evidence for support of hypotheses four and five came from the industry data. A confirmatory factor analysis of the 20 items in Hunt, Wood & Chonko's (1989) shared ethical values questionnaire (EVQ: five items) and Mowday, Steers & Porter's (1979) organizational commitment questionnaire (OCQ: 15 items) indicated the presence of three interpretable factors. The researcher created three equally weighted scales from these factors: a four-item shared ethical values scale (SEV), a three-item perceived managerial enforcement scale (PME), and a 13-item organizational commitment scale (OC-13item). These three scales and the original OCQ and EVQ scales provided the measures used to test hypothesis four.

Hypothesis four concerned the relationship between shared values and organizational commitment. Current results replicated findings from Hunt, Wood & Chonko's (1979) finding of a significant correlation between shared ethical values and organizational commitment. The currently measured relationship was significant ( $p < .05$ ) for the original Hunt, Wood & Chonko (1979) EVQ measure and the SEV and PME factor scales.

The final hypothesis (five) considered the effect of the created value scales on organizational commitment as mediated by the perception of shared ethical values. Five sets of mediation tests as following Baron and Kenny (1986) used as the mediator: (1) the original shared ethical values questionnaire (EVQ) score (Hunt, Wood & Chonko, 1989), (2) the shared ethical value (SEV) factor scale (current study), (3) SEV controlling for the perceived managerial effectiveness (PME) factor scale (current study), (4) PME and (5) PME controlling for SEV. Results of these five tests indicated that the only created value scale with a consistent significant relationship with the dependent organizational commitment measure was LOYALTY. SEV partially mediated this relationship. All other variable combinations failed the three-stage test of mediation (Baron & Kenny, 1986).

### **Discussion and Conclusions**

The purpose of this research was to explore the corporate character - ethical value matrix (CC-EVM) created for this study by (1) analyzing the uniqueness of the constructs in the CC-EVM, (2) developing a measure for each, and (3) considering the validity and reliability of these measures against known variables of interest. In turn, the current study (1) developed the corporate character questionnaire (CCQ) using items developed in the trust and

organizational citizenship behavior literatures, (2) administered the CCQ to a student sample and to an industry sample, (3) used factor analysis and reliability analysis to explore the underlying structure of the items in the CCQ, (4) developed measures based on that structure, and (5) explored the relationships of those measures to several demographic and personality variables from these samples. This section discusses the extent to which the results accomplished the study's purpose.

The primary purpose of this study was to explore the uniqueness of the constructs in the CC-EVM. The CC-EVM is composed of a two-behavior-type by three-behavior-target matrix of values. The six cells of the matrix should correspond to the six "Pillars of Character" presented by the Character Counts Coalition (1993): trustworthiness, responsibility, respect, caring, justice & fairness, and citizenship & civic virtue, as applied to an organizational setting.

This research proposed that the CC-EVM values underlie the multidimensional constructs of organizational trust and organizational citizenship behavior (OCB). If true, items designed to measure the multidimensional trust and citizenship constructs would, if analyzed together, produce a set of factors corresponding to the CC-EVM. For this study, organizational trust items drawn from McAllister (1995) and OCB items drawn from Van Dyne, Graham & Dienesch (1994) were added to 21 items selected by the researcher from the Character Counts Coalition (1993) and two items from Scott (1965) to provide the item set for analysis.

A confirmatory factor analysis of the measures developed in previous studies indicated that with one exception, probably due to wording changes, McAllister's (1995) affect-based and cognitive-based

trust (ABT & CBT) measures emerged in this study's sample. The change in wording from singular to plural on the background question (see Chapter Four) probably accounts for the shift in factor from CBT to ABT as the rephrased item addressed general people rather than a specific person. These same types of wording changes probably also account for some of the shifting in the Van Dyne et al. (1994) items. One particular change in wording for a Van Dyne et al. is the likely cause for that item's consistently emerging as its own factor. (CCC03: They urge co-workers to invest money in their organization original wording "would not urge co-workers to invest money in organization.")

#### **Uniqueness Of The CC-EVM Constructs**

A six-factor solution would fully support the uniqueness of the constructs in the CC-EVM. Only five factors emerged containing items creating scales with sufficient reliability. The five factors which emerged fall into two groups. The first three factors, the task, advocacy, and loyalty factors, correspond to the behavior target dimension of the CC-EVM: task, consideration-specific and consideration-general. The items in the task factor came primarily from McAllister's (1995) cognitive-based trust measure and Van Dyne, Graham & Dienesch's (1994) obedience and functional participation scales. These items can be interpreted as relating to getting a job done, and doing a job well. The items in the advocacy factor [which came primarily from Van Dyne, Graham & Dienesch's (1994) advocacy scale] correspond to specific relationships with others (e.g. managers & coworkers). The items in the loyalty factor [which came primarily from Van Dyne, Graham & Dienesch's (1994) loyalty scale] correspond to a general relationship with the organization as a whole rather than with specific individuals. The last

two factors, concern for friends and concern for country, are more constituency specific. All the items in the last two factors came from items developed for this study from the Character Counts Coalition (1993), rather than the trust or OCB literatures.

The main question arising from these results is the reason for the failure of the behavior-type dimension (proactive & custodial) to emerge. This failure may be explained by the lack of a clear conceptual distinction between proactive custodial types of behaviors, or by the failure of the items in the item-set to tap into that domain. As mentioned in chapter one, the difference between custodial and proactive behaviors may be context or role specific; that is, a custodial behavior in one situation may be a proactive behavior in another. This element in the distinction between custodial and proactive types of behaviors may have prevented the more generally-phrased items in the CCQ from capturing any distinction between the two behavior types.

While the results failed to support hypothesis one, they do support one of the two dimensions of the CC-EVM. Results from this study support a clear conceptual distinction among behavior targets: task, consideration-specific, and consideration-general. Future additions to the item-set, or changes in item wording or measurement method to capture the context or role specific nature of the behavior-type dimension might be needed to make further inferences about that dimension.

### **Measures Of The CC-EVM Constructs**

The item reduction procedures detailed in chapters three and four produced five factors containing items sets from which to build reliable ( $\alpha > .70$ ) measures (Nunnally, 1978). The five highest loading items in

the task factor became the TASK measure ( $\alpha=.87$ ). The four other measures contained all the items in each of their respective factors: five items each in ADVOCACY ( $\alpha=.84$ ) & LOYALTY( $\alpha=.80$ ), and two items each in FRIENDS( $\alpha=.85$ ) & COUNTRY( $\alpha=.81$ ). The remainder of the discussion section concerns the inferences made about the validity of these measures.

### **Convergent and discriminant validity**

Convergent validity deals with the extent to which measures exhibit relationships with variables with which they are expected to relate. Discriminant validity deals with the extent to which measures exhibit no relationships with variables from which they are expected to be separate. In this study, convergent validity was addressed by hypotheses two-a and two-b, which predicted the created measures' relationships with Machiavellianism (Christie & Geis, 1970), and locus of control (Rotter, 1966). Discriminant validity was addressed by hypotheses two-c and two-d, which predicted the created measures' relationships with biological gender and psychological gender (Bem, 1974).

Only one of the five created measures, TASK, exhibited all of hypothesis two's predicted relationships. ADVOCACY exhibited all but one of the expected relationships because an unpredicted relationship emerged between the created measure and the psychological MALE measure. LOYALTY exhibited the expected relationships with locus of control and biological gender. The relationship between LOYALTY and Machiavellianism was in the predicted direction, but failed the test of significance ( $p=.059$ ). A relationship emerged between LOYALTY and the psychological MALE measure. FRIENDS and COUNTRY both failed to exhibit



the expected relationship with Machiavellianism, and both FRIENDS and COUNTRY exhibited relationships with both biological gender and the psychological MALE measure where no such relationships were predicted.

More consistent findings emerged in earlier studies for Machiavellianism and locus of control than for gender (Ford & Richardson, 1994). The gender findings dealt predominantly with biological and not psychological gender. Comparisons of the relationships between these validation measures and the created measures again points to a separation of the created measures into two groups. The first three measures, TASK, ADVOCACY and LOYALTY exhibited relationships with: (1) locus of control ( $p > .05$ ), (2) Machiavellianism ( $p > .10$ ); and failed to exhibit any relationship with biological gender or the psychological FEMALE measure. The other two measures, FRIENDS and COUNTRY both fail to exhibit any relationship with Machiavellianism, but positively correlated ( $p > .05$ ) with biological gender. Hypothesis two results provide limited evidence to infer convergent and discriminant validity for three of the created measures, TASK, ADVOCACY and LOYALTY. Such inferences for FRIENDS and COUNTRY would be inappropriate.

Hypothesis three predicted the created measures would correlate positively with assessments of ethical behavior. The results indicated only four of the possible 15 relationships emerged among the five created measures and the three factors (broad-based equity, relativism and contractualism) of Reidenbach & Robin's (1990) MES. At first glance, the MES correlations seemed disappointing because only four of the predicted fifteen significant correlations emerged. Upon further consideration of the underlying MES factors, the pattern of results indicated discrimination among the five measures created in this study.

No significant correlations existed at the  $p < .05$  level between any of the created measures and relativism (REL). The correlation between TASK and relativism was significant at the  $p < .10$  significance level. The TASK measure also correlated significantly ( $p < .05$ ) with broad based equity and contractualism. The other four scales failed to demonstrate a significant correlation with either broad-based equity or relativism. No correlation with the consideration target values coupled to a significant correlation with the task target value indicates discrimination between these two values. The relationships are significant between contractualism and three of this study's measures at the  $p < .05$  level (TASK, LOYALTY, and FRIENDS), and ADVOCACY which is significant at the  $p < .10$  level. This finding indicates not only that contractualism (importance of implied contracts) differentiates from the other ethical evaluation factors, but that the violation of unwritten promises and contracts are salient to this student sample, as these violations correlate negatively to good character in business. Results for the ethical evaluation hypothesis (hypothesis three) indicated that the hypothesis, as stated, received no support. The results do indicate a pattern of discrimination among the measures.

Hypothesis four was supported, indicating that shared ethical values correlate with organizational commitment. The interesting implication here, however, is not the replication of the Hunt, Wood, and Chonko (1989) findings, but the apparent differentiation between shared ethical values and perceived managerial enforcement found in the confirmatory factor analysis. This differentiation may be in part due to the separation between the cognitive and behavioral components of the perception of shared ethical values construct. The sample size ( $n=112$ ) is small for strong conclusions from the factor analysis, however the

differentiation between shared values and perceived enforcement would be an interesting area for future research.

The final point of discussion addresses the results of the mediation tests. While a few instances of partial mediation (as indicated by the Baron & Kenny[1986] criteria) occurred, primarily with LOYALTY as the independent of interest and Shared Ethical Values as the mediator, overall the limited mediation findings were disappointing. Results indicating a relationship between shared values and commitment combined with results indicating a relationship between created value measures and commitment indicated that there should be some relationship between values, shared values and commitment. That relationship, however, may take the form of a moderator (changing the nature of the relationship between values and commitment) rather than a mediator (as part of the causal relationship link). The method of data collection and sample size makes that determination difficult. Future research of shared values as moderators may be appropriate.

### **Summary of Conclusions**

The results support one dimension of the CC-EVM, that of behavior targets. This finding converges with the empirical organizational citizenship behavior literature. Becker & Vance (1993) inferred validity for three similar constructs: (1) local altruism defined as behaviors toward individuals with whom the respondent interacts regularly, (2) distant altruism defined as behaviors toward more generalized others, and (3) conscientiousness defined as compliance with organizational rules and norms. The distinction between this study's findings and those of Becker and Vance is that while their earlier research classified behaviors, the current research considered the

underlying values guiding behaviors. In short, individuals who exhibit these behaviors are considered good people with whom to work. Results neither support nor disconfirm the existence of the behavior types dimension.

As expected, shared ethical values and organizational commitment were highly related, replicating the Hunt, Wood, and Chonko (1989) findings. An interesting result was the appearance of a differentiation between shared ethical values and the perception of managerial enforcement. Only very limited support was found for the mediation effect of shared ethical values between the value measures and organizational commitment, with the LOYALTY measure providing the strongest results.

## **Implications**

### **Implications For Research**

The findings in this study raise several interesting issues worthy of future research. Four of the most interesting are addressed here: (1) further exploration of the ethical behavior types dimension of the CC-EVM, (2) the connection between the loyalty value and organizational commitment, (3) further exploration of shared ethical values as a separate construct from the perception of managerial enforcement, and (4) further exploration of the referent person used when defining good or right behavior.

While the results of this study do not support the existence of the behavior-types dimension (custodial and proactive behaviors), the results do not refute that dimension's existence. Because custodial and proactive behaviors may be defined differently in different situations, a measurement method other than the one used in this study may be more

appropriate. If the difference between a custodial and a proactive behavior is, in part, defined by the individuals role, a scaling technique responding to a scenario may be appropriate. The scenario would establish the role definition more clearly. Regardless of method, more work is needed to clearly define and validate the behavior-type dimension.

Loyalty was found to have the strongest relationship to organizational commitment. Van Dyne et al. (1994) found a consistent pattern of relationships between loyalty and its antecedents mediated through a covenantal relationship. The fact that the loyalty items factored out as a set in both the current study and Van Dyne et al's study indicates that loyalty is a fairly broad-based concept. The consistent pattern of relationships in both studies points to loyalty as a variable of interest for future research. One idea to pursue is the portion of the variance in organizational commitment attributable to an individual's value of loyalty.

A third topic for additional research is that of the unexpected differentiation between shared ethical values and perceived managerial enforcement. Hunt, Wood, and Chonko (1989) found only one factor emerging from the five items. Both cognitive and behavioral factors emerged in the current study, and these factors functioned differently as mediators. Further exploration of these as separate factors is in order.

Finally, the respondents to the Corporate Character Questionnaire were asked to describe the behaviors of people the respondent's felt were good to work with in a business setting. Future research should explore who those referent people are, and how different reference people change individual's responses.

### Implications For Practitioners

Josephson's decision making model (see chapter two) begins with identifying relevant stakeholders. This study identified three separate targets of ethical behavior: Task, Consideration-specific and Consideration-general. These three targets can serve as a starting point for identifying and classifying relevant stakeholders, thus improving the ethical decision-making process.

By moving toward the classifications of ethical domains, this research allows those involved in the strategic planning process to more clearly identify the values important to their employees and companies. The finding of support for construct validity of the three scales (TASK, ADVOCACY, and LOYALTY) indicates that individuals differentiate among the three targets of ethical behavior and that all three targets are important at some level. Strategists can use this classification structure to provide initial direction toward incorporating ethics in the strategic planning process, and to use as an aid in drafting codes of ethics.

Perhaps the most immediate user of this research is the business ethics educator. The framework and the clarification of the values definitions in the ethical domains provide additional tools for presenting information and promoting discussion in the business ethics classroom.

Vogel (1992) postulated that American society's interest in business ethics arises from a historical interconnection between America's culture, business institutions, and heroes. When businesses fail to live up to the public's high expectations, business betrays the trust of the public. "Because the public's expectations of business conduct are so high, the invariable result is a consistently high level

of public dissatisfaction with the actual ethical performance of business" (Vogel, 1992: 43). The current research is another step in helping business live up to the public's high expectations by defining and clarifying ethical values.

### **Limitations**

As with any study, the samples used limit the generalizability of results. The combination of a diverse urban university student sample and a nationwide industry sample mitigates this problem somewhat, but does not allow statements of broad generalizability. Factor structure of values may or may not replicate across samples, and a specific value's relationship to organizational commitment may vary by industry and even by organization. As Vogel (1992) pointed out, an individual's perceptions of business ethics behavior in the U.S. may be unique to the country's culture, requiring study of the psychometric properties of these new scales across cultures.

There are five areas of concern about the validity of this study. The first, that of measure stability over time, is common to all measure building studies and results from use of new and relatively untested instruments. The second concern is susceptibility to social desirability bias, or that respondents will answer what they think others would want them to respond rather than what they believe. Assurance of anonymity, and Butler's (1991) contention that social desirability is an important part of the variance in trust research notwithstanding, this bias could alter the results of this study if individuals biased their responses on the commitment, shared values or corporate character instruments. The third concern is the so called "contrast" effect whereby individuals report being more ethical than their peers, and the effect of this bias

on validity and generalizability (Cohen, Pant & Sharp, 1993). Fourth, correlations may be higher among measures using similar scales, known as common method variance. The use of a different scaling techniques for the locus of control scale (Rotter, 1966) and for the MES (Reidenbach & Robin, 1990) helped reduce this problem. The fifth concern regards the tests of mediation used in seeking support for the criterion validity of the scales. Tests used (Baron & Kenny, 1986) provide only indication of support or failure of mediation, not proof or disproof of mediation. Any highly correlated variable omitted and then entered into a series of equations may provide similar results regardless of whether or not that variable truly functions as a mediator.

Hunt, Wood & Chonko raised an important question about the relationship between ethics and organizational commitment. "One must be aware, however, that organizational commitment may blind some employees to the ethical problems in their firms (i.e., 'I am committed, therefore no ethical problems are present in my organization.'). At issue here is: Under what circumstances can a person engage in 'perceptual distortion' about the commitment-corporate ethical values relationship?" (1989, p. 87) The current research does not specifically address this issue, which remains important for future research on these topics.

The untested Corporate Character Ethical Value Matrix (CC-EVM) theory limited this research to validity assessment of the contained constructs. While inferring validity comprised a significant portion of this research, additional testing beyond this study will add to the created measures' validity, and in turn to the validity of the CC-EVM theory. The study does not attempt to analyze value structure differences across cultures. Even if the CC-EVM categories are stable



across cultures, the specific behaviors representing the values may differ. Determining the temporal stability of the CC-EVM measures requires future longitudinal testing.

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**APPENDIX 1: INDUSTRY SAMPLE CORRESPONDENCE AND INSTRUMENT.**

# IIAV

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## Independent Insurance Agents of Virginia, Inc.

***ed L. Smith, CAE***  
***resident***

December 9, 1996

To: **State National Directors**

From: Ted Smith, CAE

Re: Ethics survey

As we continue to pursue "Best Practices" one of the points of discussion that always emerges is ethical considerations in our independent agency system. A friend of mine and former member of IIAV is now in the midst of some work in this area and needs your help. As a candidate for a doctoral degree at Virginia Commonwealth University he is compiling information and you could be a great resource for him. Please try to allocate time for this survey. I have asked him to make available to each of you who participate an executive summary of his findings. Thanks for your cooperation!

December 16, 1996

Dear IIA State National Director:

As a former Independent agency owner and IIA member, I know the importance of the character values we and our agency personnel hold. While we all agree that character values are important, we often have a harder time defining specific values and their importance to good business practices.

Enclosed are ten packages, each containing a cover letter, a questionnaire and a stamped return envelope. This research is part of a VCU School of Business research project. The purpose of this research is to help define and clarify certain values in a business setting. IIA has agreed to participate in this project to benefit the academic community, and to better understand the values and attitudes important to IIA members. Your participation ensures that the results consider the values of your agency personnel.

All responses to these questionnaires are confidential, and can no way affect anyone's employment or IIA membership. IIA has provided only the mailing labels. VCU has no record of your name. The return envelopes come directly back to VCU, and the survey contains no information that can directly or indirectly identify any respondent. All agencies receiving this mailing will receive a summary of the aggregated national results upon the completion of the study.

Please distribute these surveys randomly to ten people in your agency, and ask them to return the questionnaire by January 5, 1997. A stamped return envelope accompanies each survey. Thank you for your participation.

Sincerely,

Edward D. Showalter  
Department of Management  
Virginia Commonwealth University

December 16, 1996

Dear IIA Member:

This questionnaire is part of a VCU School of Business research project. The purpose of this research is to help define and clarify certain values in a business setting. IIA has agreed to participate in this project to benefit the academic community, and to better understand the values and attitudes important to IIA members. Your participation ensures that the results consider your values.

All of your responses on this questionnaire are confidential, and can no way affect your employment or IIA membership. IIA has provided only the mailing labels. VCU has no record of your name. The return envelope comes directly back to VCU, and the survey contains no information that can directly or indirectly identify you. All agencies receiving this mailing will receive a summary of the aggregated national results upon the completion of the study.

The survey contains three sections, two research questionnaires and one demographic section. Please answer all the questions honestly.

Please complete and return only the survey questionnaire by January 5, 1997. A stamped return envelope accompanies this survey. Thank you for your participation.

Sincerely,

Edward D. Showalter  
Department of Management  
Virginia Commonwealth University



## Section One

### Instructions:

People differ in what they perceive as good or acceptable behavior in a business setting. This instrument considers what behaviors you feel are good or show good character for business people. These statements describe what might be the behaviors of good people to work with, or feelings you might have about those people. Please indicate your level of agreement with each statement as a description of good people in a business setting. Your first reaction is likely to be your best reaction. Use this scale.

1	2	3	4	5	6	7
<b>Strongly Disagree</b>	<b>Moderately Disagree</b>	<b>Slightly Disagree</b>	<b>Neither Agree nor Disagree</b>	<b>Slightly Agree</b>	<b>Moderately Agree</b>	<b>Strongly Agree</b>

Many of the statements look similar. Please respond to each statement separately. Record your answers on the answer sheet by filling in the scale number for each question.

### **This statement describes good people in a business setting...**

- |                                                                                                                  |               |
|------------------------------------------------------------------------------------------------------------------|---------------|
| 1. Given their track record, I see no reason to doubt their competence and preparation for the job.              | 1 2 3 4 5 6 7 |
| 2. They are always consistent.                                                                                   | 1 2 3 4 5 6 7 |
| 3. They urge co-workers to invest money in their organization.                                                   | 1 2 3 4 5 6 7 |
| 4. They represent the organization favorably to outsiders.                                                       | 1 2 3 4 5 6 7 |
| 5. They volunteer for overtime work when needed.                                                                 | 1 2 3 4 5 6 7 |
| 6. They keep well informed where their opinion might benefit the organization.                                   | 1 2 3 4 5 6 7 |
| 7. They have little difficulty cooperating with others on projects.                                              | 1 2 3 4 5 6 7 |
| 8. They share ideas for new projects or improvements widely.                                                     | 1 2 3 4 5 6 7 |
| 9. They always come to work on time.                                                                             | 1 2 3 4 5 6 7 |
| 10. Most people, even those who are not close friends of these individuals, trust and respect them as coworkers. | 1 2 3 4 5 6 7 |
| 11. They always demonstrate integrity.                                                                           | 1 2 3 4 5 6 7 |
| 12. They always protect their country.                                                                           | 1 2 3 4 5 6 7 |
| 13. We have a sharing relationship. We can all freely share our ideas, feelings, and hopes.                      | 1 2 3 4 5 6 7 |
| 14. They rarely avoid extra duties and responsibilities at work.                                                 | 1 2 3 4 5 6 7 |
| 15. They always stand by their family.                                                                           | 1 2 3 4 5 6 7 |
| 16. They help coworkers think for themselves.                                                                    | 1 2 3 4 5 6 7 |
| 17. They always stay informed.                                                                                   | 1 2 3 4 5 6 7 |
| 18. They always use appropriate considerations in decision making.                                               | 1 2 3 4 5 6 7 |

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

19.	They encourage management to keep their knowledge and skills current.	1	2	3	4	5	6	7
20.	They would not accept a job in a competing organization simply for more money.	1	2	3	4	5	6	7
21.	They never deceive anyone.	1	2	3	4	5	6	7
22.	These individuals push superiors' performance to higher standards.	1	2	3	4	5	6	7
23.	These individuals encourage others to speak up at meetings.	1	2	3	4	5	6	7
24.	They attend work-related meetings not required by their jobs.	1	2	3	4	5	6	7
25.	They are always charitable.	1	2	3	4	5	6	7
26.	They practice self-control.	1	2	3	4	5	6	7
27.	These individuals frequently make creative suggestions to coworkers.	1	2	3	4	5	6	7
28.	They always pursue excellence.	1	2	3	4	5	6	7
29.	My other work associates who interact with these individuals consider them to be trustworthy.	1	2	3	4	5	6	7
30.	These individuals go out of their way to defend the organization against outside threats.	1	2	3	4	5	6	7
31.	They work to keep their personal appearances attractive and appropriate.	1	2	3	4	5	6	7
32.	They show they care about others through empathy.	1	2	3	4	5	6	7
33.	These individuals are never tricky.	1	2	3	4	5	6	7
34.	These individuals treat others the way they want others to treat them.	1	2	3	4	5	6	7
35.	I would have to say that we have all made considerable emotional investments in our working relationship.	1	2	3	4	5	6	7
36.	They never miss work without good reason.	1	2	3	4	5	6	7
37.	These individuals pursue additional training to improve performance.	1	2	3	4	5	6	7
38.	At all times these individuals produce as much as they are capable of producing.	1	2	3	4	5	6	7
39.	They defend the organization when employees criticize it.	1	2	3	4	5	6	7
40.	Regardless of circumstances, they produce their highest quality work.	1	2	3	4	5	6	7
41.	I can talk freely to these individuals about difficulties I am having at work and know that they will want to listen.	1	2	3	4	5	6	7
42.	We would all feel a sense of loss if one of us was transferred and we could no longer work together.	1	2	3	4	5	6	7
43.	They use professional judgment to assess right or wrong for the organization.	1	2	3	4	5	6	7
44.	These individuals always make all they do worthy of pride.	1	2	3	4	5	6	7
45.	They never make excuses or take credit for others' work.	1	2	3	4	5	6	7
46.	They are mentally alert and ready to work when they arrive.	1	2	3	4	5	6	7
47.	I can rely on them not to make my job more difficult by careless work.	1	2	3	4	5	6	7
48.	These individuals work beyond what is required.	1	2	3	4	5	6	7
49.	They never take unfair advantage of mistakes.	1	2	3	4	5	6	7

:	:	:	:	:	:	:	:
1	2	3	4	5	6	7	
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree	

50.	If people knew more about these individuals and their background, people would be less concerned and monitor these individuals' performance less closely.	1	2	3	4	5	6	7
51.	These individuals are involved in outside groups for the benefit of the organization.	1	2	3	4	5	6	7
52.	Before they act, these individuals always think about the consequences.	1	2	3	4	5	6	7
53.	They never quit easily.	1	2	3	4	5	6	7
54.	They always support their friends.	1	2	3	4	5	6	7
55.	They approach their jobs with professionalism and dedication.	1	2	3	4	5	6	7
56.	These individuals always stand by their country.	1	2	3	4	5	6	7
57.	They always tell the truth even though it may hurt themselves or others.	1	2	3	4	5	6	7
58.	They meet deadlines set by organization.	1	2	3	4	5	6	7
59.	They tell outsiders this is a good place to work.	1	2	3	4	5	6	7
60.	They always do their best.	1	2	3	4	5	6	7
61.	These individuals rarely waste organizational resources.	1	2	3	4	5	6	7
62.	These individuals always stand by their friends.	1	2	3	4	5	6	7
63.	They follow work rules and instructions with extreme care.	1	2	3	4	5	6	7
64.	These individuals actively promote the organization's products and services.	1	2	3	4	5	6	7
65.	If I shared my problems with them, I know they would respond constructively and caringly.	1	2	3	4	5	6	7
66.	They keep informed about products and services and share the information with others.	1	2	3	4	5	6	7
67.	These individuals rarely waste time while at work.	1	2	3	4	5	6	7
68.	They keep their work areas clean and neat.	1	2	3	4	5	6	7

## Section Two

*Instructions.* Listed below are a series of statements that represent possible feelings that individuals might have about the company or organization for which they work. With respect to your own feelings about the particular organization for which you are now working, please indicate the degree of your agreement or disagreement with each statement by circling one of the seven alternatives beside each statement

		1	2	3	4	5	6	7
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1.	Managers in my company rarely engage in behaviors that I consider to be unethical.	1	2	3	4	5	6	7
2.	In order to succeed in my company, it is rarely necessary to compromise one's ethics.	1	2	3	4	5	6	7
3.	Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.	1	2	3	4	5	6	7
4.	If a manager in my company is discovered to have engaged in unethical behavior that results primarily in personal gain (rather than corporate gain), he or she will be promptly reprimanded.	1	2	3	4	5	6	7
5.	If a manager in my company is discovered to have engaged in unethical behavior that results primarily in corporate gain (rather than personal gain), he or she will be promptly reprimanded.	1	2	3	4	5	6	7
6.	I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	1	2	3	4	5	6	7
7.	I talk up this organization to my friends as a great organization to work for.	1	2	3	4	5	6	7
8.	I feel great loyalty to this organization.	1	2	3	4	5	6	7
9.	I would accept almost any type of job assignment in order to keep working for this organization.	1	2	3	4	5	6	7
10.	I find that my values and the organizations values are very similar.	1	2	3	4	5	6	7
11.	I am proud to tell others that I am part of this organization.	1	2	3	4	5	6	7
12.	I would not be as well off working for a different organization even if the type of work was similar.	1	2	3	4	5	6	7
13.	This organization really inspires the very best in me in the way of job performance.	1	2	3	4	5	6	7
14.	It would take a great change in my present circumstances to cause me to leave this organization.	1	2	3	4	5	6	7
15.	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	1	2	3	4	5	6	7
16.	There's much to be gained by sticking with this organization indefinitely.	1	2	3	4	5	6	7
17.	I rarely find it difficult to agree with this organization's policies on important matters relating to employees.	1	2	3	4	5	6	7
18.	I really care about the fate of this organization.	1	2	3	4	5	6	7
19.	For me this is the best of all possible organizations for which to work.	1	2	3	4	5	6	7
20.	Deciding to work for this organization was definitely not a mistake on my part.	1	2	3	4	5	6	7

### Section Three - Demographic Information

Please provide this information for statistical analysis. No one at your company, agency or IIA will see your answers. Circle the number next to the most appropriate response.

1. Main line of insurance (*CIRCLE ONLY ONE*)

- |                           |   |
|---------------------------|---|
| Life & Health             | 1 |
| Small Business P&C        | 2 |
| Large Business P&C        | 3 |
| Personal Lines - Auto     | 4 |
| Personal Lines - Property | 5 |
| Investments               | 6 |
| Other (please indicate)   | 7 |
- 

2. Agency size in annualized premium

(*CIRCLE ONLY ONE*)

- |                           |   |
|---------------------------|---|
| Less than 2 million       | 1 |
| 2 million to 10 million   | 2 |
| 10 million to 50 million  | 3 |
| 50 million to 100 million | 4 |
| Over 100 million          | 5 |
| Not applicable or unknown | 6 |

3. Primary customer base (*CIRCLE ONLY ONE*)

- |                                |   |
|--------------------------------|---|
| Urban                          | 1 |
| Rural                          | 2 |
| Suburban                       | 3 |
| About evenly split urban/rural | 4 |
| Other (please indicate)        | 5 |
- 

4. Position (*CIRCLE ONLY ONE*)

- |                                   |   |
|-----------------------------------|---|
| Owner or principle agent          | 1 |
| Licensed agent                    | 2 |
| Customer service representative   | 3 |
| Claims adjuster or claims service | 4 |
| Other (please indicate)           | 5 |
- 

5. Professional Designations

(*CIRCLE ALL THAT APPLY*)

- |                         |   |
|-------------------------|---|
| CLU                     | 1 |
| CPCU                    | 2 |
| CFC                     | 3 |
| Other (please indicate) | 4 |
- 

6. Years in the insurance industry \_\_\_\_\_

7. Years with current company or agency \_\_\_\_\_

8. Years in current position \_\_\_\_\_

9. Two letter state code (*i.e. Virginia = VA*) \_\_\_\_\_

10. Gender

- |        |   |
|--------|---|
| Female | 1 |
| Male   | 2 |

11. Age \_\_\_\_\_

12. Ethnic Background (*CIRCLE ONLY ONE*)

- |                               |   |
|-------------------------------|---|
| Asian                         | 1 |
| Black, not of Hispanic origin | 2 |
| Hispanic                      | 3 |
| White, not of Hispanic origin | 4 |
| Other (please indicate)       | 5 |
- 

Thank you very much for your time and participation. Please place the completed survey in the provided stamped return envelope and return to:

E. D. Showalter  
VCU School of Business  
Department of Management  
[REDACTED]  
Richmond, VA 23284-4000

**APPENDIX 2: STUDENT SAMPLE INSTRUMENT**

## The Corporate Character Questionnaire

### Instructions:

People differ in what they perceive as good or acceptable behavior in a business setting. This instrument considers what behaviors you feel are good or show good character for business people. These statements describe what might be the behaviors of good people to work with, or feelings you might have about those people. Please indicate your level of agreement with each statement as a description of good people in a business setting. Your first reaction is likely to be your best reaction. Use this scale.

:	1	:	2	:	3	:	4	:	5	:	6	:	7	:
	Strongly		Moderately		Slightly		Neither		Slightly		Moderately		Strongly	
	Disagree		Disagree		Disagree		Agree nor		Agree		Agree		Agree	
							Disagree							

Many of the statements look similar. Please respond to each statement separately. Record your answers on the answer sheet by filling in the scale number for each question.

### **This statement describes good people in a business setting...**

- |               |     |                                                                                                              |
|---------------|-----|--------------------------------------------------------------------------------------------------------------|
| 1-2-3-4-5-6-7 | 1.  | Given their track record, I see no reason to doubt their competence and preparation for the job.             |
| 1-2-3-4-5-6-7 | 2.  | They are always consistent.                                                                                  |
| 1-2-3-4-5-6-7 | 3.  | They urge co-workers to invest money in their organization.                                                  |
| 1-2-3-4-5-6-7 | 4.  | They represent the organization favorably to outsiders.                                                      |
| 1-2-3-4-5-6-7 | 5.  | They volunteer for overtime work when needed.                                                                |
| 1-2-3-4-5-6-7 | 6.  | They keep well informed where their opinion might benefit the organization.                                  |
| 1-2-3-4-5-6-7 | 7.  | They have little difficulty cooperating with others on projects.                                             |
| 1-2-3-4-5-6-7 | 8.  | They share ideas for new projects or improvements widely.                                                    |
| 1-2-3-4-5-6-7 | 9.  | They always come to work on time.                                                                            |
| 1-2-3-4-5-6-7 | 10. | Most people, even those who are not close friends of these individuals, trust and respect them as coworkers. |
| 1-2-3-4-5-6-7 | 11. | They always demonstrate integrity.                                                                           |
| 1-2-3-4-5-6-7 | 12. | They always protect their country.                                                                           |
| 1-2-3-4-5-6-7 | 13. | We have a sharing relationship. We can all freely share our ideas, feelings, and hopes.                      |
| 1-2-3-4-5-6-7 | 14. | They rarely avoid extra duties and responsibilities at work.                                                 |
| 1-2-3-4-5-6-7 | 15. | They always stand by their family.                                                                           |
| 1-2-3-4-5-6-7 | 16. | They help coworkers think for themselves.                                                                    |
| 1-2-3-4-5-6-7 | 17. | They always stay informed.                                                                                   |
| 1-2-3-4-5-6-7 | 18. | They always use appropriate considerations in decision making.                                               |
| 1-2-3-4-5-6-7 | 19. | They encourage management to keep their knowledge and skills current.                                        |
| 1-2-3-4-5-6-7 | 20. | They would not accept a job in a competing organization simply for more money.                               |

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1-2-3-4-5-6-7	21.	They never deceive anyone.				
1-2-3-4-5-6-7	22.	These individuals push superiors' performance to higher standards.				
1-2-3-4-5-6-7	23.	These individuals encourage others to speak up at meetings.				
1-2-3-4-5-6-7	24.	They attend work-related meetings not required by their jobs.				
1-2-3-4-5-6-7	25.	They are always charitable.				
1-2-3-4-5-6-7	26.	They practice self-control.				
1-2-3-4-5-6-7	27.	These individuals frequently make creative suggestions to coworkers.				
1-2-3-4-5-6-7	28.	They always pursue excellence.				
1-2-3-4-5-6-7	29.	My other work associates who interact with these individuals consider them to be trustworthy.				
1-2-3-4-5-6-7	30.	These individuals go out of their way to defend the organization against outside threats.				
1-2-3-4-5-6-7	31.	They work to keep their personal appearances attractive and appropriate.				
1-2-3-4-5-6-7	32.	They show they care about others through empathy.				
	33.	These individuals are never tricky.				
1-2-3-4-5-6-7	34.	These individuals treat others the way they want others to treat them.				
1-2-3-4-5-6-7	35.	I would have to say that we have all made considerable emotional investments in our working relationship.				
1-2-3-4-5-6-7	36.	They never miss work without good reason.				
1-2-3-4-5-6-7	37.	These individuals pursue additional training to improve performance.				
1-2-3-4-5-6-7	38.	At all times these individuals produce as much as they are capable of producing.				
1-2-3-4-5-6-7	39.	They defend the organization when employees criticize it.				
1-2-3-4-5-6-7	40.	Regardless of circumstances, they produce their highest quality work.				
1-2-3-4-5-6-7	41.	I can talk freely to these individuals about difficulties I am having at work and know that they will want to listen.				
1-2-3-4-5-6-7	42.	We would all feel a sense of loss if one of us was transferred and we could no longer work together.				
1-2-3-4-5-6-7	43.	They use professional judgment to assess right or wrong for the organization.				
1-2-3-4-5-6-7	44.	These individuals always make all they do worthy of pride.				
1-2-3-4-5-6-7	45.	They never make excuses or take credit for others' work.				
1-2-3-4-5-6-7	46.	They are mentally alert and ready to work when they arrive.				
1-2-3-4-5-6-7	47.	I can rely on them not to make my job more difficult by careless work.				
1-2-3-4-5-6-7	48.	These individuals work beyond what is required.				
1-2-3-4-5-6-7	49.	They never take unfair advantage of mistakes.				



1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1-2-3-4-5-6-7	50.	If people knew more about these individuals and their background, people would be less concerned and monitor these individuals' performance less closely.				
1-2-3-4-5-6-7	51.	These individuals are involved in outside groups for the benefit of the organization.				
1-2-3-4-5-6-7	52.	Before they act, these individuals always think about the consequences.				
1-2-3-4-5-6-7	53.	They never quit easily.				
1-2-3-4-5-6-7	54.	They always support their friends.				
1-2-3-4-5-6-7	55.	They approach their jobs with professionalism and dedication.				
1-2-3-4-5-6-7	56.	These individuals always stand by their country.				
1-2-3-4-5-6-7	57.	They always tell the truth even though it may hurt themselves or others.				
1-2-3-4-5-6-7	58.	They meet deadlines set by organization.				
1-2-3-4-5-6-7	59.	They tell outsiders this is a good place to work.				
1-2-3-4-5-6-7	60.	They always do their best.				
1-2-3-4-5-6-7	61.	These individuals rarely waste organizational resources.				
1-2-3-4-5-6-7	62.	These individuals always stand by their friends.				
1-2-3-4-5-6-7	63.	They follow work rules and instructions with extreme care.				
1-2-3-4-5-6-7	64.	These individuals actively promote the organization's products and services.				
1-2-3-4-5-6-7	65.	If I shared my problems with them, I know they would respond constructively and caringly.				
1-2-3-4-5-6-7	66.	They keep informed about products and services and share the information with others.				
1-2-3-4-5-6-7	67.	These individuals rarely waste time while at work.				
1-2-3-4-5-6-7	68.	They keep their work areas clean and neat.				

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(Social Security Number)

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78 79

### **APPENDIX 3: FACTOR ANALYTIC PROCEDURES USED**

This appendix provides additional information on the underlying reasoning behind the choice and use of the factor analytic procedures appearing in this study.

#### **Component and Common Factor Analysis**

Factor analysis begins with the creation of the data's correlation matrix. Factor analysis considers each item (or variable) in the data set in terms of its correlation with every other item. Variance can be common, specific or error. All variables share common variance attributed to underlying common factors. Specific variance is unique to each individual variable, and error variance comes from random error, and unreliable data-gathering (Hair et al., 1992: Nunnally, 1978).

Common factor analysis solutions include only common variance rather than total variance (Hair et al. 1992) eliminating specific and error variance. To eliminate all but common variance, common factor analysis estimates communalities of each variable (reliability coefficients) and inserts that estimate in the diagonal of the matrix. Creation of these communality estimates requires prior knowledge of the type and amount of variance in the original variables. Component analysis, on the other hand, considers total variance by inserting unities in the diagonal of the correlation matrix.

The exploratory nature of this study made reasonable estimates of each variable's communality difficult, if not impossible. For this reason, this study considered all variance using components analysis.

### Principle-Components Analysis

There are several methods of components analysis. One of the most respected and widely used is principle-components analysis. Principle-components maximizes the sum of squared loadings of each factor extracted, producing item-factor loadings explaining more variance than any other components method (Nunnally, 1978). Because of the complexity involved in manipulating large matrices, principle-component analysis requires a computer.

Input into the principle-components computer analysis is the  $n$  responses to  $k$  items. The computer then calculates the covariance matrix, inserting unities in the trace. Because the analysis inserts unities into the diagonal of the covariance matrix, by construction, the trace of the covariance matrix is equal to the number of variables considered ( $k$ ). Output from principle-component analysis is a  $k$  by  $k$  factor matrix. Each column represents a factor or unique dimension, and each value in the column is an item loading on that factor. By construction, the number of items equals the number of factors.

Factor loadings represent the correlation between the original item (variable) and the factor. The square of a factor loading is the proportion of an item's variance explained by the factor. A factor's eigenvalue is the sum of the squares of its item loadings. The eigenvalue represents the amount of total variance in the matrix explained by that factor. The sum of the eigenvalues for all  $k$  factors equals  $k$ , making the average variance explained by all factors exactly one.

In principle-components analysis, factors are orthogonal meaning each factor has zero correlation with all others. Graphically each factor stays at a 90 degree angle from all others. The factors

represent the underlying uncorrelated latent variables that explain the data according to the loadings of each variable on each factor. The computer extracts factors in order of their importance. Those factors with the highest variance (highest eigenvalues) extract first and explain the greatest proportion of the total variance. Those factors extracted last represent little variance, usually error.

This research used principle-components analytic techniques for the following reasons. First, principle-component analytic techniques consider all variance, reducing the amount of lost information (Nunnally, 1978). Second, according to Hair et al. (1992) principle-components analysis is the proper choice when the researcher's objective is to determine the minimum number of factors needed to account for the maximum amount of variance as was the case in the current study. Third, and finally, principle-components analysis frequently appears in measurement building research in the management field, which supports it's appropriateness for the current research (i.e., Shore, Barksdale & Shore, 1995; Wayne & Liden, 1995; Van Dyne, Graham & Dienesch, 1994; Butler, 1991; O'Reilly, Chatman & Caldwell, 1991; and Cook & Wall, 1980).

#### **Number of Factors to Retain**

Several methods exist for a researcher to determine the number of factors to retain, each appropriate in the proper context. In confirmatory analysis, an 'a priori' method would determine the number of factors to retain prior to analysis. The analysis would then support or fail to support the original choice. If this research were taking a confirmatory approach, the underlying theory would suggest an 'a priori'

choice of six factors. However, because this research is exploratory in nature, another method is more appropriate.

Two other criteria for choosing the number of factors to retain in exploratory analysis are the percentage of variance criteria and the eigenvalue criteria. Because principle-components analysis extracts factors in descending order of variance explained, the researcher may make the choice of number of retained factors by noting when the percentage of variance explained reaches a predetermined cutoff point. The percentage of variance of all items explained by a factor is the average squared item loadings of the factor (Nunnally, 1978: 336). Here again, the type of variance is important. Because variance can be either common, specific or error, without prior knowledge of the type and magnitude of variance, predetermining a cutoff point is difficult. The unknown nature of the variance in the current research makes this an inappropriate method for factor retention.

The last usual method to determine the number of factors to retain is to look at the eigenvalues of each factor, retaining those with significant eigenvalues. In the factor matrix, total variance -- the sum of the eigenvalues of all factors -- equals the number of factors. Those factors with eigenvalues above 1 are significant in that they explain above average variance. Those factors with eigenvalues below one explain less than average variance, most likely due to specific and error variance, and should be discarded. The choice of factors to retain rests on several considerations, the most important of which is interpretability. This study used a cutoff point of an eigenvalue greater than or equal to one.

### Rotation

The initial principle-components solution is frequently difficult to interpret. Rotation of factors aids in interpretation. Two major categories of rotation exist, orthogonal and oblique. Orthogonal rotation methods retain the orthogonal pattern of the factors. In orthogonal rotation factors remain uncorrelated. When the results of the factor analysis appear in subsequent analysis, orthogonal rotations eliminate colinearity (Hair et al., 1992). In the current study however, the researcher expected some correlation among the constructs as they are all part of the larger concept of corporate character.

Oblique rotations allow the correlation of factors after rotation. The techniques for oblique rotation are newer, and used less frequently because colinearity exists in subsequent uses of the factor analysis. The SAS (1989) manual points out that "a consequence of correlated factors is that there is no single unambiguous measure of the importance of a factor in explaining a variable"(776). Hair et al. (1992) state "However, if the analyst is simply interested in obtaining theoretically meaningful constructs or dimensions, the oblique factor rotation is more desirable because it is theoretically and empirically more realistic." Examples of oblique rotations in the literature include Van Dyne, Graham & Dienesch (1994) and Butler (1991). Cohen, Pant & Sharp (1993) support oblique rotation in business ethics research. The current research used the DIRECT OBLIMIN oblique rotation method (SPSS for Windows™ release 6.1.3) as an aid to interpretability and to verify that the factors retained were robust to changes in rotation.

**VITA**