UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

ORGANIZATIONAL CULTURE, IDENTITY, COMMITMENT, AND CITIZENSHIP BEHAVIORS: ANTECEDENTS, CHANGE OVER TIME, INTERRELATIONSHIPS, AND POTENTIAL OF INOCULATION TO BOLSTER IDENTITY, COMMITMENT, AND CITIZENSHIP BEHAVIORS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

In partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

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Norman, Oklahoma

2006

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DEPARTMENT OF COMMUNICATION

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ACKNOWLEDGEMENTS

First, I would like to thank Dr. Michael Pfau, my committee chair and advisor. An advisee could not ask for a better role model because he embodies all the qualities of a top scholar. I thank him for all the words of advice, for spending countless hours reading through earlier versions of this project, for answering all my repetitive questions, and for believing in me more than I believe in myself. I cannot thank him enough for his attention to detail as well as challenging me to do more, be more, and give more to the discipline.

Thanks also to Dr. Amy Johnson. The four years I spent working on her research task force prepared me to approach research in a very systematic manner. Assisting her with IRBs, collecting and entering data, as well as just visiting about the research process prepared me for my work as the Department of Defense Academic Coordinator. I cannot thank her enough for believing in me and providing me with hands-on experience in all aspects of conducting research.

Dr. H. Dan O'Hair challenged me to think about organizational communication concepts. His organizational communication class introduced several of the concepts being studied in this dissertation. I hope he finds this project interesting. His comments on the final draft were very helpful and insightful. Special thanks to Dr. Glenn Hansen. He is now an honorary member of my committee because I asked him so many questions about regression and SEM.

The Department of Communication at OU is full of great people. Thanks to Bill Pierro for all his help and patience when I was trying to keep up with the DoD while sitting in the Burton Hall lounge. Thanks to Kristi Wright and Danni Madden who have

spent countless hours ordering colored paper and making sure I had somewhere to collect data for the DoD projects or my own. Thanks to Dr. Kramer, Dr. Edy, and Dr. Miller for your support of the DoD as well as your words of wisdom about life as an academic. Thanks to Liz Craig, Josh Compton, and Michael Bruce for getting me through some rough times over the past four years. Thanks to Toni Siriko for bringing me lunch when I had to collect dissertation data, and for just giving me hope that I could get it all done. Wen-Yu Chao also tested my knowledge about statistics while I sat endless hours in the lounge. Thanks for letting me ask you so many questions towards the end. I cannot list all the graduate students who have made me smile or laugh over the past four years. I will remember you and the time spent in 211 fondly.

Thanks also to the DoD Joint Course in Communication students – Class 04D – 06C. They made my job easy. We completed very complicated capstone projects, but they were always up for the challenge. Conducting a major research project in 8 weeks was a learning experience. I never will know who learned more, the students or me.

Thanks also to my very patient family. Four years of graduate school can be very trying and full of sacrifices. My great-aunt Mabel once again provided inspiration, support, and encouragement. Our phone conversations over the past four years helped me visualize the end goal.

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Abstract

This study examined the antecedents of several organizational variables (organizational culture, organizational identity, organizational commitment, and organizational citizenship behaviors (OCBs), how they are linked together, and how they change over time. It also examined if an employee's intention to stay at an organization would change; and how organizational culture, identity, and commitment would related to an employee's intention to stay. The study also examined whether inoculation treatments could be used to bolster these organizational variables. To examine the hypotheses and research questions, a two-wave national telephone survey and an experiment were conducted. Results reveal that organizational, organizational commitment, and OCBs change over time. There are a number of organizational and sociodemographic variables that predict these constructs as well as changes in these constructs. The experiment revealed that inoculation can be used to bolster organizational identity, organizational commitment, and OCBs.

Chapter I

Introduction

Employees are becoming increasingly valuable assets to businesses. Today there is more emphasis placed on intellectual resources (employees) than financial resources (Eskildsen & Nussler, 2000). As a result, employee retention is an important issue facing businesses. Businesses experience a 19.2% annual voluntary turnover rate per year (www.nobscot.com). Losing employees costs businesses time and money. When the business is short an employee, it loses the training and knowledge the employee possessed, and productivity is effected. Many businesses are finding it hard to find qualified employees who will stay with the company once they are trained and gain experience. Businesses are beginning to consider how they can retain employees. Researchers continue to observe and measure different organizational concepts (i.e., job satisfaction, commitment, OCBs) to determine what variables influence whether an employee stays or goes. These variables include extra-role behaviors (e. g. Moorman, Niehofff, & Organ, 1993), absenteeism (e. g. Gellatly, 1995), and turnover rate (e. g. Somers, 1993).

Branham (2004) observes a number of important truths about employee turnover. He notes turnover will happen, and that not all turnover is bad. There will always be turnover in today's job market, and zero percent turnover is not desirable because there would be a lack of new ideas, abilities, and attitudes to enlighten the organization. He also acknowledged turnover is costly and difficult to quantify. Branham (2004) suggests turnover costs can run 25 to 200% of annual employee compensation. Costs that are hard to estimate include customer service disruption, emotional costs, morale costs, burnout or

absenteeism, loss of experience, as well as corporate memory. Branham (2004) observes making more money is not necessarily why people leave an organization. He maintains when people are compensated comparably, are making contributions, have positive work experiences and enjoy positive working conditions, they will be less likely to leave (Branham, 2004). Branham believes managers' hold the key to retaining the talent. More than 50% of job satisfaction is determined by the quality of the employee's relationship with the manager (Branham, 2004). He also argues reducing employee turnover starts with commitment. The organization that reduces turnover and maintains lower turnover rates is one where the management is committed (Branham, 2000). Daniels (2003) states most employee turnover will be blamed on low wages or benefits. However, he agreed with Branham (2004) the main reason people leave their jobs is because of the way they are treated on a daily basis. Research shows that 40% of people leave due to the way they are treated.

Retaining qualified employees is becoming a concern. How can an organization keep their employees? Branham (2004) states keeping employees starts with commitment. Most organizational commitment researches concur. They view commitment as a form of organizational identity suggesting a link between organizational identity and organizational commitment. If an employee's identity and commitment to the organization can be increased from their first day on the job, then they might be less likely to leave. The messages that companies are sending through their internal newsletters and other internal communication venues (even those used at employee orientation) can be persuasive. Companies need to persuade employees to buy into the company's organizational culture, which links to organizational identity, organizational

commitment, organizational attitude, and organizational citizenship behaviors, or so this study argues. Organizational identity, organizational commitment, and organizational citizenship behaviors are cognitive needs that employee have; if the need to identify, commit, and behave are met, employees may stay at the organization longer. This study examines what organizational variables (e.g., culture and commitment) might influence an employee's intention to stay at the organizaton.

Employees leave organizations for a number of different reasons. If the organization is not meeting the employee's needs, he/she might leave. Employees' needs (i.e., competitive salary, education opportunities, benefits, promotion opportunities, and need to belong to a group) play a big role in organizational communication research. The idea employees have needs is apparent in a number of concepts and theories that have been studied in the field of organizational communication. They include organizational culture, organizational identity, organizational commitment, and organizational citizenship behaviors.

The first component of meeting needs comes from the organizational culture. Organizational culture is an antecedent to attitude, identity, and commitment. Sagini (2001) suggests the best organizational culture is one that creates a climate conducive to satisfying member's needs psychologically, biologically, socially, and vocationally. "If the needs of these members are not met, the group or organization will progressively and gradually decline, disintegrate, and vanish" (p. 288).

Eisenberg and Riley (2001) posit two frameworks of studying culture, one is studying organizational culture as identity and the other is studying culture as cognition. The process of identifying is thought to be a cognitive process. This framework defines

culture as “a pattern of shared assumptions, shared frame of reference, or a shared set of values and norms” (Eisenberg & Riley, 2001, p. 305).

Hatch and Schultz (1997) distinguish between the two concepts of organizational identity and organizational culture. Organizational identity refers to what members of an organization feel and think about a specific organization; and organizational culture is “the internal symbolic context for the development and maintenance of organizational identity” (p. 6).

Dutton, Dukerich, and Harquail (1994) posit researchers view organizational identification as “value congruence between a member and his or her organization. . .we focus on the cognitive connection between the definition of an organization and the definition a person applies to him or herself, viewing identification as a process of self-definition” (p. 242). The strength of this identification depends on how much a person feels his/her self-concept is tied to organizational membership. Organizational identities define members’ perceptions of their organization’s traits (Dutton, et al., 1994; Elsbach & Kramer, 1996). Therefore, one can link organizational identity to employees’ needs as well. The identity with the organization satisfies employees’ needs.

As previously discussed, organizational culture is linked to organizational identity as a cognitive process. Organizational commitment is also linked to identity at a cognitive level. Mowday, Porter, and Steers (1979) define organizational commitment as the relative strength of an individual’s identification with and involvement in a particular organization that is characterized by three factors: “(1) a strong belief in an acceptance of the organization’s goals and values, (2) a willingness to exert considerable effort on

behalf of the organization, and (3) a strong desire to maintain membership in an organization" (p. 15).

Etzioni (1961) views organizational commitment as a response based on rational exchanges of benefits and rewards. The more an employee feels the investment in the organization outweighs the benefits, the less attached they will feel. The more employees feel resentment, the less committed they will be to an organization. Here again, the needs of an employee dictate commitment to an organization.

Allen and Meyer (1990) proposed a three-component model of organizational commitment. The affective component of organizational commitment refers to an employees' emotional attachment to, identification with, and involvement in the organization. The continuance component consists of commitment based on the costs employees' associate with leaving the organization. The normative component includes employees' feelings of obligation to remain with the organization. It assumes employees have beliefs about their responsibilities or obligations to an employer. Therefore, organizational culture influences organizational identity and organizational commitment. Organizational identity and commitment are distinct constructs that can be measured independent of organizational culture. Organizational identity and organizational commitment will influence an employee's decision to leave or stay, and they should also influence the number of organizational citizenship behaviors portrayed by employees.

Organ (1988) states "OCB [organizational citizenship behaviors] represents individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (p. 4). Discretionary behaviors are behaviors that are not required in

writing by the organization (e.g., coming early, staying late, and making coffee). The behavior is a personal choice, so if one does not do this he/she cannot be punished by not performing OCBs. Organizational citizenship behaviors (OCBs) do not have to be rewarded, and Organ (1988) argues OCBs will not be rewarded. OCBs will improve how the organization functions.

Attitudes have two components. One is cognitive and the other is affective (Eagley & Chaiken, 1993). Mayhew and colleagues (2003) state if an employee feels some ownership in the organization, the feeling will predict the job attitudes of satisfaction and organizational commitment. In the organization communication literature, most researchers such as Mayhew and colleagues, study organizational attitudes as job satisfaction. This study actually studies attitude about the organization rather than satisfaction with the organization. This satisfaction usually leads to OCBs (Organ, 1988; Williams & Anderson, 1991).

One can logically draw a connection between organizational culture, organizational identity, organizational commitment, organizational attitudes, and OCBs. If an organizational culture meets an individual's needs, he/she should have greater strength of identity and commitment to the organization and he/she might practice OCBs. If the culture does not meet the needs of the individual, the person will lack identity, commitment, and OCBs. However, there is lack of literature that links OCBs directly to identity and commitment, or that examines if OCBs can be increased. If identity, commitment, and OCBs are experienced by an employee, he/she might be more likely to stay, and the organization will be able to retain its intellectual resources.

Organizational culture, organizational identity, organizational commitment, and OCBs have been defined and introduced as necessary blocks for understanding or studying employee retention. There is limited research discussing how bolstering identity, commitment, and OCBs will increase employees' likelihood to stay with an organization, thereby lowering employee turnover (Branham, 2004). It is also important to determine if organizational identity, organizational commitment, and OCBs are static or dynamic. These variables may be as dynamic as the organization. They may increase or decrease from day to day. There is lack of research examining these variables as dynamic concepts. There is lack of research examining whether organizational identity, organizational commitment, and OCBs change over time and what factors might contribute to these changes. It is an organization's prerequisite to satisfy employees' needs, which in the long run will lower employee turnover. Organizations could adopt the process of inoculation to bolster organizational identity, organizational commitment, and OCBs. Inoculation is a process of protecting attitudes through the process of forewarning individuals' their attitudes and beliefs will come under attack, and refuting possible arguments they might come into contact with (McGuire, 1964; Pfau, 1997). Inoculation is happening in the organizational setting every day. Employees are questioned by spouses, co-workers, or other external sources about their commitment to the organization (i.e., why do they go to work early, why do they stay late, why do they work weekends). Inoculation in a laboratory setting happens through messages. This process may also be used in internal communication forms that organizations disseminate to their employees.

Inoculation theory suggests messages can protect attitudes toward organizations from weakening. Inoculation can bolster an employees' attitude toward the company. Compton and Pfau (2004) suggest inoculation could be used to maintain employee morale. Fuller, Barnett, Hester, and Relyea (2003) state employees have commitment to an organization if they feel the organization is committed to them. If inoculation treatments are administered to bolster employees' attitudes, employees may be less likely to leave and may even be more satisfied with their decisions to stay with an organization.

This study is two fold. The first part of the investigation is a longitudinal telephone survey. It was conducted nation-wide. The participants randomly selected at time one were asked if they would participate three months later and answer the same questions. The telephone survey examines if in fact organizational identity, organizational commitment, organizational attitudes, and OCBs change, it also examines the factors that predict organizational identity, organizational commitment, and OCBs, what predicts these concepts changing over time. It also examined how organizational culture links to an employee's attitude, identity, commitment, and OCBs. A model was proposed to examine how organizational culture, identity, and commitment would relate to an employee's likelihood of staying at the organization. The second purpose of this investigation was to examine if inoculation treatments could be administered through "internal employee communication forms" to bolster organizational identity, commitment, and OCBS. To examine this, an experiment was conducted at a Southwestern University. Students participated in a four-phase study that took initial measures of the organizational variables and examined what would happen to the

organizational identity, commitment, and OCBs after someone receives an inoculation message.

Before discussing how the study was carried out, the organizational constructs will be discussed one by one. The relevant literature will be examined to define and operationalize organizational culture, organizational identity, organizational commitment, organizational attitudes, and OCBS.

Chapter II

Organizational Culture, Organizational Identity, Organizational Commitment, and Organizational Citizenship Behaviors

This chapter will define organizational culture, organizational identity, organizational commitment, and OCBs. After these concepts have been defined and the literature about each briefly reviewed, a model will be proposed linking them. The model will show organizational culture as an antecedent to organizational attitude, organizational identity, which precedes organizational commitment. Both of these serve as antecedents to OCBs. These same antecedents could also predict an employee's likelihood of staying at an organization. Before understanding how organizational identity or commitments are formed, one must look at the organizational culture. The culture of an organization influences the norms, values, and rituals of an organization. The culture will influence the organizational identity, organizational commitment, and OCBs of employees. Martin (2002) states one can study culture as a variable or as a metaphor for organizational life. Studies that assume culture can be treated as a variable are assuming a functionalist perspective.

Organizational Culture

Organizational Culture Defined

Martin (2002) collected a list of definitions of organizational culture. Culture represents values, beliefs, behaviors, expectations, languages, and symbols shared by organization members. The following definitions are those that work well in the field of communication: "[Culture] is a set of understanding or meanings shared by a group of people. The meanings are largely tacit among the members, are clearly relevant to a

particular group, and are distinctive to the group" (Louis, 1985, p. 74). Another standard definition of organizational culture is: "the system of values, symbols, and shared meanings of a group including the embodiment of these values, symbols, and meanings into material objects and ritualized practices…" (Sergiovanni & Corbally, 1984, p.viii). There are a number of ways to define culture, but most of them involve the same components of having a shared system of values, meanings, and norms. Martin (2002) states "culture is defined as a way of studying everyday life in organizations" (p. 5). The idea that culture includes values, meanings, and norms and is a way to study the everyday life of an organization will guide this study.

Organizational Culture Shapes Behavior

Organizational culture shapes behavior and what takes place in an organization. Erez and Earley (1993) states culture exerts pressure on its members to conform to the organization and this pressure shapes the organization's behavior. Sagini (2001) suggests the best organizational culture is one satisfying member's psychological, biological, social, and vocational needs. If the culture is not meeting the employees' needs, the organization will not perform at its maximum capacity and employees might leave.

Frameworks For Studying Culture

Martin (2002) posits three traditions in organizational culture research. The *integration perspective* assumes people in the culture share a common set of values or a common set of norms. These assumptions may be expressed in a mission statement, logos, and uniforms. The perspective of *differentiation* takes into account organizations contain people who come from different social and ethnic backgrounds and subcultures may exist. The third tradition is the *fragmentation* perspective. Contemporary cultures are

ambiguous in terms of values, norms, and beliefs, which leads to fragmentation into subgroups. Martin (2002) states subcultures may exist in harmony, independently, or in conflict with one another. Kilduff and Corley (2000) state studying social identity in organizations may shed light on the concept of fragmentation, which is the first link between organizational culture and organizational identity in this study.

Eisenberg and Riley (2001) discuss culture as being studied from several different frameworks in the communication literature, which included culture as identity, culture as cognition, and culture as climate. They (Eisenberg & Riley, 2001) broke identity into two sub-themes when studying organizational culture as identity. The comparative management perspective studies culture as being imported into organizations through the national, regional, or ethnic affiliations of employees. In these studies, culture is studied as an external variable. The second approach to studying identity as culture examines "the idea of self as consistent integrated 'thing'" (p. 305).

The discussion of self-identity leads to an understanding of the social construction of the organization and self-construction of individuals. The process of identifying is thought to be a cognitive process. Researchers investigate the cognitive frame facilitating coordinated action. This framework defines culture as "a pattern of shared assumptions, shared frame of reference, or a shared set of values and norms" (Eisenberg & Riley, 2001, p. 305). Most researchers study why organizational members behave the way they do. Eisenberg and Riley (2002) state the "relationship between humans and their cultures, then, is a seamless and symbiotic one – human beings and culture arise in relationship to one another, and it cannot be separated in any meaningful way" (p. 312).

Types of Organizational Culture

Cooke and Lafferty (1987), Deal and Kennedy (1982), and Gabriel (1999) posit several different types of organizational culture including constructive, passive/defensive, and aggressive/defensive. Cooke and Szumal (2000) state constructive cultures are characterized by norms of achievement, self-actualizing, humanistic-encouraging, and affiliative behaviors. This type of culture encourages members to interact with people and approach tasks in ways that help them meet their needs. Passive/defensive cultures are characterized by approval, conventional, dependent, and avoidance norms. They require employees to interact with people in ways that will not threaten their own personal security. Aggressive/defensive culture encompasses power, competitive and perfectionistic norms. They encourage members to approach tasks in forceful ways to protect their status and security.

Deal and Kennedy (1982) also state cultures can be categorized into four major types. The first type is the "tough-guy macho" culture, a risk-taking culture, which is tough, uncompromising, and decisive. The "work-hard/play-hard" culture emphasizes both hard work as well as fun. The "bet-your-company" culture emphasizes long-term planning through thinking and the spread of responsibility to organizational members; whereas the "process culture" is a low-risk rule-driven and highly ordered culture. Most organizations will have dominant category but will also have a mixture of the other types of culture. The types of culture influence how employees socialize into an organization.

Socialization and Culture

People within the organization influence the organizational culture. They have to learn the culture when they begin working at the organization. Schein (1988) suggests

individuals respond to socialization in a new culture in three ways: conformity, rebellion, and creative individualism. When someone conforms to a new culture, they absorb the norms and values. When someone rebels, they reject the culture in overt ways. When someone responds with creative individualism, they accept and reject certain aspects of the organization's culture.

The process of socialization is relevant to this study because of its ties to organizational identity as well as organizational commitment. Major (2000) defines socialization in the context of organizational culture as the learning activity, focusing on what and how newcomers learn as they transition from an organizational outsider to an organizational insider. Major (2000) also suggests socialization is effective when newcomers understand and accept the organization's key values, goals, and practices. Beyer, Hannah, and Milton (2000) posit stronger organizational attachment is based on shared ideas, interactions, symbolism, and behavior.

Organizational culture is an important part of understanding organizations. Hatch and Schultz (1997) distinguish between the concepts of organizational identity and organizational culture. Organizational identity refers to what members of an organization feel and think about a specific organization; and organizational culture is "the internal symbolic context for the development and maintenance of organizational identity" (p. 6). Organizational identity will be discussed in detail next to further the idea that socialization through culture influences organizational identity.

Organizational Identity

Research defines organizational identity as separate from organizational culture (Hatch & Schultz, 1997). Individuals, groups, organizations, and industries may be

studied using this concept (Stuart, 1998). Albert and Whetten (1985) state the concept of organizational identity appears when people in organizations ask, "Who are we?" "Organizational identity is that which is central, distinctive, and enduring about the organization" (Hatch & Schultz, 2004, p. 3). In this study, organizational identity will be studied as a concept constructed by "cognitions, emotions, and/or aesthetic appreciations of those who participate in its creation, maintenance, and change" (Hatch & Schultz, 2004, p. 4).

Albert and Whetten (1985) state there are two purposes for the concept of organizational identity. One purpose is to define a particular aspect of an organization (identity), and organizations use this concept to characterize themselves. Organizational identity must "be a statement of identity which distinguishes the organization on the base of something important and essential" (p. 91). It also must be a classification. This classification can be dynamic and the organization might have multiple identities. For example, one classification for a bank would be a financial institution, another would be the identity created with the network of banks with the same name, as well as the classification of being FDIC insured.

Lee (1971) posits identification implies some degree of belongingness, loyalty, or shared characteristics, but these concepts are interwoven and cannot be analyzed as separate phenomena. Pratt (1998) states identification happens in two ways. One way is by recognizing that the organization has values and beliefs similar the employee's, which is identification through affinity. The second way to identify is when an individual changes his/her values and beliefs to be more similar to the organizations, which is identification through emulation. Brown (1969) states an individual will identify with an

organization if the membership is relevant to his/her satisfaction. The identification will be independent of money, seniority, and better work conditions.

Organizations try to gain identification with employees to make sure employees' decisions will be made with the organization's interests in mind. "Identification has been linked to greater employee compliance, lower attrition, lower in-group conflict, and an increase in behaviors congruent with the organization's identity. . . it also has been found to affect member decision making and sense-making" (Pratt, 1998, p. 184; Dutton, et al., 1994). Miller, Allen, Casey, and Johnson (2000) posit organizational identification is derived from internal messages the organization provide employees and the link between worker goals and values and organization values and goals.

Social Identification Theory and the Organization

Organizational identity theory is built on the theory of social identity theory. The social identity theory will be examined first to lay the groundwork for the work of Ashforth and Mael (1989). Nkomo and Cox (1996) state the social identity theory is a cognitive theory. Individuals classify themselves and others into social categories and these classifications have a significant impact on human interactions.

Organizational identification is a specific form of social identification (Ashforth & Mael, 2001). An organization, seen as a social category, has characteristics that relate to the individuals who are part of it. The social identification theory states individuals identify with certain social categories to enhance their self-esteem through association. This identity may come from the organization, and also from the specific group the individual is associated with inside the organization (i.e. a work group).

Ashforth and Mael (1989) state there are three general consequences of group identification which are relevant to organizational behavior 1) individuals tend to choose activities with institutions which are congruent with salient identities; 2) identification affects outcomes such as intragroup cohesion and cooperation; and 3) identification reinforces attachment to the group and its values and increases competition with out-groups. When examining social identity at an individual level, individuals must perceive himself/herself as having a stake in the "fate" of the group. He/she must also feel vested in the success or failure of an organization, and the individuals must also internalize the values and goals of the group. These are also the behaviors an employee must exhibit when identifying with an organization. Antecedents of social identity occurring in organizations include: the distinctiveness of the group or organization, the prestige of the group or organization, the salience of out-group membership, and the attraction, similarity, and liking of the group by the individual. Organizational identities define members' perceptions of their organization's traits (Elsbach & Kramer, 1996; Dutton et al., 1994).

Group Identity

Another theory applicable to measuring identity in groups is embedded intergroup theory. This theory states individuals and organizations are constantly attempting to manage potential conflicts arising from the interface between identity groups and organization group membership (Alderfer, 1980). Identity of individuals in organizations is determined not only by organizational categorization but also by identity group membership. Some employees might identify with a specific work group more so than the organization as a whole.

Most people's time is spent communicating within or for organizations. Burke posited identification was necessary to understand the division of labor and hierarchy of the human experience. Identification relates to the division of labor because of the roles workers play. A person may identify himself/herself by where they are from, what they do, and the title they have. The corporate identity one has serves to enhance the "self." "One identifies himself with some corporate unit…and by profuse praise of this unit he praises himself" (Cheney, 1983, p. 147). As individuals work on their corporate identities, they communicate with other people of the same role and stature. Burke's theory is receiver-oriented - the emphasis is on the act of identifying with or without the help of peer groups. However, van Knippenberg and van Schie (2000) posit a work-group identification may be stronger than the organizational identification, and this form of identity strongly relates to job satisfaction, turnover intentions, job involvement, and job motivation.

An example of self-concept being tied to organizational membership and group identity can be seen in the Elsbach and Kramer (1996) study examining how magazine, educational institution rankings impacted ranked or unranked universities' self-perceptions. Some universities hoped they would not make the magazine rankings of the nation's best universities because of what might happen in subsequent years. If the school was never ranked, a positive perception of the university would always be present. If the school was ranked one year and not the next, the university would worry people would disassociate with it because it was not ranked in subsequent years after earning the honor of ranking previously. On the other hand, alumni wanted their identity to be tied to ranked universities.

How Employees Gain Organizational Identity

Cheney (1983) performed a study to analyze Burke's strategies in the organizational communication context. Cheney reviewed internal communication pieces as a primary form of organizational communication. He found several techniques used to promote a sense of unity between the organization and the individual. Cheney identified: (1) expression of concern for the individual - words and content that stressed the employees as important, integral role of the organization; (2) recognition of individual contributions – recognize employees for their contribution in organizations; (3) shared values – the employee shares the values of the organization. The communication pieces used "we" and "you" in them; and (4) advocacy of benefits and activities – advocate what the company does for the employee, an example of this is training. (5) praise by outsider – encourage employees to be part of the organization because the organization has won awards, been recognized as industrial leaders, etc.; and (6) testimonials by employees-communication pieces that use quotes from employees to stress the importance of belonging to the organization. Each of these pieces involves an association process where the concerns of the employee are identified with the organization (Christensen, 1995).

Albert and Whetten (1985) first posit identity changes over time. Erickson (1968) found one of the reasons Army personnel after World War II were disturbed when coming home was the loss of their identity with their previous life. They were identifying with their immediate group of soldiers as well as the Army. When they returned home, they did not belong to a close-knit group. Identity of individuals is formed by continuous interactions with others (Cooley, 1922; Goffman, 1959; Mead, 2004). Organizations may have changing identities based on whom they do business with, as well as individuals

identifying with certain sub-groups in the organization. Organizational identities change over time due to different continuous interactions both internally and externally. Albert and Whetten (1985) state organizational identities will change when 1) organizations form, 2) when the organization loses something that helps create the identity (e.g., manager or CEO), 3) when the organization accomplishes something, 4) when the organization grows, 5) when the organization has a change in the "we" (e.g., take over or merger), 6) or when cutbacks occur.

Hall, Schneider, and Nygren (1970) examine how organizational identification in the U.S. Forest Service changes over time. They measured job attitudes, satisfaction needs, and self-identity. They found as the number of years someone worked for the Forest Service increased, his or her organizational identity increased. Identification went from being least important (for respondents working less than five years) to be being the most important in the group with the longest tenure. Hall et al., (1970) did not find a significant difference in self-identity changing to align with organizational identity. They suggest people entering the Forest Service have the same goals and needs as the forest service has as its mission. This is the only study (Hall, et al., 1970) which examines identity change over time. Hall and colleagues did not have a benchmark for identity. There is a lack of research examining if identity changes. Therefore this study posits:

H1: Employees' identity with an organization changes.

RQ1a: What antecedents contribute to organizational identity?

RQ1b: What antecedents contribute most to changes in organizational identity?

There is a link in the literature between organizational commitment and organizational identity, but for the purpose of this study, they are treated as separate concepts and measured separately.

Organizational Commitment

Organizational culture was explained in order to better understand the process of socializing in organizations. As previously stated, Miller and colleagues (2000) posit when studying organizational identity, it is easy to overlap identity with commitment. For the purpose of this study, organizational commitment will be a stand-alone construct.

Definition and Process

For more than 30 years, organizational commitment has been operationalized in terms of careers, organizations, norms, identification, morals, work, jobs, etc. There are two views of commitment apparent in the literature. The first view sees organizational commitment as behavior. The second view suggests organizational commitment is an attitude (Zangaro, 2001). Mowday, Porter, and Steers (1979) define organizational commitment as the relative strength of an individual's identification with and involvement in a particular organization characterized by three factors: "(1) a strong belief in an acceptance of the organization's goals and values, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a strong desire to maintain membership in an organization" (p. 15). This definition is similar to the definition of organizational identity. The idea of adopting values and beliefs and aligning employees' values and goals with those of an organization is what drives organizational commitment and the organizational identity literature. Meyer and Allen (1991) suggest commitment is

a psychological state that can characterize the employee's relationship with an organization, which influences his or her decision to stay or leave.

The classic commitment study conducted by Porter, Steers, Mowday, and Boulian (1974) posit commitment includes a belief in and acceptance of the organization's values and goals; a willingness to work on behalf of the organization to achieve its' goals; a desire to maintain membership with the organization (cognitive and affective); and behaving or acting in a way that can increase commitment.

Commitment manifests in different strengths. Brown (1996) defines the strength of commitment as "its significance or importance in the life of a person who owns the commitment relative to other commitments and pursuits" (p. 234). When examining commitment from an attitude or a behavioral perspective, there are different ways to form commitment. From the behavioral perspective, there are two ways to form commitment: by using overt statements of agreement and by using actions and behaviors that indicate where one stands. Salanik (1977) posits commitment grows stronger as behaviors are explicit, irreversible, voluntary, and public. From the attitude perspective, Brown (1996) states "a person can become committed without making an overt pledge; if a person develops sufficient positive attitudes or sense of goal congruence, then at some point that person is committed" (p. 237).

Organizational Commitment Relates to Organizational Culture

Organizational commitment can be linked to organizational culture. Virtanen (2000) posits organizational commitment is a social commitment because organizations need to influence and control the commitment of its members toward objects for the organization to succeed. This creates the need to make commitments visible and

understandable to other people. It creates homogeneous commitment as well. To understand how one interprets these events happening in organizations, researchers study the concept of organizational culture or climate. For example, Schneider, Gunnarson, and Niles-Jolley (1994) posit organizational culture is the broad pattern of an organization's morals, values, and beliefs resulting from employees' interpretation of assumptions, values, and philosophies of the organization. Virtanen (2000) suggests commitment is one way to manage organizational culture.

Goldberg (2000) suggests several key ways his organization retained employees. They include offering employees competitive wages, respecting employees, training and educating employees, providing career planning and promotion opportunities, and creating effective communication channels at each level of the organization. By concentrating on these things, his assisted-living center has had less employee turnover. As commitment increases, the employee is more likely to stay. Now that organizational culture has been tied to organizational commitment, different ways of forming commitment will be discussed. It is important to note that if an organizational culture promotes giving back to employees for what they have put into the organization, there is an exchange relationship, which might form the basis of commitment.

Social Exchange Theory and Commitment

There are several theories applied when studying organizational commitment. Etzioni (1961) states organizational commitment is a response based on rational exchanges of benefits and rewards. The more an employee feels the investment in the organization outweighs the benefits, the less attached they will feel. The more feelings of resentment employees' experience, the lower the commitment. Becker (1960) argues

organizational commitment occurs when a person makes a side-bet or links outside interests. These side-bets can be anything from pension-plans to status. Employees will be more committed to an organization they have developed side-bets with. Geurts, Schaufeli, and Rutte (1999) state that social exchange theory (Blau, 1964) and equity theory (Adams, 1965) can be used to examine how employees pursue equity in their exchange with their organization. Employees expect a balance between what they give to an organization and what they receive in return. If the balance is not met, it will lead to an unpleasant emotional state that results in employee resentment, withdrawal, absenteeism, and turnover (Geurts, et al., 1999). Geurts et al., (1999) posit a strong link between inequity in the employment relationship and absenteeism, and poor organizational commitment was necessary for turnover intentions to develop. Employees agree to make specific contributions to an organization for which they expect benefits in return. Psychological contracts (Rousseau & Parks, 1993) between employees and employers convey the expectations held by employees about the reciprocal nature of their employment relationship. Expectations can be concrete (payment and word) and abstract (esteem and dignity).

Magenau, Martin, and Peterson (1988) suggest a positive exchange relationship with one object of commitment and a negative relationship with another will impact work behavior. Brown (1996) argues all commitments have an object, a party to which commitment is made (Cohen, 2003). Brown (1996) states one continually evaluates commitments. A person's current situation and affect will evaluate how he/she evaluates the commitment. The psychological contract signifies issues of exchange and of mutual expectations. "More formally, the psychological contract was defined as an individual's

belief in paid-for-promises or a reciprocal obligation between the individual and the organization" (Cohen, 2003, p. 11). Eisenberger, Huntingtion, Hutchinson, and Sowa (1986) posit organizational commitment is the culmination of a series of social exchange transactions. The organization demonstrates its' support to reward increased work efforts and meet the needs for approval or self-affirmation.

Commitment and identity are also linked. Rousseau (1998) explains when participation rewards are exchanged, and identification begins. When people are being rewarded, they are more likely to be concerned with the organization's reputation, survival, and success.

Models of Commitment

One of the most commonly used models to study organizational commitment is Meyer and Allen's (1991) three-component model of organizational commitment. The components include affective, normative, and continuance commitment. The affective component of organizational commitment refers to an employees' emotional attachment to, identification with, and involvement in the organization. Affective commitment is "an affective or emotional attachment to the organization such that the strongly committed individual identified with, is involved in, and enjoys membership in the organization" (p. 2). The continuance component refers to commitment based on the costs employees' associate with leaving the organization. Continuance commitment is similar to Becker's idea of side bets. Individuals will look at alternatives to their current situation. The normative component refers to employees' feelings of obligation to remain with the organization based on the idea they have beliefs about their responsibilities or obligations to an employer (Meyer & Allen, 1997). Affective, continuance, and normative

commitments are distinguishable parts of commitment rather than types of commitment (Wasti, 2003).

Antecedents of Commitment

Affective commitment antecedents. There are a number of antecedents for affective commitment. One of those is organizational structure, which also relates to organizational culture. Organizational structure influences organizational commitment. The more open the lines of communication, the higher the affective form of commitment (Meyer & Allen, 1997). Demographic variables have not been good indicators of affective commitment. Recent research has shown age and affective commitment are weakly related (Mathieu & Zajac, 1990). Work experience has been a good indicator of affective commitment, and if an employee is sure of his/her role in the organization, his/her affective commitment is higher (Mathieu & Zajac, 1990).

Continuance commitment antecedents. There are antecedents to continuance commitment as well. This refers to the employee's awareness that there are costs associated with leaving the organization. "Continuance commitment can develop as a result of any action or event that increases the costs of leaving the organization, provided the employee recognizes that these costs have been incurred" (Meyer & Allen, 1997, p. 56). There are two antecedent variables for continuance commitment: investments and alternatives. Employees' can make investments in organizations by incurring the expense and human cost of relocating or by spending time gaining skills specific to that organization. Employees' perceptions of alternatives also influence continuance commitment. For example, an employee with a weak continuance commitment will see a lot of opportunity or other positions for him or herself. "Neither investment nor

alternatives will have an impact on continuance commitment unless or until the employee is aware of them and their implications" (Meyer & Allen, 1997, p. 58). Continuance commitment can be related to the social exchange perspective of commitment. Is the employee investing in the organization as much as the organization is investing in the employee?

Antecedents of normative commitment. Normative commitment refers to an employee's feelings of obligation to remain where he/she is. Wiener (1982) argues normative commitment to the organization develops during the early socialization as a newcomer. "Through complex processes involving both conditioning (rewards and punishments) and modeling (observation and imitation of others), individuals learn what is valued and what is expected of them by the family, the culture of the organization" (Meyer & Allen, 1997, p. 61). The psychological contracts defined above play a large part in the formation of normative commitment.

Finegan (2000) found employee commitment could be predicted based on perceptions of organizational values. It is not as important personal values and organizational values match, rather that the employee perceives the organization's values as fair. Affective commitment could be predicted if the organization valued humanity and vision. Continuance commitment could be predicted when an organization examined the bottom-line factors. Normative commitment is impacted most by a person's individual values.

One can see most of the research focuses on the antecedents of commitment, not necessarily on how commitment changes. This study would like to examine if commitment does change. Therefore this study posits:

H2: Employees' commitment to an organization changes.

RQ2a: What are the antecedents of each component of organizational commitment?

RQ2b:What antecedents contribute most to the changes in the components of organizational commitment?

Organizational Citizenship Behavior

There is no research that directly ties organizational culture to OCBs. There is also limited research examining how OCBs might change, if the number of OCBs increases or decreases; however, this study probes whether OCBs can be bolstered. OCBs can be considered one of the three types of extra-role behaviors studied in organizational communication. Extra-role behaviors usually occur in three forms: 1) organizational citizenship behaviors; 2) negative behaviors; and 3) political behaviors (Eastman & Pawar, 2005). This study will only examine OCBs. There are three aspects used to define OCBs. They include: discretionary (extra-role behavior), absence of direct and explicit formal rewards, and organizational functional consequences (Organ, 1988; Schnake, 1991; Eastman & Pawar, 2005). OCBs are considered positive extra-role behaviors. The construct of OCB is multidimensional. As the OCB construct continues to evolve, dimensions have been added.

Graham (1986), Morrison (1994), Organ (1988), and Podsakoff, MacKenzie, and Hui (1993) all posit five dimensions of OCB. They include altruism, conscientiousness, civic virtue, courtesy, and sportsmanship. Antecedents of OCB include individual characteristics, organizational characteristics, and leadership behaviors (Podsakoff,

MacKenzee, Paine, & Bachrach, 2000). OCBs impact group (Podaskoff, Ahrearne, & MacKenzie, 1997) and organizational performance (Koys, 2001).

OCB Defined

Organ (1988) posits this definition of OCB, "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (p. 4). Discretionary behaviors are not enforceable, not in the job description, and the employee decides to do it. Organ's (1988) definition of OCB requires the behavior not be formally recompensed by the organization's reward system. "Finally, our requirement of OCB is that it represent actions of individuals that in the aggregate improve the functioning of organizations…most OCB actions, taken singly, would not make a dent in the overall performance of an organization" (Organ, 1988, p.6). When Organ (1988) started developing the concept of OCB, efficiency did not guarantee effectiveness, and efficiency could be obtained even if effectiveness was not present. In 2006, Organ and colleagues state, "In truth, the way we should define OCB is not crystal clear" (p. 36). After reviewing the literature about OCBs, Organ and colleagues (2006) felt the only thing they knew for sure is OCBs are not routine job functions, and they contribute directly or indirectly to organizations being effective. They also found OCB researchers had two themes in the research; there was some element of choice in exhibiting OCBs and that there had to be some variance in OCBs. Specifically, the number of OCBs demonstrated by individuals could not be equal; they had to vary among individuals. The number of OCBs also varies among organizations.

Categories of OCBs

Van Dyne, Grahman, and Dienesch (1994) present a taxonomy that includes social participation (overlapped with altruism and courtesy); loyalty (overlapped with sportsmanship and civic virtue); obedience (overlapped with civic virtue and conscientiousness); and functional participation (which was not included in Organ) (Harkins, et al., in press). Morrison (1994) also proposes several dimensions of OCB. Her dimensions include altruism (overlapped with altruism and courtesy); conscientiousness; sportsmanship; involvement decisions (overlapped with civic virtue and a piece of sportsmanship); and keeping up with changes (overlapped with civic virtue and consciousness) (Harkins, et al., in press).

Williams and Anderson (1991) provide a taxonomy distinguishing between OCBI (an OCB that benefits the organizational members), and OCBO (an OCB that benefits the organization). There are five OCB dimensions: altruism, courtesy, conscientiousness, sportsmanship, and civic virtue. Organ (1988) defines altruism as discretionary behaviors that help specific people within the organization. This type of behavior helps the efficiency of an organization. Schnake and Dumler (2003) state altruism "refers to helping behaviors directed at individuals within the organization; which ultimately benefit the organization" (p. 284).

Conscientiousness is the behaviors organizational members carry out beyond the minimum required levels. An example of this might be never missing a day of work. Conscientiousness (or generalized compliance) is a behavior, which benefits the organization but not the person. The person is performing his/her role, but not going above and beyond. Not wasting time, attendance, and punctuality are examples (Schnake

& Dumler, 2003). The difference between conscientiousness and altruism is that altruism behaviors help specific people and conscientiousness behaviors are not carried out for a specific person (Organ, 1988).

Organ (1990) defines civic virtue OCBs as "responsible, constructive involvements in the political process of the organization, including…expressing opinions" (p. 96). Civic virtue is participating in the political process of the organization. Examples include attending meetings and expressing opinions (Schnake & Dumler, 2003). Sportsmanship behaviors are tolerating the inconveniences of an organization without complaining (Organ, Podsakoff, & MacKenzie, 2006). Organ (1990) defines the sportsmanship dimension as "a citizen-like posture of tolerating the inevitable inconveniences and impositions of work without whining and grievances…" (p. 96).

The courtesy dimension of OCB involves employees preventing problems by telling others about decisions and actions or passing the information along to people who find it useful (Schnake & Dumler, 2003). Organ (1990) defines courtesy as "subsumes all of those foresightful gestures that help someone else prevent a problem – touching base with people before committing to actions that will affect them, providing advance notice to someone who needs to know to schedule work" (p. 96). Courtesy behaviors are behaviors that include touching base with parties at work when one is gone, and planning in advance for non-routine things that might occur if the employee is going to be gone.

OCB: Construct in Need of Clarification

Harkins et al. (in press) state there are two findings that have come from the OCB literature. These findings are: managers who wish to encourage OCB should reward employees for doing so (Schnake & Dumler, 1997), and that OCBs influence managers'

decisions when rating performance (Podsakoff, et al., 2000). Another finding in the literature is there is not one way to define OCB. There is a disagreement in the literature as to what OCB really is, if it is extra-role behavior or in-role behavior. Even though there is a conflict as to how to define OCB, it has been studied. Each study uses only one definition of OCB (Organ, 1997).

Organ's (1988) definition is still the most commonly used. Organ and Konovosky (1989) define OCB as organizational behaviors deliberative and reflective rather than spontaneous. Most OCB literature examines OCB and job satisfaction or OCB and organizational justice (Organ, et al., 2006). Nowhere in the literature is there a study that examines OCBs changing over time, which is what this study would like to accomplish. OCBs should be directly related to organizational identity, organizational commitment, and organizational culture.

For the purpose of this study, Organ's (1988) definition of OCB will be used as well as his five dimensions of OCB. Most research has examined how different OCB dimensions impact employee's work performance and evaluation from a manager's perspective. Barnard (1938) posits some people have more of a "willingness to cooperative" with others. Seers, Petty, and Cashman (1995) state reciprocity-based exchange predicts extra-role behaviors and attitudes (e.g., higher job satisfaction and lower employee turnover). This will impact the number of or dimensions of OCBs. Rhoades and Eisenberger (2002) apply the social exchange process between the organization and the employee. The employee trades their effort, loyalty, and commitment to the organization for tangible rewards. Job satisfaction and job attitudes should influence OCBs more than performance and productivity. Research has found

little to show personality predicts OCBs or the dimensions of OCBs. Bishop and colleagues (2000) examine the potential relationship between organizational commitment, organizational support, and overall OCBs. Organizational commitment was found to mediate organization support and OCBs. Reed and Kidder (2005) found employees think OCBs should be rewarded. Men were more likely to prefer monetary rewards than women. Rioux and Penner (2001) state OCBs are exhibited by employees whose needs are being met by the organization. This study would like to examine if OCBs can be bolstered and if they change over time, evidence of which is missing from the literature. Therefore; this study posits*:*

H3: Employees' number and dimensions of OCBs change.

RQa3: What are the antecedents of each dimension of OCB?

RQ3b: What antecedents contribute most to changes in OCBs?

Organizational Attitude

Organizational attitudes appearing in the organizational communication literature include organizational commitment and job satisfaction (Mayhew, et al., 2003). Attitudes have been studied for why people behave the way they do at their jobs. Eagley and Chaiken (1993) state an attitude has two components. One component is cognitive thought about the attitude object, while the second component is affective, feelings about an attitude object. The attitude studied most frequently is job satisfaction. Moorman and Harland (2002) found job attitudes toward an organization related to demonstrated OCBs. They also suggest that if an employee's commitment is increased, even temporary employees would demonstrate OCBs, which would indicate a positive job attitude. Organ and Ryan (1995) found job attitudes cause OCBs. Organ et al. (2006) also posit if an

employee is satisfied it will impact job performance. “If is reasonable to think that the more positive a person’s job attitudes or job satisfaction, the more positive the persons behavior will be with respect to the job” (p. 67). Attitudes would also play a role in organizational identity, organizational commitment, and OCBs. Therefore, this study posits:

H4: Employees’ attitude toward the organization changes.

H5: Employees’ perceptions of likelihood of staying at an organization changes over time.

H6: Attitude toward the organization predicts organizational identity, organizational commitment, and OCBs.

An Organizational Model – Organizational Culture, Organizational Attitude, Organizational Identity, Organizational Commitment, and Organizational Citizenship Behaviors

Now that the literature for organizational culture, organizational identity, organizational commitment, OCBs, and organizational attitude has been examined, a model linking these concepts will be proposed.

Organizational culture is the antecedent to attitudes, identity, commitment, and OCBs. Most researchers study why organizational members behave the way they do and focus on the reason for the behavior. Martin (2002) posits culture represents values, beliefs, behaviors, expectations, languages, and symbols shared by organization members. Major (2000) defines socialization in the context of organizational culture as the learning activity, focusing on what and how newcomers learn as they transition from an organizational outsider to an organizational insider. So therefore, organizational

culture includes values, beliefs, behaviors, and expectations for members in the organization.

Organizational culture can be seen as an antecedent to organizational identity. Lee (1971) posits identification implies some degree of belongingness, loyalty, or shared characteristics; and this feeling of belongingness, loyalty, or shared characteristics happens because of an adoption of the organization's values, beliefs, and behaviors. Therefore, organizational culture is an antecedent of organizational identity.

Pratt (1998) posits two ways to identity, identification through affinity and identification through emulation. The first requires an employee to work at an organization that has the same values and beliefs as he/she does. The second involves the employee changing his/her values and beliefs to become similar to the organizations. Hatch and Schultz (2004) state organizational culture is tacit. Organizational cultures are not based on what others think and say about an organization, but organizational identity is. Culture shapes the attitudes of others. Because culture is shaping the attitudes of employees, and culture is influencing how one identifies with an organization, *organizational culture could be considered an antecedent to attitude about an organization as well as organizational identity. Culture might also impact an employee's likelihood of staying at an organization.*

Attitudes have been studied for why people do things on their jobs. The attitude studied most frequently is job satisfaction. Organ et al., (2006) also posit the more positive a person's job attitude, the more positive the person's behavior will be with respect to the job. This has not been found true (Kornhauser & Sharp, 1932; Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985). This study actually measures

organizational attitude, rather than job satisfaction. Because an attitude measure is used, *it is expected that culture would influence the attitude one has about an organization, which would precede organizational identity. Culture and attitude should influence an employee's likelihood of staying at an organization,*

Organizational Identity vs. Organizational Commitment

There is frequent confusion between organizational identity and organizational commitment. Ashforth and Mael (1989) posit identification refers to self in terms of social category, where as internalization refers to incorporation of values and assumptions one lives by. Also, many view organizational identity as a facet of commitment, while others see them as separate. The Organizational Commitment Questionnaire views commitment as an employee's belief in the organization's values, an employee's ability to work on behalf of the organization, and an employee's desire to stay at the organization (Balfour & Wechsler, 1996). The internalization of the organization's values and the intent of staying and exhibiting effort on behalf of the organization do not include an employee identifying with the organization. Identification is usually organization-specific, whereas commitment and internalization of values are not. Members of an organization might score high on the OCQ because they feel obligated to feel loyal and committed as an employee, but these feelings may not be directed toward any specific organization (Balfour & Wechsler, 1996).

Most of the research on commitment focuses on why people commit, or what influences their commitment. There is an abundant amount of research on antecedents of commitment. There are antecedents for each type of commitment posited by Meyer and Allen (1997). Open lines of communication, work experience, and role identity are all

strong predictors of affective commitment (Meyer & Allen, 1997). Investments and alternatives are predictors of continuance and normative commitment (Meyer & Allen, 1997). They posit identification and internalization are mechanisms by which commitment develops. This study wants to examine a link between organizational commitment and organizational identity. *Identification must come before commitment in order for it to be included in the definition of commitment (Mowday et al., 1979).*

An example of how identification comes before commitment can be seen in the classic Mowday and colleague's definition. Mowday and colleagues (1979) define organizational commitment as the *relative strength of an individual's identification* with and involvement in a particular organization. Organizational structure has been shown to influence organizational commitment. More open lines of communication lead to higher the affective form of commitment (Meyer & Allen, 1997). Meyer and Allen (1997) posit identification and internalization are mechanisms by which commitment develops. *Because identification happens before commitment, and also because identification is a necessary component of commitment (Meyer & Allen, 1997 definition) the model will depict organizational identity as an antecedent of organizational commitment. If an employee is committed, he/she should be more likely to see themselves staying at the organization.*

The last aspect of the model is a link between organizational commitment and OCBs. This link is drawn based on the way commitment is formed. From the behavioral perspective, there are two ways to form commitment: by using overt statements of agreement and by using actions and behaviors that indicate where one stands. Salanik (1977) posits commitment grows stronger as behaviors are explicit, irreversible,

voluntary, and public. In the Mowaday et al. (1979) commitment definition, the second part states there is a willingness to exert considerable effort on behalf of the organization. This effort can be seen in the form of OCBs. The behaviors that are being performed voluntary, public, and irreversible are the types of behaviors considered forms of OCBs. Because Organ (1988) first suggested OCB as a way to link job satisfaction and job performance, this link could be expanded to show a link between organizational commitment and OCBs. If an employee feels committed to the organization, he/she might demonstrate more OCBs that benefit the organization as well as OCBs that benefit organizational members. There has been a link between job satisfaction and job performance, so it is only logical to draw a link between organizational commitment and the number of OCBs demonstrated. If one is more committed to the organization, he/she might demonstrate more OCBs. *Therefore, this model depicts organizational commitment as a precursor to OCBs. OCBs will be removed from the model, and replaced with an employee's likelihood of staying at the organization. It is predicted that the same precursors (culture, identity, commitment, and attitude) would predict an employee staying at an organization.*

This study proposes a model where organizational culture is an antecedent of organizational identity. Organizational identity precedes organizational commitment, which then serves as an antecedent of organizational citizenship behaviors. This study predicts:

H7a: The predicted model is:

organizational culture → organizational identity → organizational commitment → OCBs. Please see Figure 1.

The end result of increasing organizational identity, commitment, and OCBs could be lower employee turnover intentions. Branham (2004) states one way to keep employees is to increase commitment. This study would like to examine how an employee's likelihood of staying at an organization relates to organizational identity, commitment, and OCBs. Another model will also be examined.

H7b: organizational culture → organizational identity → organizational commitment → likelihood of staying. Please see Figure 7.

Now that models linking organizational culture, organizational attitude, organizational identity, organizational commitment, OCBs, and an employee's likelihood of staying at an organization have been posited, the theory of inoculation will be examined. The process of inoculation will be used in this study as a way to bolster organizational identity, organizational commitment, and OCBs.

Chapter III

Inoculation

Now that organizational culture, organizational identity, organizational attitude, organizational commitment, and OCBs have been explained, the process of inoculation will be examined. One purpose of this study is to bolster organizational identity, organizational commitment, and OCBs through the process of inoculation.

Inoculation Defined

Inoculation is a theory about resistance to persuasion. Research demonstrates inoculation works by conferring resistance to attitude change when people come into contact with messages that attack preexisting attitudes. Borrowing from a medical analogy, McGuire posited inoculation theory as the process by which individuals receive "weakened, defense stimulating forms of the counterarguments" (1961, p. 327), which then serves to protect attitudes against belief attacks. In the same way that individuals receive a weakened form of an infectious virus to develop an immunity capable of combating the viral infection itself, McGuire posits refutational inoculation treatments manifest threat (the degree to which one perceives his or her belief is vulnerable), which causes an individual to generate overt counterarguments that confer resistance. McGuire's (1964) inoculation theory was developed after Lumsdaine and Janis (1953) found two-sided messages were more effective than one-sided messages in producing attitude change and that they protected against counterattitudinal attacks. McGuire (1964) suggests individuals can be motivated to build resistance to attacks on attitudes by being exposed to attitude-threatening messages. These attitude-threatening messages cause

individuals to perceive their attitudes as vulnerable and trigger individuals to begin making mental counterarguments that confer resistance.

An alternative approach to resistance to attitude change is seen in the classic debate of motivational influences (heuristic) versus cognitive mechanisms (systematic) created by Festinger's theory of dissonance. Festinger (1957) had participants write support for a position that ran contrary to their attitudes. The change in attitude resulted from the person reducing the unpleasant tension or dissonance between two conflicting beliefs.

This theory of dissonance was challenged by Daryl Bem, who proposed a non-motivational account for Festinger's findings. Bem (1972) argues people often have no direct way of determining their attitudes by observing their own behavior and inferring their attitudes. Self-perception theory is another approach to resistance to attitude change, and it accounts for attitude change, which results from counterattitudinal behavior in cognitive terms. Bem (1972) states individuals know their attitudes and emotions by observing how they behave in certain social situations with others. Steele and Liu (1983) demonstrate the need for self-affirmation drives attitude change.

Despite the existence of dissonance and self-perception approaches in persuasion literature, McGuire's inoculation approach to resistance is the most common. Eagly and Chaiken (1993) call inoculation "the grandparent theory of resistance to attitude change" (p. 561), and the theory has been applied in a number of contexts including commercial advertising (e.g., Pfau, 1992), public relations (Burgoon, Pfau, & Birk; Wan & Pfau, 2004), political communication (e.g., An & Pfau, 2004; Pfau & Burgoon, 1988; Pfau &

Kenski, 1990), and health campaigns (e.g., Godbold & Pfau, 2000; Pfau, Van Bockern, & Kang, 1992; Szabo, & Pfau, 2001).

A Closer Look: Mechanisms That Confer Resistance

McGuire's (1964) original assumption of inoculation theory is based on the notion that refutational pretreatments, which challenge a person's attitude and provide responses to counterarguments, threaten people (Szabo & Pfau, 2001). The threat component of refutational pretreatments motivates people to protect their attitudes, which confers resistance (Papageoris & McGuire, 1961). The pretreatments consist of threat and refutational preemption, which are integral mechanisms in resistance. Refutational preemption raises counterarguments before they occur, and provides responses to them. This allows receivers to strengthen their attitudes against later attacks (Pfau, Tusing, Koerner, et al., 1997). Szabo and Pfau (2001) posit threat and refutational preemption work together. Threat provides motivation, and refutational preemption provides scripts (McGuire, 1964).

Early research compared refutational and supportive treatments. Refutational treatments provide arguments contrary to the initial attitude and responses to those arguments (McGuire, 1962, McGuire & Papageoris, 1962). Resistance occurs in refutational treatments because the receiver is motivated to produce counterarguments and responses. Unlike refutational treatments, supportive treatments use a bolstering strategy. They are only effective if the recipient was motivated to generate reasons for holding the attitude (McGuire, 1964). The bolstering effect is short lived, and research supports the idea that refutational treatments work better than supportive (bolstering) treatments (Crane, 1962; McGuire, 1962; McGuire & Papegeorgis, 1961).

Traditionally, inoculation confers resistance by threatening an individual's attitude or belief and presenting arguments that challenge the threatened attitude or belief (McGuire, 1964). The threat component of the inoculation treatment is understood to motivate the individual to process the message or messages contained in the refutational preemption component of an inoculation treatment (Papageeoris & McGuire, 1961). Both of these components of inoculation (threat and refutational preemption) make attitudes and objects salient. The attitude threatened is salient, as is any object provided in the refutational preemption component. Lee and Pfau (1997) posit an attitude would be vulnerable to attack if only one component (be it cognitive or affective) was strengthened and not the other. Pfau (1997) posits threat is a distinguishing feature of inoculation. Threat motivates receivers to realize vulnerability in their attitudes and "is operationalized as a warning of possible future attacks on attitudes and the recognition of attitude vulnerability to change" (Szabo & Pfau, 2002, p. 235). Threat motivates individuals to protect attitudes, which creates resistance to counterpersuasion (Pfau & Kenski, 1990). Szabo and Pfau (2002) posit threat and refutational preemption work together. Threat provides motivation, and refutational preemption provides scripts (McGuire, 1964).

While the above discussion summarizes research that confirms McGuire's original mechanisms (threat and counterarguments), other scholars have attempted to identify how inoculation treatments conferred resistance through alternative, but complimentary paths. Pfau, Roskos-Ewoldsen, and colleagues (2003) suggest attitude accessibility may be another way that inoculation elicits resistance. Roskos-Ewoldsen, Arpan-Ralstin, and St. Pierre (2002) suggest accessible attitudes play a large role in how

social influence messages are processed. Fazio (1986) defines attitude accessibility as the retrieval of an attitude from memory as a product of associative pathways connecting memory nodes. Attitudes connecting objects surface when the node is activated. This is a virtual spider-web of information and corresponding emotions. Roskos-Ewoldsen (1997) states that the response depends on the attitude brought to the surface. Research has shown the priming nature of attitude accessibility by using pictures or words (Fazio, 1993).

Roskos-Ewoldsen and colleagues (2002) posit a person has an accessible attitude when it can be quickly and effortlessly retrieved from memory after the person is exposed to the corresponding attitude object. Attitudes can be automatically accessible from memory, or they can be extremely hard to tap. Attitude accessibility is measured by how long it takes the receiver to evaluate an attitude object (Fazio, 1990).

Bassili and Fletcher (1991) report attitudes with stronger accessibility were more resistant to influence than attitudes that had weaker accessibility. Roskos-Ewoldsen (1997) posits associative strength between the object and its evaluation will be automatically activated from memory when the receiver encounters the attitude object. He posits if the attitude is strongly associated with evaluation, the attitude may be heuristically activated. Fazio and Powell (1992) state attitudes grounded in emotion toward an object were more accessible than those formed from cognitive reasoning.

Roskos-Ewoldsen et al. (2002) observe “attitude accessibility can influence several steps within the persuasion process, most notably the orienting of attention to a message, how extensively a message is processed, whether the message is processed in a biased manner, and the resulting behavior (deliberative or spontaneous)” (p. 40).

Furthermore, they state the attitude toward the source of a message impacts how the message is processed. If a message recipient with more accessible attitudes toward the source of a message is more persuaded by a message attributed to the source, then those message recipients have less accessible evaluations of the source (Roskos-Ewoldson & Fazio, 1992).

Attitudes bias how messages are perceived. Accessible attitudes bias information processing, and accessible attitudes motivate critical processing of information (Roskos-Ewoldsen et al., 2002). Accessible attitudes are more likely to result in biased processing when ambiguous information is presented. When information is less ambiguous, accessible attitudes are less influenced by how the information is interpreted. Highly motivated people will override the effects of a highly accessible attitude and consider the information in a less theory-driven manner (Pfau et al., 2003; Pfau et al., 2004; Roskos-Ewoldsen et al., 2002).

Message Processing

People process messages in different ways. The ways they process a message will influence if they feel their attitudes have been attacked or not. Current theories of persuasion assume that people process a persuasive message in a systematic way. This means individuals will systematically assess arguments (Kunda, 2001). However, Kunda (2001) posits people also process messages heuristically, relying on quick and easy cues such as likeability or credentials of the source. Eagly and Chaiken (1993) and Petty and Cacioppo (1986) state people are easily persuaded by strong arguments when processing messages centrally or systematically. People find weak arguments more persuasive when they are processing information using a peripheral or heuristic approach.

People process messages using heuristic or systematic processing, but both of these processing methods may be influenced by emotion and cognition. Research has also considered how people respond to cognitive and affective treatments of inoculation. Lee and Pfau (1997) posits a distinction between cognitive inoculation treatments and affective inoculation treatments. Cognitive inoculation treatments emphasize strong reasoning with arguments supported by evidence (statistics or other findings). The tone is highly objective. In contrast, affective inoculation treatment feature more anecdotal support and approach to affect and are grounded in source characteristics. There is not hard evidence, and the focus of the message is more subjective. Zuwerink and Devine (1996) found subjects' relied on central and peripheral cues when resisting persuasion for high importance issues. Pfau and colleagues (1997) demonstrate affective and cognitive inoculation treatments are both able to confer resistance, but that the process of resistance varied. They found cognitive treatments promoted more resistance, and that affective-positive and affective-negative treatments conferred resistance to cognitive attacks.

Associative Network Mechanisms and Activation

Associative network mechanisms have been used widely within social psychology to explore a variety of topics including recall (e.g., Cohen, 1981; Stangor & McMillan, 1992), stereotypes (e.g., Devine, 1989; Gaertner & McLaughlin, 1983), and affect (e.g., Bower & Mayer, 1985; Singer & Salovey, 1988). However, the associative network literature, which is prominent in social psychology (Smith, 1998), is just now being applied to the theory of inoculation.

Associative networks. Associative networks are structures of mental representations that function to create an individual's memory (Collins & Loftus, 1975;

Smith, 1998). Associative networks are composed of a number of affective and cognitive nodes (Anderson, 1983; Clore, Schwarz, & Conway, 1994; Fazio, 1986; Smith, 1998; Wyer & Carlston, 1994). The affective and cognitive nodes within an associative network are connected by links that are formed when the subject of the nodes are experienced or thought about together (Smith, 1998). The links connecting nodes within the network have varying levels of strength, a measure that is related to the frequency with which the linked nodes are experienced or considered together and the importance the individual ascribes to either of the linked nodes (Smith, 1998; Wyer & Carlston, 1994). The activation of an associative network starts with one specific node within that network, and that activation spreads to other related nodes in the network (Anderson, 1983). When activation occurs, it will spread first and in greater quantities to nodes that are linked to the activated node via strong links (Smith, 1998).

Inoculative Treatment and Associative Network Activation

Inoculation confers resistance by threatening an individual's attitudes or beliefs and then systematically raising arguments contrary to attitudes and providing answers to these arguments (McGuire, 1964). The threat component of the inoculation treatment is understood to motivate the individual to engage in overt counterarguing using content provided in the refutational preemption component of inoculation (Papageeoris & McGuire, 1961). Both of these components of inoculation (threat and refutational preemption) make attitudes and objects more salient. The attitude that is threatened in the threat component is salient, as is any object provided in the refutational preemption component. Simply making an attitude or object salient activates the associative networks relevant to those items (Smith, 1998).

Within an associative network, nodes are the individual concepts by which single object representations are constructed through association with other nodes (Smith, 1998). If an individual encounters a concept that is not accounted for by a node, then a new node will be created (Smith, 1998). New concepts can be encountered through any of the typical means of learning, whether it is through individual experience or based upon the testimony of a figure of authority.

The refutational preemption mechanism of an inoculative treatment aims to give receivers specific content that they can use to strengthen their attitudes against change (Pfau et al., 1997). If the content provided to the individual in a refutational preemption is new content, then a new node representing that content or concept will be created within the associative network that has been activated by the inoculative treatment. Thus, refutational preemptions that provide individuals with new information create new nodes. In addition, content provided by refutation preemption may also strengthen existing nodes and the linkages between nodes, whether or not the content is new.

The Role of Affect

Recent inoculation research has explored the role of emotion in the process of inoculation. Lee and Pfau (1997) explore the role of cognitive and affective inoculation messages. The inoculation treatments were designed to elicit positive and negative emotions. The cognitive messages contained facts and arguments; whereas the affective treatments used anecdotal evidence and emotional language. They found cognitive treatments promoted more resistance, and that affective-positive and affective-negative treatments conferred resistance to cognitive attacks. Pfau, Szabo, and colleagues (2001) then compared cognitive, affective-anger, and affective-happiness inoculation treatments.

They found affective-happiness messages could promote goal attainment, and affective-anger messages would impede goal attainment. The examination of emotion in the process of inoculation added to the knowledge of how inoculation works. The anger inoculation treatments generated anger, which added to the process of resistance (Compton & Pfau, 2004).

The theory of inoculation has evolved for more than 40 years. The process of inoculation has been expanded from just the understanding of refutational preemption and threat to include attitude accessibility and affect. Now that the process of inoculation has been explained, it will be applied in the organizational context.

Chapter

IV

Using Inoculation to Bolster Organizational Identity, Organizational Commitment, and Organizational Citizenship Behaviors

Organizational culture, organizational identity, organizational commitment, and OCBs were defined in a previous chapter. One of the purposes of this study is to see if organizational identity, organizational commitment, and OCBs can be bolstered through the process of inoculation.

Inoculation and Organizational Identity, Organizational Commitment, and OCBs

Dutton and colleagues (1994) posit researchers "focus on the cognitive connection between the definition of an organization and the definition a person applies to him-or herself, viewing identification as a process of self-definition" when conceptualizing organizational identity (p. 242). The strength of this identification depends on how much a person feels his or her self-concept is tied to organizational membership.

Once again, it is important to note identity happens on many levels. Mael and Ashforth (2001) posit an individual tends to be a member of multiple categories and plays a number of roles, which leads to multiple social identities. One way to measure short-term identity is by using valence, current salience, and opportunities for social validation.

Valence, according to Mael and Ashforth (2001), is the attractiveness of a role transition to the transitioner where positive valence means attractive and negative valence means unattractive. This concept depends on whether the role is consistent with a desired "self." The greater the desirability of the role and the perception of gain rather than loss, the more positively valent the change. This leads to a greater willingness to identify.

Individuals will identify with an organization if the membership is relevant to the satisfaction of him/herself, and this identification will be independent of money, seniority, and better working conditions, and will be negatively related to factors that diminish visibility and potency (Brown, 1969). Hall et al. (1970) examined organizational identification in the U.S. Forest Service. They found the number of years someone worked for the Forest Service, his/her organizational identity increased. However, they could not determine if each individual's organizational identity changed over time because it was not a longitudinal study.

There is limited research examining how to bolster organizational identity or how identity changes over time. This study examines the use of inoculation as a mechanism of bolstering organizational identity.

Traditionally, inoculation confers resistance by threatening an individual's attitude or belief and presenting arguments that challenge the threatened attitude or belief (McGuire, 1964). The threat component of the inoculation treatment is understood to motivate the individual to process the message or messages contained in the refutational preemption component of an inoculation treatment (Papageeoris & McGuire, 1961). Both of these components of inoculation (threat and refutational preemption) make attitudes and objects salient. The attitude threatened by the threat component is salient, as is any object provided in the refutational preemption component. This study posits identity is an attitude toward an organization, and if someone or something threatens the person's organizational identity, it might bolster it by making it more salient.

Mayhew and colleagues (2003) state organizational commitment is an attitude as well. Organizational commitment is a social commitment and organizations need to

influence and control the commitment of its members for the organization to succeed (Virtanen, 2000). There is not a study determining if dimensions of commitment may change over time or be bolstered. One reason commitment might change over time is because of the costs and benefits of being employed by an organization. This idea weaves its way through the commitment literature. The exchange theory (Geurts et al., 1999) is the basis for formulating a causal model discussing the reciprocal relationships between organizational commitment and organizational support. Three forms of commitment: affective, normative, and continuance. There are two antecedent variables for continuance commitment: investments and alternatives. Neither will impact continuance commitment unless the employee is aware of them (Meyer & Allen, 1997). Normative commitment to the organization develops during the early socialization as a newcomer (Wiener, 1982) through rewards and punishments and observation and imitation of others (Meyer & Allen, 1997). The psychological contracts defined above play a large part in the formation of normative commitment.

Research demonstrates inoculation works by conferring resistance to attitude change when people come into contact with messages attacking preexisting attitudes. McGuire posits refutational (or countering) inoculation treatments carry threat (the degree to which one perceives his or her belief is vulnerable) which causes an individual to create counterarguments that confer resistance. One might argue if the costs and benefits associated with committing to an organization are made salient to employees, then organizational commitment will change.

As stated previously, there is limited research examining what changes OCBs. An OCB has been defined as “individual behavior that is discretionary, not directly or

explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). There are five OCB dimensions: altruism, courtesy, conscientiousness, sportsmanship, and civic virtue (Organ, 1988). We already know about the process of inoculation. If the process of inoculation can make OCBs salient to employees, they might be more likely to exhibit these OCBs, therefore increasing the efficiency of the organization (Organ, 1988). Therefore this study posits:

H8: Compared to controls, people who are inoculated manifest:

a) greater organizational identity

b) greater organizational commitment

c) greater number of and dimensions of OCBs.

Inoculation Treatments and Organizational Associative Networks

Inoculation research examines the process of counterarguing, threat, refutational preemption, and associative networks. Pfau and colleagues (2005) explained that there was more to the process of inoculation besides threat and counterarguing. They examine associative networks. As previously stated, associative networks are structures of mental representations that function to create an individual's memory (Collins & Loftus, 1975; Smith, 1998). Associative networks are made up of a varying number of affective and cognitive nodes (Anderson, 1983; Clore, et al., 1994; Fazio, 1986; Smith, 1998; Wyer & Carlston, 1994). The affective and cognitive nodes within an associative network are connected by links formed when the subject of the nodes are experienced or thought about together (Smith, 1998). The links connecting nodes within the network have varying levels of strength, a measure that is determined by both the frequency with which

the linked nodes are experienced or considered together and the importance the individual ascribes to either of the linked nodes (Smith, 1998; Wyer & Carlston, 1994). The activation of an associative network starts with one specific node within that network, and that activation spreads to other related nodes in the network (Anderson, 1983). When activation occurs, it will spread first and in greater quantities to nodes that are linked to the activated node via strong links (Smith, 1998). Pfau et al. (2005) posit refutational preemption alters the basic structure of the associative network by adding nodes or adding additional links between the nodes. The stronger the associative network becomes, the harder it would be to change it. Petty and colleagues (1994) state it would be more difficult to change attitudes when the information base is increased; the information base is the associative network. Pfau et al. (2005) found both cognitive and affective inoculation treatments increased the number of nodes and links in an associative network. Inoculation treatments did not change the weight or strength of the nodes within the network, only the number of nodes. This was the only study examining the use of concept mapping as a way to measure associative networks and their nodes and links. More still needs to be learned about this. The rational above supports the following predictions:

H9: Inoculation treatments affect the structure of associative networks. They:

a) increase the number of nodes and linkages within a network;

b) and strengthen the relative weighting of nodes within a network.

As stated earlier, associative networks are made up of a varying number of affective and cognitive nodes (Anderson, 1983; Clore et al., 1994; Fazio, 1986; Smith, 1998; Wyer & Carlston, 1994); and these nodes are connected by links that are formed

when the subject of the nodes are experienced or thought about together (Smith, 1998). Pfau et al. (2005) state the refutational component of inoculation treatments could be designed to stress affective or cognitive content. Their study did not find cognitive or affective balance of the nodes was changed within networks. There is still more research that needs to be done to understand the process of affective and cognitive nodes in associative networks. This study will reexamine the affective and cognitive make-up of associative networks by examining the dimensions of organizational commitment.

As previously stated, organizational commitment can occur in three forms (Meyer & Allen, 1997). Most of the research on commitment focuses antecedents of commitment. There is a lack of research focusing on strength of commitment or bolstering commitment. Affective, continuance, and normative commitments are distinguishable parts of commitment rather than types of commitment (Wasti, 2003), and employees experience each of these parts of commitment to varying degrees (Wasti, 2003). Because commitment is a cognitive process (continuance commitment) as well as an affective process (normative and affective commitment), the use of inoculation could increase the associative networks available for commitment.

As stated earlier, Lee and Pfau (1997) posit a distinction between cognitive inoculation treatments and affective inoculation treatments. Pfau et al. (1997) demonstrated affective and cognitive inoculation treatments were able to confer resistance the same way. Commitment is a cognitive or affective process and inoculation treatments can use cognitive or affective forms. A person's associative network has cognitive as well as affective nodes. Therefore, this study will apply the process of matching cognitive and affective inoculation messages to the cognitive or affective form

of commitment. The number of nodes related to an associative network changes (Pfau et al., 2005). This study questions:

RQ4: Is inoculation more effective in conferring resistance when treatment form matches the form of commitment (e.g., cognitive treatments are better for normative and continuance commitment, and affective treatments are better for affective commitment)?

RQ5: Will there be an increase in affective nodes or cognitive nodes in an associative network when receiving an affective or cognitive message?

V

Methodology

This study has two purposes. The first purpose was to examine the relationship between organizational culture, organizational identity, organizational commitment, and OCBs over time. The other purpose was to examine the impact of inoculation as a strategy to bolster identity, commitment, and OCBs.

The methods for this study included a longitudinal, national telephone survey and an experiment conducted in a laboratory setting.

Telephone Survey

To explore the relationship between organizational culture, organizational identity, organizational commitment, and OCBs over time, a two-panel telephone survey was conducted by the University of Oklahoma Public Opinion Learning Laboratory. The telephone survey was conducted in September and January (see Appendix A for telephone survey). The sample was drawn from households in the 48 contiguous states. The national sample was obtained from Survey Sampling Inc., and was screened for non-residential numbers. Participants were screened before they took part in the national survey based on the following criteria. Participants had to be at least 18 years of age and a full-time employee at an organization that had at least 100 employees. The survey instrument was pilot tested before actual fieldwork to insure satisfactory response rate and acceptable margins of error.

The survey attained an acceptable margin of error outcome. The Time 1 survey consisted of 508 interviews, representing a margin of error of +/- 4.4% at a 95%

confidence level. The Time 2 survey featured 301 completed interview, representing a margin of error of +/- 5.6% at a 95% confidence interval.

Individuals who participated in September (N = 508 $_{\text{Time 1}}$; N = 301 $_{\text{Time 2}}$; 58.5% retention) indicated their willingness to also participate in January. Please see Table 1 to examine the specific sample characteristics. The sample was compared to National Election Survey samples to examine how the survey sample compared to the population. All instruments in the telephone surveys featured multiple-item indicators and were assessed for internal consistency using Cronbach's coefficient alpha. The measures are described below.

Sociodemographics

Respondents' sociodemographic characteristics, including gender, race, age, education, household income, marital status, number of children, years of service at the organization, and likelihood of leaving the organization, served as control variables in the analysis. Refer to Table 1.

Respondents' gender was determined without asking and was operationalized as male (31.3%$_{\text{Time 1}}$, 29.2% $_{\text{Time 2}}$; and 48.2% NES sample) or female (68.7% $_{\text{Time 1}}$, 70.1% $_{\text{Time 2}}$; 51.8%NES sample). This sample had a large percentage of women take part. This may be due to more women answering the phone. The survey callers did not ask for a specific gender. They only asked to speak to someone who had a full-time job and was at least 18 years of age. If they had altered asking for male or female, a more representative sample would have been achieved. Race was assessed by asking if they were: Caucasian (87.2% $_{\text{Time 1}}$, 89.7% $_{\text{Time 2}}$, 72.6% NES data), African-American (4.1% $_{\text{Time 1}}$, 4.7% $_{\text{Time 2}}$; 14.2% NES data), Hispanic (1.9% $_{\text{Time 1}}$, 2.0% $_{\text{Time 2}}$; 6.9% NES data), Native-American

(1.8% $_{\text{Time 1}}$, .7% $_{\text{Time 2}}$; 1.1% NES data), or other (4.0 $_{\text{Time 1}}$, 2.7% $_{\text{Time 2}}$; 1.6% NES data). Approximately 5 of the respondents refused to answer the question about their race. In an effort to include these cases, a procedure outlined by Cohen and colleagues (2003) was utilized. Specifically, a dummy variable was coded as 1 if the respondent had missing data for race and as 0 if there was no missing data. The value for Caucasian was imputed into the missing data since it was the most commonly reported. The mean value was arbitrary and given the dummy race variable, has no impact on the predictive value of the ethnicity variable (Cohen et al., 2003). Both of these variables were used in the analysis. The dummy variable was not a significant predictor.

Age was operationalized by asking respondents what year they were born. Age ranges were grouped into those 18 – 24 (1.4% $_{\text{Time 1}}$, .7 $_{\text{Time 2}}$, 11.2% NES data), 25 – 44 (36.9% $_{\text{Time 1}}$, 30.6% $_{\text{Time 2}}$, 36.7% NES data), 45 – 64 (57.0% $_{\text{Time 1}}$, 63.1% $_{\text{Time 2}}$, 33.0% NES data), 65+ (4.7% $_{\text{Time 1}}$, 5.6% $_{\text{Time 2}}$, 9.3% NES data). Those taking part in this study were older than the NES sample. Because the person taking part in the current study had to be a full-time employee, this may have resulted in an older population. Education was operationalized as: some high school (1.2% $_{\text{Time 1}}$, 1.7% $_{\text{Time 2}}$, 13.4% NES data), high school degree (19.1% $_{\text{Time 1}}$, 18.9% $_{\text{Time 2}}$, 32.2% NES data), some post-high education (23.9% $_{\text{Time 1}}$, 22.3% $_{\text{Time 2}}$, 26.2% NES data), college or professional school degree (27.4% $_{\text{Time 1}}$, 32.6% $_{\text{Time 2}}$, 16.3% NES data), or a masters (12.1% $_{\text{Time 1}}$, 11.0% $_{\text{Time 2}}$, 9.4% NES data) or advanced professional degree (2.3% $_{\text{Time 1}}$, 4.3%, $_{\text{Time 2}}$, 9.4% NES data). Those taking part in this study tended to have more education than those in the NES sample.

Household income was operationalized as: below $25,000 (4.7% $_{\text{Time 1}}$, 3.3% $_{\text{Time 2}}$, 34.1% NES data), between $25,000 and $34,999 (5.8% $_{\text{Time 1}}$, 6.6% $_{\text{Time 2}}$, 11.4% NES data), between $35,000 and $44,999 (10.7% $_{\text{Time 1}}$, 9.3% $_{\text{Time 2}}$, 10.6% NES data), between $45,000 and $54,999 (17.7% $_{\text{Time 1}}$, 18.6% $_{\text{Time 2}}$, 9.17% NES data), between $60,000 and $74,999 (11.7% $_{\text{Time 1}}$, 14.3% $_{\text{Time 2}}$, 5.7% NES data), and $75,000 and $89,999 (9.5% $_{\text{Time 1}}$, 14.0% $_{\text{Time 2}}$, 4.4% NES data), and above $90,000 (21% $_{\text{Time 1}}$, 18.9% $_{\text{Time 2}}$, 6.4% NES data). Participants in this sample had more household income because they had to have a job. People do not have to be employed to take part in the NES survey. Approximately 11 of the respondents refused to answer the question about their household income. In an effort to include these cases, a procedure outlined by Cohen and colleagues (2003) was utilized. Specifically, a dummy variable was coded as 1 if the respondent had missing data for household income and as 0 if there was no missing data. The mean household income was imputed in the household income variable to replace the missing value (category $60,000 - $74, 999). The mean value was arbitrary and given the dummy income variable, has no impact on the predictive value of the household income variable (Cohen, et al., 2003). Both of these variables were used in the analysis. The dummy variable was not a significant predictor.

Marital status was assessed by asking if they are married (66.7% $_{\text{Time 1}}$, 71.1% $_{\text{Time 2}}$, 66% NES data) or single, and presence of children was answered yes (82.5% $_{\text{Time 1}}$, 83.7% $_{\text{Time 2}}$, 26.7% NES data) or no to a question asking if they had children. There was a similar percentage of married people taking part in this study and a greater percentage of them had children when compared to the NES data. Number of years of service at an organization was operationalized by asking respondents “number of years of service at

this organization?" More than 50% of the population had worked at their organization for 1 to 10 years. More than 30.6% had worked at their organization for a total of 16-30 years (M = 12.51, $S.D.$ = 11.32 $_{\text{Time 1}}$, M = 12.51, $S.D.$ = 10.27 $_{\text{Time 2}}$). Likelihood of staying at the organization was assessed by asking respondents the question, "How likely are you to be at this organization in five years?" This question was placed on a thermometer scale of 1 to 100. 1 was little chance of being there, whereas 100 was very likely to be there (M = 74.33, $S.D.$ = 67.84 $_{\text{Time 1}}$, M = 76.75, $S.D.$ = 99.34 $_{\text{Time 2}}$). More than 36% of the sample rated their likelihood of staying at the organization between 91 – 100. On the opposite end of the scale, 16.3% of the sample stated they were not very likely of being at the organization in another five years (e.g., they answered the question using the 1 – 10 response on the thermometer scale).

Independent and Control Measures

One independent measure employed in the telephone survey was organizational culture. Organizational culture was only assessed in the first phase of the survey conducted in September. The Glaser, Zamanou, and Hacker (1987) Organizational Culture Survey was administered. Keyton (2006) states there are two ways to study organizational culture quantitatively. One way is by using survey instruments that classify an organization into a culture type. The other option is a by using multiple dimensions to measure culture. She also states the most common scale used when studying organizational culture in the field of communication is the Organizational Culture Survey. This is a 36- item index that breaks into six dimensions (teamwork, morale, information flow, involvement, supervision, and meetings). Each question was on a scale of one to five, (to a very little extent, to a little extent, to some extent, to a great

extent, to a very great extent). Participants were asked to think how the statements are like or similar to the organizations they work for. The dimension of *teamwork* was measured by the following questions: “People I work with are direct and honest with each other.” “People I work with accept criticism without becoming defensive.” “People I work with resolve disagreements cooperatively.” “People I work with function as a team.” “People I work with are cooperative and considerate.” “People I work with constructively confront problems.” “People I work with are good listeners.” “People I work with are concerned about each other.” Reliability for this dimension was $\alpha = .90$.

The dimension of *morale* was measured by the following seven statements. Once again, the five-point Likert-type scale was used to assess how similar was the participant’s organization to these statements. The statements were: “Labor and management have a productive working relationship.” “This organization motivated me to put out my best efforts.” “This organization respects its workers.” “This organization treats people in consistent and fair manner.” “Working here feels like being part of a family.” “There is an atmosphere of trust in this organization.” “This organization motivates people to be efficient and productive.” Reliability for this dimension was $\alpha = .91$.

The dimension of *information flow* was measured by the following four statements. All questions were asked on a 1 – 5 scale where 1 is “to a very little extent” and 5 is “to a very great extent.” The scale was used to assess how similar these statements are to the participant’s organization. The statements were: “I get enough information to understand the big picture here.” “When changes are made the reasons

why are made clear." "I know what's happening in work sections outside of my own." "I get the information I need to do my job well." Reliability for this dimension was $\alpha = .92$.

The dimension of *involvement* was measured by five statements. Once again, the five-point Likert-type scale was used to assess how like the participant's organization the statements were. The statements included: "I have a say in decisions that affect my work." "I am asked to make suggestions about how to do my job better." "This organization values the ideas of workers at every level." "My opinions count in this organization." Reliability for this dimension was $\alpha = .86$.

There were also seven statements measuring the *supervision* dimension. Once again, the five-point Likert-type scale was used to assess how similar the participant's organization was to the questions. The statements were as follows: "Job requirements are made clear by my supervisor." "When I do a good job my supervisor tells me." "My supervisor takes criticism well." "My supervisor delegates responsibility." "My supervisor is approachable." "My supervisor gives me criticism in a positive manner." "My supervisor is a good listener." "My supervisor tells me how I'm doing." Reliability for this dimension was $\alpha = .91$.

The final dimension of organizational culture was *meetings*. This dimension was measured by five statements. The five-point Likert-type scale was used to assess how the participant's organization was similar to the questions. The statements were: "Decisions made at meetings get put into action." "Everyone takes part in discussions at meetings." "Our discussion in meetings stays on track." "Time in meetings is time will spent." "Meetings tap the creative potential of the people present." Reliability for this dimension was $\alpha = .91$.

Respondents' attitude toward the organization was also measured. This was measured at both phases and operationalized by using six bipolar adjective pairs developed by Burgoon and colleagues (1978) that have been used in resistance research for more than 25 years. Adjective pairs included: negative/positive; unacceptable/acceptable; unfavorable/favorable, foolish/wise; wrong/right; and bad/good. These pairs were listed on a 7-point Likert-type scale. Reliability for this dimension was $\alpha = .76$ in September, and $\alpha = .95$ in January.

Dependent Measures

The dependent measures employed in the telephone survey were that of organizational identity, organizational commitment, and dimensions of OCBs. These three variables were measured at both phases. The means and standard deviations for these measures at Time 1 and Time 2 can be found in Table 2.

Organizational Identity was measured using the Organizational Identification Questionnaire (Cheney, 1983). This questionnaire allows some research to be compared because it uses the same scale. Also, because there are so many definitions of identity, using the questionnaire standardized the definition for those using the instrument. By using the Organizational Identity Questionnaire, management can understand the behavior patterns of individuals, groups, and organizations; predict behavioral responses that will occur after certain management decisions are made; and focus predictions of behavior to maintain control over the individuals in the organization (Johnson, Johnson, & Heimberg, 1999). One weakness of the Organizational Identity Questionnaire according to some is that 13 of the 25 items on the questionnaire were face valid, but lacked content validity. It was also posited this scale was not measuring identity, but

rather measuring commitment (Miller et al., 2000). Even thought it has been questioned, *this is the only quantitative measure available to measure organizational identity*. Because this study had separate scales to measure commitment, and the reliabilities were consistent, it was deemed appropriate to use.

The Organizational Identity Questionnaire is a 25-item scale measured on a 7-point Likert-type scale (strongly agree to strongly disagree). The items were as follows: "I would continue working for this organization even if I did not need the money." "In general, the people employed by this organization are working toward the same goals." "I am very proud to be an employee of this organization." "This organization's image in the community represents me as well." "I often describe myself to others by saying 'I work for this organization' or 'I am from this organization.' "I try to make on-the-job decisions by considering the consequences of my actions for this organization." "We at this organization are different from others in our field." "I am glad I chose to work for this organization rather than another company." "I talk up this organization to my friends as a great company to work for." "In general, I view the organization's problems as my own." "I am willing to put in a great deal of effort beyond that normally expected in order to help the organization be successful." "I become irritated when I hear others outside the organization criticize the company." "I have warm feelings toward this organization as a place to work." "I would be quite willing to spend the rest of my career with this organization." "I feel that this organization cares about me." "The record of this organization is an example of what dedicated peoples can achieve." "I have a lot in common with others employed by this organization. I find it difficult to agree with the organization's policies on important matters relating to me." "My association with this

organization is only a small part of who I am." "I like to tell others about projects that the organization is working on." "I find that my values and the values of the organization are very similar." "I feel very little loyalty to this organization." "I would describe this organization as a large family in which most members feel a sense of belonging." "I find it easy to identify with this organization." "I really care about the fate of this organization." Reliability in September was $\alpha = .95$, and $\alpha = .90$ in January.

Organizational Commitment was measured using the Organizational Commitment Scale (Meyer & Allen, 1997). Cohen (2003) states the Meyer and Allen commitment scales are the most valid scales used to measure organizational commitment. This is a 34-item scale that obtained responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. This scale breaks down into affective, normative, or continuance commitment.

Affective commitment was measured by the following eight statements that included: "I would be very happy to spend the rest of my career with this organization." "I enjoy discussing my organization with people outside of it." "I really feel as if this organization's problems are my own." "I think that I could easily become as attached to another organization as I am to this one." "I feel like part of the family at my organization." "I feel emotionally attached to this organization." "This organization has a great deal of personal meaning for me." "I feel a strong sense of belonging to my organization." Reliability in September was $\alpha = .87$, and $\alpha = .87$ in January.

Normative commitment was measured using the original and revised items. They were placed on a 7-point Likert-type scale where 1=strongly disagree and 7= strongly agree. The statements were as follows: "I think that people these days move from

company to company too often." "I believe that a person must always be loyal to his or her organization." "Jumping from organization to organization is unethical to me." "One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain." "If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization." "I was taught to believe in the value of remaining loyal to one organization." "Things were better in the days when people stayed with one organization for most of their careers." "I think that that wanting to be a 'company man' or 'company woman' is sensible." **"**I feel obligated to remain with my current employer." "Even if it were to my advantage, I do not feel it would be right to leave my organization now." "I would feel guilty if I left my organization now." "This organization deserves my loyalty." "I would not leave my organization right now because I have a sense of obligation to the people in it." "I owe a great deal to this organization." Reliability in September was $\alpha = .86$, and $\alpha = .87$ in January. For final data analysis, the revised normative commitment items were not included because the reliabilities for that scale were deemed to be too low at both phases of data collection ($\alpha = .69$, and $\alpha = .71$).

Continuance commitment was measured using the original and revised items. There were eight questions asked using the same Likert-type scale. The questions are as follows: "I am afraid of what might happen if I quit my job without having another one lined up." "It would be very hard for me to leave my organization right now, even if I wanted to." "Too much in my life would not be disrupted if I decided I wanted to leave my organization now." "Right now staying with my organization is a matter of necessity as much as desire." "I feel that I have too few options to consider leaving this

organization." "One of the few serious consequences of leaving this organization would be the scarcity of available alternatives." "One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits that I have here." Reliability in September was $\alpha = .87$, and $\alpha = .91$ in January.

Organizational Citizenship Behaviors (OCBs) were measured using the Organizational Citizenship Behaviors scale developed by Williams and Anderson (1991). This 21-item scale obtains responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. Three types of OCBs measured included: behaviors directed at specific individuals (OCBI), behaviors directed at an organization (OCBO), and employee-in-role behaviors (IRB). Each type of OCB was measured by seven single item indicators.

The following items measured OCBI: "I help others who have been absent." "I help others who have heavy work loads." "I assist a supervisor with his/her work when not asked." "I take time to listen to co-workers' problems and worries." "I go out of way my help new employees." "I take a personal interest in other employees." "I pass along information to co-workers." Reliability in September was $\alpha = .83$, and $\alpha = .84$ in January.

OCBO was measured using the following items: "My attendance at work is above the norm." "I give advance notice when unable to come to work." "I take undeserved work breaks." "I spend a great deal of time with personal phone conversations." "I complain about insignificant things at work." "I conserve and protect organizational property." "I adhere to informal rules devised to maintain order." Reliability in September was $\alpha = .65$, and $\alpha = .61$ in January.

The final type of OCB, IRB, was measured by seven statements using the same Likert-type scale. Scale items included: “I complete assigned duties adequately.” “I fulfill responsibilities specified in my job description.” “I perform tasks that are expected of me.” “I meet formal performance requirements of the job.” “I engage in activities that will directly affect my performance.” “I neglect aspects of the job that it is my responsibility to perform.” “I fail to perform essential duties.” Reliability in September was $\alpha = .54$, and $\alpha = .54$ in January. For final data analysis, the Williams and Anderson (1991) scale was omitted due to low reliability. Therefore, this study did not examine OCBIs, OCBOs, or IRBs.

To measure the dimensions of organizational citizenship behaviors, the Podsakoff, MacKenzie, Moorman, and Fetter (1990) scale was used. The five dimensions of OCBs measured included altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. All dimensions have five, single-item indicators except civic virtue, which had four indicators.

Altruism was measured using the following scale items: “I help others who have heavy workloads.” “I am always ready to lend a helping hand to those around me.” “I help others who have been absent.” “I willingly help others who have work-related problems.” “I help orient new people even though it is not required.” Reliability in September was $\alpha = .74$, and $\alpha = .85$ in January.

The second dimension of OCBs, *conscientiousness*, was measured by the following statements: “I am a very conscientious employee.” “I believe in giving an honest day’s work for an honest day’s pay.” “My attendance is above the norm.” “I do

not take extra breaks." "I obey company rules and regulations even when no one is watching." Reliability in September was $\alpha = .71$, and $\alpha = .78$ in January.

Sportsmanship was measured by the following scale items: "I am the classic squeaky wheel that always needs greasing." "I consume a lot of time complaining about trivial matters." "I tend to make mountains out of molehills." "I always focus on what's wrong, rather than the positive side." "I always find fault with what the organization is doing." Reliability in September was $\alpha = .78$, and $\alpha = .78$ in January.

The *courtesy* dimension of OCBs was measured by the following items: "I try to avoid creating problems with my co-workers." "I consider the impact of my actions on co-workers." "I do not abuse the rights of others." "I take steps to try to prevent problems with other employees." "I am mindful of how my behavior affects other people's jobs." Reliability in September was $\alpha = .81$, and $\alpha = .82$ in January.

The final dimension of OCBs, *civic virtue*, was measured by using the following items: "I keep abreast of changes in the organization." "I attend meetings that are not mandatory, but are considered important." "I attend functions that are not required, but help the company image." "I read and keep up with organization announcements, memos, and so on." Reliability in September was $\alpha = .76$, and $\alpha = .78$ in January.

Experimental Component

The second facet of this investigation was to determine if one can bolster organizational identity, organizational commitment, and the dimensions of OCBs through the process of inoculation. It examined the role of associative networks in the process of resistance, thus contributing to theoretical knowledge about the process of resistance. To assess these predictions, an experiment was conducted.

Participants were undergraduate students at the University of Oklahoma, and all were at least 18 years of age. A total of 317 students (167 females, 158 males) were recruited from the Communication research pool. The study was administered in four phases. Student hypothetically worked at one of four U.S. corporations. Corporations who had expressed interest in the study when it was to be carried out in a corporate setting with real employees later decided the procedures were too intrusive. Because these organizations had shown previous interest, they were contacted again to see if they would send employee orientation materials. Only four organizations contacted the researcher to help out in this less obtrusive way. Students were able to choose one of the four organizations to learn more about. The corporations used included an international manufacturer of scoreboards and electronic marquees (n = 73); a hospital (n = 87); an energy corporation (n = 76); and a national insurance agency (n = 81).

Participants were hypothetically assigned as an employee of one of the four organizations. They received information about the organization. Later, an inoculation treatment was administered to protect against erosion of organizational attachment. Much later they received a message that attacked organizational attachment.

Design and Independent Variables

The primary independent variable in this study was the treatment condition (inoculation and control/no inoculation).

Control Variables

Knowledge. Initial knowledge about the organization was used as a control variable. There was a need to make sure students had knowledge about the corporation they were hypothetically working at in order to gain an initial identification and

commitment. Knowledge was assessed by scoring knowledge questions as correct or incorrect. There were 10 general items asked that could be answered relevant to each organization (sample items in Appendix I).

Work Experience. Students were also asked if they had ever had a job, and if so, how long they had worked there. It was believed that if students had work experience, asking them about their identity, commitment, and OCBs would make them reflect on their work experience. More than 95% of the students had been employed. More than 50% had been employed by the same organization for more than two years. Number of years worked was included as a control variable.

Gender. Gender was also used as a covariate. Gender is a weak indicator of certain organizational citizenship behaviors, so it was appropriate to control for this.

Initial Measures

Several variables were measured to determine initial attitude, involvement, and commitment. These variables were used to balance across inoculation and control conditions. In inoculation research, an initial attitude and involvement measure is taken in order to assign subjects to condition and to determine if one can be inoculated.

Issue involvement. Issue involvement was operationalized as organizational involvement. A modified version of the Personal Involvement Inventory (PII) developed by Zaichkowsky (1985) was used. Six items of the PII was used in this study including: unimportant/important; of no concern/of much concern; means nothing/means a lot; doesn't matter/matters to me; insignificant/significant; and irrelevant/relevant. Cronbach's coefficient alpha was used to assess this and other measures. Reliabilities for issue involvement were $\alpha = .94$ at Phase 1, and $\alpha = .94$ at Phase 4.

Initial attitude. Initial attitude about the organization was assessed using six bipolar adjective pairs developed by Burgoon and colleagues (1978) that have been used in resistance research for more than 25 years. Adjective pairs included: negative/positive; unacceptable/acceptable; unfavorable/favorable, foolish/wise; wrong/right; and bad/good. Reliabilities for issue involvement were $\alpha = .92$ at Phase 1, and $\alpha = .94$ at Phase 4.

Organizational commitment. An initial measure of organizational commitment was assessed using the Meyers and Allen (1997) organizational commitment scale. This measure was used to assign inoculation participants to a message condition (affective or cognitive). This is a 34-item scale that obtains responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. This scale breaks down into an affective, normative, or continuance commitment. (See telephone dependent measure section for specific scale items).

Pilot Test

Inoculation research hinges on the nature of inoculation messages. Two were used in this study, one affective in nature and one cognitive. A pilot study was conducted to test if the affective message would elicit more affect and the cognitive message would elicit more thinking. Twenty-two students were recruited to read through an affective or cognitive message and fill out the organizational commitment questionnaire. It was believed that those reading an affective message should score higher on the affective part of the scale, and those reading a cognitive message would score higher on the continuance part of the scale. Pilot test results indicate that the affective message elicited more affective commitment ($M = 4.70$, $S.D. = .49$) than the cognitive message ($M = 4.39$,

S.D. = .55). The cognitive message elicited more continuance commitment (*M* = 4.47, *S.D.* = .90) than the affective message (*M* = 4.25, *S.D.* = 1.17).

Procedures

During Phase 1, participants were assigned to one of the four organizations. They selected which one they wanted to hypothetically work at based on their current major and future career aspirations. Care was taken to balance participants across the four organizations. They were told to read the new employee orientation materials and background information about the organization they were just hired by. The materials used at this phase were actual materials obtained from the four organizations. Care was taken to balance the number of materials each participant read. Message length was controlled across conditions. Participants were encouraged to visit the organization's web site as well. The materials available on the web consisted of organizational histories and backgrounds, which was the same type of information available in the materials provided in the laboratory setting. Phase 1 lasted one week.

During Phase 2, students reviewed their employee orientation materials. These materials consisted of employee expectations and a refresher on history. After reading these materials, students completed a knowledge questionnaire about the organization. The number of knowledge questions answered correctly indicated how much the student knew about the organization they had selected. Also at Phase 2 participants completed a questionnaire, containing items assessing sociodemographics, including age, gender, initial attitude toward the organization, initial involvement with the organization, initial organizational identity, initial organizational commitment, and initial organizational citizenship behaviors.

Based on responses to this questionnaire, participants were randomly assigned to either the inoculation or control condition as well as the cognitive or affective message condition. Participants were randomly assigned conditions except care was taken to insure that research design remained balanced in terms of initial attitude and involvement levels.

An initial measure of organizational commitment was assessed using the Meyers and Allen (1997) organizational commitment scale, previously discussed (page 66). This measure was used to assign inoculation participants to a message condition. This scale breaks down into an affective, normative, or continuance commitment. The results were used to assign subjects to conditions. A number of additional variables were measured during Phase 2: organizational identity, organizational commitment, and OCBs. These items are described in detail in the Telephone Survey Dependent Measure section. Participants in the experiment were also asked to complete a concept map (see Dependent Measures section below) about the organization.

Associative networks were also assessed at Phase 2. This study follows the design of Pfau and colleagues (2005). This study used the concept mapping technique to tap the structure of associative networks. The operationalization of concept mapping is discussed below in the Dependent Measures section. There was a 98.7% retention rate from Phase 1 to Phase 2.

Phase 3 was conducted a week after Phase 2. Participants were administered an inoculation or control message. Phase 3 booklets consisted of one of three messages: either an inoculation affective message, an inoculation cognitive message or a dummy message, which did not pertain to anything organizational specific. The first paragraph of

each of the inoculation pretreatment messages threatened receivers. Threat was operationalized as a warning of impending attacks against the company. Example text includes:

> "This organization appreciate hard-working and committed employees. It owes its success to employees, like you, who are believe in its goals and mission…Such a close match enhances people's commitment to the organization and its mission, which, in turn, fuels success…As a responsible and informed employee, you understand the importance of commitment to the organization…Yet, we occasionally come in contact with people who will question our commitment and the organization's mission. These people can prove influential, causing a person to question their commitment to the organization."

The remainder of each inoculation message contained refutational preemption. Two arguments contrary to a participant's position on commitment and OCBs were raised and then systematically refuted. Arguments were made about why the person is committed to the organization and also argued that demonstrating OCBs does not help the participant get ahead (Appendix B - Inoculation Messages).

Each message was constructed to match the writing style and comprehensibility of the corresponding attack message. Length, verb tenses, and comprehensibility of the inoculation message and other messages were similar (Burgoon, Cohen, Miller, & Montgomery, 1978). Total word counts and the Index of Contingency, developed by Becker, Bavelas, and Braden (1961), were used to assess the comprehensibility of messages used. The inoculation messages had 676 words. There were two inoculation messages used (affective and cognitive) and two attack messages employed (affective

and cognitive). Inoculation messages were also constructed as refutational same or different. Inoculation different messages featured a message that was opposite of the type of commitment of participants. For example, if he/she scored higher on the affective component of the scale, he/she received a message that was more affective in nature (more anecdotal with more emotion-laden language), or a cognitive message (more facts and statistics about the organization). Care was taken to balance across the conditions when assigning.

Control participants received a dummy message. The control message had 680 words. The dummy message was a reprint from a story that aired on CBS Sunday Morning. The story was edited to control for word count (See Control Message Appendix C). The message was about a town that is positioned in two time zones. It discussed how the school must deal with two zones for much of the year. It goes on to discuss how a bill might be passed that would put the whole town in one time zone. One unique aspect is during basketball season, the kids can score points in Indiana and Ohio both due to the gym being located in both states. Only those in the control condition received this message. The message did not prime them in any way about any particular organization or the business world at all.

After participants read the message, threat and counterarguing were assessed (see dependent measures section below). Counterarguing was assessed by asking the participants to list all the counterarguments they could think of that someone would have against their position. They were asked to rate each argument on a scale of 1 (weak) to 7 (strong). Counterarguing procedures are discussed in detail in the Dependent Measure Section (below). There was a 97% retention rate from Phase 2 to Phase 3.

One week later, Phase 4 was conducted. Phase 4 consisted of an attack message and measurement. An attack message was used in this study because of the experimental setting. In the real world, employees would constantly talk to co-workers, friends, or family, some whom would question their identity, commitment, and OCBs toward the organization they work for. Because of the control setting, this attack came from the researcher. The attack message was constructed using the same procedures as the inoculation message. Word count was similar to the inoculation messages used at Phase 3. The attack messages each had 405 words. The message content "attacked" employees' identity, commitment, and number of OCBs. It made participants question whether the organization was treating them well and challenged whether they should stay at the organization. There were two attack messages, cognitive or affective. The type of attack message a participant received corresponded with the type of inoculation message they received. The control participants were randomly assigned one of the attack messages based on their initial organizational commitment scores.

Involvement in the organization and attitude toward the organization were measured as well as organizational identity, organizational commitment, and OCBs. The specific scales used for each variable are in the Dependent Measures section.

Associative networks were also assessed at Phase 4. This study follows the design of Pfau and colleagues (2005). This study used the concept mapping technique to tap the structure of associative networks. The operationalization of concept mapping is discussed below in the Dependent Measures section. There was a 94.6% retention rate from Phase 3 to Phase 4.

Dependent Measures

Dependent measures in this study included organizational identity, organizational commitment, OCBs, threat, counterarguing, and associative networks.

Organizational identity. Organizational identity was measured using the Organizational Identification Questionnaire (Cheney, 1983). This is a 25-item scale measured on a 7-point Likert-type scale (7=strongly agree, 1=strongly disagree). The specific scale items were listed in the dependent measure section (pp. 63-64) for the telephone survey, as well as in the Measures Appendix. Reliabilities for this measure were $\alpha = .89$ at Phase 2 and $\alpha = .92$ at Phase 4.

Organizational commitment. Organizational Commitment was measured using the Organizational Commitment Scale (Meyer & Allen, 1997). This is a 34-item scale that obtains responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. There are three types of organizational commitment (affective, normative, and continuance) measured. The specific scale items were listed in the dependent measure section for the telephone survey (p. 66), as well as in the Measures Appendix. Reliabilities for this measure were: affective commitment $\alpha = .89$ at Phase 2 and $\alpha = .89$ at Phase 4; normative commitment $\alpha = .89$ at Phase 2 and $\alpha = .89$ at Phase 4; and continuance commitment $\alpha = .83$ at Phase 2 and $\alpha = .83$ at Phase 4.

OCBs. Organizational Citizenship Behaviors (OCBs) were measured using the Organizational Citizenship Behaviors scale developed by Williams and Anderson (1991). This is a 21-item scale that obtains responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. Three types of OCBs were measured: behaviors directed at specific individuals (OCBI), behaviors directed at an organization

(OCBO), and employee-in-role behaviors (IRB). The specific scale items were listed in the dependent measure section for the telephone survey (pp. 68-70), as well as in the Measures Appendix E. Reliabilities for this measure were: OCBI α = .87 at Phase 2 and α = .87 at Phase 4; OCBO α = .60 at Phase 2 and α = .60 at Phase 4; and IRB α = .50 at Phase 2 and α = .50 at Phase 4. These items were not used in final data analysis for two reasons. First, the reliabilities were too low; and second, they were not used in the telephone survey phase of the study.

To measure the dimensions of OCBs, the Podsakoff, MacKenzie, Moorman, and Fetter (1990) scale was used. The five dimensions of OCBs measured included altruism α = .90 at Phase 2 and α = .90 at Phase 4; conscientiousness α = .76 at Phase 2 and α = .76 at Phase 4; sportsmanship α = .90 at Phase 2 and α = .90 at Phase 4; courtesy α = .81 at Phase 2 and α = .81 at Phase 4; and civic virtue α = .82 at Phase 2 and α = .82 at Phase 4. All dimensions have five, single-item indicators except civic virtue, which has four indicators. The specific scale items were listed in the dependent measure section for the telephone survey, as well as in the Measures Appendix.

Threat. Threat elicited by the inoculation treatment was measured using six bipolar adjective pairs employed in previous inoculation studies (Compton & Pfau, 2004). Threat was assessed at Phase 3 and Phase 4 following administration of inoculation treatment (or control), and attack message. Six 7-interval scales were used to access participant acknowledgement that they could come into contact with information that might cause them to rethink their identity, commitment, or OCB behaviors demonstrated in the organization. The adjective pairs were: not dangerous/dangerous,

non-threatening/threatening, calm/anxious, not harmful/harmful, not scary/scary, and not risky/risky. Reliabilities were $\alpha = .90$ at Phase 2 and $\alpha = .90$ at Phase 4.

Counterarguing. Counterarguing and responses to counterarguments were also assessed at Phases 2 and 4. Pfau and colleagues (1997) employed a technique where following exposure to the inoculative materials, the participants counterargued and listed their responses. After filling out their assessment of threat, participants were asked to complete an open-ended measure in which they wrote down their possible arguments that are contrary to their own position on organizational involvement, and then listed potential responses to those arguments in the spaces provided. This procedure was modeled after Petty et al. (1976) and has been used by Pfau and colleagues (1997) in previous inoculation research. Each response was counted. A weighted average was assessed from the overall ratings of each counterargument. The same procedure was employed for the responses section.

Associative Networks. Associative networks were assessed using concept maps. Concept maps represent mental structures (Jonassen, Beissner, & Yacci, 1993). Maps consist of nodes and links that "capture the structure of meaning for a given subject" (Novak, 1998, p. 227). Concept maps have been shown to be valid and reliable (Jonassen et al., 1993; Pfau et al., 2005). Participants were told that the purpose of this procedure was to understand what employees think and feel about an organization. An example concept map was provided. The map started with a target node, in this node was the words "employee of an organization." After drawing links and labeling nodes, participants were asked to assess how strongly they felt about each of the concepts in their map by rating them from 1 (very weak) to 7 (very strong).

The concept maps were scored using a system that Pfau and colleagues used, which was devised by Novak and Gowin (1984). The researcher identified the number of nodes and links and the node strength for each participant. Node strength required averaging the participant's weighting of nodes. Please refer to the appendix for an example. This study expanded on the Pfau et al. (2005) study. Besides coding the overall number of nodes and associative network weight, the researcher also coded each node as cognitive or affective. The nodes were deemed cognitive if they included cognitive statements. If the node has a feeling listed (e.g., sad, happy, mad) then it was coded as an affective node. The ratings were then examined to devise a cognitive and affective associative network weight, independently from the overall associative network weight.

VI

Results

The purpose of this study was two fold. The first purpose was to examine organizational identity, organizational commitment, and OCBs to examine predictors, to determine if they change over time, and to identify predictors of change. A model linking the concepts was also proposed. This data was collected using a two-panel national telephone survey. The second purpose was to see if inoculation treatments could be used to bolster organizational identity, organizational commitment, and OCBs. An experiment was conducted to examine these hypotheses.

First Hypotheses 1 through 7 will be examined as well as Research Questions 1 through 3. The data used to examine these hypotheses and research questions came from the telephone survey.

Hypotheses 1-6

Hypotheses 1 through 5 posited that organizational identity, organizational commitment, OCBs, employees' attitudes toward an organization, and employees' likelihood of staying with an organization would change over time. To examine these hypotheses, five paired-sample t-tests were computed comparing September and January outcomes on each of these concepts.

Hypothesis 1 predicted organizational identity would change over time. The correlated t-test compared scores on the organizational identity questionnaire distributed in September ($M = 4.82$, $S.D. = 1.13$) and January ($M = 5.06$, $S.D. = .88$). Hypothesis 1 was supported, $t(300) = 3.67$, $p < .01$, $\eta^2 = .04$. Organizational identity increased over time. Hypothesis 2 predicted dimensions of commitment would change over time. There

were three dimensions of commitment measured at times one and two. Scores on two dimensions, affective commitment, $t(300) = .92$, p = .36, and continuance commitment, $t(300) = .56$, $p = .63$, did not change over time. Normative commitment, $t(300) = 8.81$, $p < .01$, $\eta^2 = .21$, did change over time, increasing from ($M = 3.77$, *S.D.* = .89) September to ($M = 4.44$, *S.D.* = 1.30) January, partially supporting Hypothesis 2. The means are depicted in Table 2.

Hypothesis 3 predicted that dimensions of OCBs would change over time. Five dimensions of OCB were measured in September and again in January. There were no differences or changes found in the OCB dimensions of conscientiousness, $t(300) = .53$, $p = .88$, sportsmanship, $t(300) = .12$, $p = .48$, and civic virtue $t(300) = .85$, $p = 77$. However, scores on the dimensions of altruism, $t(300) = -11.66$, $p < .01$, $\eta^2 = .31$, and courtesy, $t(300) = 4.61$, $p < .01$, $\eta^2 = .07$, did change over time. Both increased from September to January, altruism increasing from $M = 5.38$ to $M = 6.09$, and courtesy increasing from $M = 5.76$ to January $M = 6.11$. This pattern of results partially supports Hypothesis 3. The means are depicted in Table 2.

Hypothesis 4 predicted an employee's attitudes toward an organization would change over time. This was not supported, $t(300) = .80$, $p = .43$. Hypothesis 5 predicted an employee's perception of staying at an organization would change over time. This was not supported, $t(300) = .51$, $p = .61$. The means are depicted in Table 2.

Hypothesis 6 predicted employee's attitude toward the organization would predict organizational identity, organizational commitment, and OCBs. A hierarchical regression analysis was conducted to examine this hypothesis. There were two blocks of variables. The first block of variables were the sociodemographic variables (gender, age, marital

status, having children, education level, ethnicity, income, and years of service at an organization, and likelihood of staying at the organization). The second block was attitude toward the organization. Attitude was not a significant predictor of organizational identity (β = .06, p = .10). It was a significant predictor of affective commitment (β = .11, p < .05). The beta was positive, a positive relationship between attitude and affective commitment. However, attitude was not a significant predictor of normative (β = -.01, p = .46) or continuance commitment (β = -.01, p = .84). Attitude was not a significant predictor of the OCB dimensions of altruism (β = .03, p = .67), conscientiousness (β = -.07, p = .25), sportsmanship (β = .03, p = .68), courtesy (β = -.04, p = .54), or civic virtue (β = .11, p = .08). On balance, there was limited support for Hypothesis 6. See Tables 3 – 5 to examine the complete regression model.

Research Questions 1 – 3

Research Questions 1-3 examined the antecedents of organizational identity, organizational commitment, and OCBs and the factors that contribute to changes in these variables over time. To examine these research questions, hierarchical regression analyses were conducted. The first predictor block consisted of sociodemographic variables (gender, age, marital status, having children, education level, ethnicity, income, and years of service at an organization, and likelihood of staying at the organization). Four additional blocks of variables were entered sequentially: attitude toward the organization (Block 2), organizational culture dimensions (Block 3), organizational identity (Block 4), and organizational commitment dimensions (Block 5).

Research Questions 1a and 1b. Research Questions 1a and 1b probed the antecedents of organizational identity. Hierarchical regression analysis featured three

blocks of variables. The first block of variables was the sociodemographic variables (gender, age, marital status, having children, education level, ethnicity, income, and years of service at an organization, and likelihood of staying at the organization). The second block was attitude toward the organization, and the third block of variables was the dimensions of organizational culture. Income ($\beta = .09$, $p < .05$) and likelihood of staying at an organization ($\beta =. 12$, $p < .01$) were all significant antecedents of organizational identity. Income level and the likelihood of staying at an organization were positive predictors of organizational identity. Three dimensions of organizational culture also predicted organizational identity. They were the dimensions of teamwork ($\beta = .33$, $p < .01$), information flow ($\beta = .26$, $p < .01$), and support ($\beta = .37$, $p < .01$). Teamwork, information flow, and support were positive organizational culture dimensions related to organizational identity (Please refer to Table 3).

Research Question 1b examined the antecedents of change in organizational identity. The only significant predictors of change in organizational identity were likelihood of staying at an organization ($\beta=.12$, $p < .05$) and the teamwork dimension of organizational culture ($\beta = .25$, $p < .05$). Likelihood of staying at an organization and teamwork were positively related to changes in organizational identity. Table 6 displays the antecedents of change in organizational identity.

Research Questions 2a and 2b. Research Questions 2a and 2b examined the antecedents of organizational commitment and changes in commitment. Hierarchical regression analyses featured four blocks of variables. The first block of variables was the sociodemographic variables (gender, age, marital status, having children, education level, ethnicity, income, and years of service at an organization, and likelihood of staying at the

organization). The second block was attitude toward the organization, and the third block of variables consisted of the dimensions of organizational culture. The fourth block was organizational identity. Affective commitment will be examined first. There were no sociodemographic predictors of affective commitment. Organizational identity (β = .95, $p < .001$) was a significant positive predictor of affective commitment. Since previous results indicated no change in affective commitment over time, antecedents of change in affective commitment were not examined. (Please refer to Table 4)

There were several significant predictors of normative commitment. Income (β = .03, $p < .05$) and three dimensions of organizational culture (teamwork β =.14, $p < .01$; morale β = 1.00, $p < .01$; information flow β = -.12, $p < .01$), were significant predictors of normative commitment. Organizational identity was also a significant predictor of normative commitment (β = -.04, $p < .05$). Income and the organizational culture dimensions of teamwork and morale were all positively related to normative commitment. The dimension of organizational culture, information flow, was negatively related to normative commitment, as well as organizational identity.

Previous results indicated change in normative commitment over time. Age (β = .16, $p < .01$), education (β =.13, $p < .05$), and several dimensions of organizational culture (teamwork β = .23, $p < .05$; morale β = .59, $p < .01$; and support β = .27, $p < .05$), were all significant predictors of changes in normative commitment. Organizational identity was also a significant predictor of change in normative commitment (β = -.64, $p < .001$). Age, education, and the teamwork, morale, and support dimensions of organizational culture were positive antecedents to change in normative commitment.

There were also several significant predictors of continuance commitment. Years of service ($\beta = .17$, $p < .01$), and likelihood of staying at an organization ($\beta = .26$, $p < .01$), were significant predictors of continuance commitment. Years of service and likelihood of staying at an organization were positive predictors of continuance commitment. Previous results did not depict change in continuance commitment over time, so the antecedents of change were not examined. Table 7 depicts the predictors of change in organizational commitment.

Research Questions 3a and 3b. Research Questions 3a and 3b examined the antecedents of the five dimensions of OCBs (altruism, conscientiousness, sportsmanship, courtesy, and civic virtue) as well as the antecedents producing changes in each OCB dimension. There were five blocks of variables. The first block of variables consisted of sociodemographic variables (gender, age, marital status, having children, education level, ethnicity, income, and years of service at an organization, and likelihood of staying at the organization). The second block was attitude toward the organization, and the third block of variables consisted of the dimensions of organizational culture. The fourth block was organizational identity, and the fifth block consisted of three types of organizational commitment (affective, normative, and continuance). Each OCB dimension's antecedents will now be discussed.

For the dimension of altruism, gender ($\beta = .13$, $p < .05$), likelihood of staying at an organization ($\beta = -.14$, $p < .05$), and continuance commitment ($\beta = .13$, $p < .05$) were all significant predictors of employees demonstrating altruistic behaviors. Gender and continuance commitment were all positive antecedents of altruism behaviors. Likelihood of staying at an organization was a negative antecedent of altruistic behaviors.

Changes in altruistic behaviors were predicted by ethnicity (β = -.22, $p <$ .05), and the organizational culture dimension of teamwork (β = .28, $p < .05$). Teamwork was a positive predictor of altruistic behaviors, whereas ethnicity was a negative predictor of altruistic behaviors.

The conscientiousness dimension of OCBs was predicted by gender (β = .14, $p <$ .05) and continuance commitment (β = .18, $p < .01$). Gender and continuance commitment were positive antecedents of conscientiousness behaviors. Previous results did not indicate a change in conscientiousness over time, so no antecedents of change in conscientiousness were examined.

The sportsmanship dimension of OCBs was predicted by age (β = .15, $p < .05$), marital status (β = -.15, $p < .05$), and the organizational culture dimension of teamwork (β = .23, $p < .05$). Age and teamwork were positive predictors of sportsmanship behaviors. Marital status was a negative antecedent of sportsmanship behaviors. Sportsmanship behaviors did not change over time, so no antecedents of change were probed. Table 4 depicts the predictors of each dimension of OCB.

Courtesy behaviors were predicted by gender (β = .12, $p < .05$) and the organizational culture dimension of meetings (β = .52, $p < .01$) also predicted courtesy behaviors. Continuance commitment (β = .14, $p < .01$) was also a significant predictor of courtesy behaviors. Gender, meetings, and continuance commitment were all positive antecedents of a worker exhibiting courtesy behaviors.

Changes in courtesy behaviors were predicted by gender (β = .11, $p < .05$), income (β = .16, $p < .05$), the organizational culture dimension of meetings (β = .46, $p <$

.001), and continuance commitment (β = .12, $p < .05$) all predicted changes in one exhibiting courtesy behaviors.

The final dimension of OCBs is civic virtue. Gender (β = .11, $p < .05$) and the organizational culture dimension of teamwork (β = -.29, $p < .01$) significantly predicted civic virtue behaviors. Organizational identity (β = .33, $p < .01$) and affective commitment (β = .33, $p < .01$) also significantly predicted civic virtue behaviors. Gender, organizational identity, and affective commitment were all significant predictors of exhibiting civic virtue behaviors. The organizational culture dimension of teamwork was a negative antecedent of civic virtue behaviors. There was no change in civic virtue behaviors demonstrated over time, so no antecedents of change were examined. Table 8 depicts the predictors of change in each dimension of OCB.

Structural Equation Modeling

To test Hypothesis 7, structural equation analysis (SEM) was used. Hypothesis 7 posited a model (See Figure 1) that organizational culture would be a precursor to organizational attitude. Organizational culture would lead to a strong organizational identity, which links to organizational commitment, OCBs, and likelihood of staying. Attitude was also thought to link to organizational identity, organizational commitment, OCBs, and likelihood of commitment. Five variables were included in the predicted and final model: organizational culture, organizational attitude, organizational identity, organizational commitment (collapsed measure), a specific OCB type (therefore 5 models were computed, one for each type of OCB), and likelihood of staying. The predicted model is in Figure 1.

Each model will be discussed separately. The first model discussed examined the OCB of *altruism*. The initial model for altruism did not fit the data well, χ^2 (*df* = 3, N = 301) = 8.93, p = .030. Thus, changes were made to improve the model's overall fit based on the results of the Lagrange multiplier test, which indicted what paths should be added (i.e., allowing more parameters to be estimated by the data), and the Wald test, which noted what paths should be deleted (i.e., fixing parameters at zero). Changes involved tweaking the model and all changes were theoretically justified.

Modifications included removing the path from attitude to commitment. It was not sure how attitude was related to commitment when the model was proposed. It was known that job satisfaction was related to identity, but this study did not measure job satisfaction but rather an actual attitude. A path was added between organizational culture and organizational commitment. There was not previous quantitative research that linked culture to commitment, so this path was added. There was also not a path from organizational identity to altruism. The removal of this path was appropriate. There was lack of quantitative research that linked identity to OCBs, so it not sure what the actual relationship would be. The revised model fit the data better, χ^2 (*df* = 4, N = 301) = 3.76, p = .440 with fit indices of: Comparative Fit Index (CFI), 1.00; Adjusted Goodness of Fit (AGFI), .98; and Root Mean Square of Approximation (RMSEA), .00. A model that fits the data should manifest a nonsignificant chi-square and CFI and AGFI ratings should fall above .90. RMSEA ratings should be less than .05 (Byrne, 2001; Bu & Bentler, 1995). The final model was deemed an appropriate fit due to theoretical reasons. All paths in the model had path coefficients above 1.96, which suggests fit (Byrne, 2001). Figure 2 depicts the revised altruism model.

The next model examined links to the OCB *conscientiousness*. The initial model for conscientiousness did not fit the data well, χ^2 (*df* = 3, N = 301) = 12.19, p = .007. Thus, changes were made to improve the model's overall fit based on the results of the Lagrange multiplier test and the Wald test. Changes involved tweaking the model and all changes were theoretically justified.

Modifications included removing the path from attitude to commitment. Again, this study measured attitude with an attitude measure instead of a job satisfaction measure. Previous research demonstrated job satisfaction as an attitude that did link to commitment, however, it was unclear what the relationship would be when using an attitude measure. A path was added between organizational culture and total commitment. This was a quantitative examination of culture, which is why there was lack of evidence to suggest this path when the model was first proposed. The revised model fit the data better, χ^2 (*df* = 3, N = 301) = 4.59, p = .205, with fit indices of: CFI, .99; AGFI, .98; and RMSEA, .03. The final model specifications were deemed an appropriate fit due to theoretical reasons. Figure 3 depicts the revised *conscientiousness* model.

The next model examined will be the OCB *sportsmanship* model. Once again, the initial model for sportsmanship did not fit the data well, χ^2 (*df* = 3, N = 301) = 11.31, p = .010. Thus, changes were made to improve the model's overall fit based on the results of the Lagrange multiplier test and the Wald test. Changes involved tweaking the model and all changes were theoretically justified. Modifications included removing the path from attitude to commitment, as well as removing the path from organizational commitment to OCB. A path was added from organizational culture and total commitment. These changes supported the changes made to the models discussed above. The revised model

fit the data better, χ^2 (*df* = 4, N = 301) = 3.261, p = .515, with fit indices of CFI, 1.00; AGFI, .98; and RMSEA, .00. Figure 4 depicts the revised *sportsmanship* model.

The next model examined will be the *courtesy* OCB model (Figure 6). The initial model for *courtesy* did not fit the data well, χ^2 (*df* = 3, N = 301) = 28.96, p = .000. Thus, changes were made to improve the model's overall fit based on the results of the Lagrange multiplier test and the Wald test. Changes involved tweaking the model and all changes were theoretically justified. Modifications included removing the path from attitude to commitment, as well as the path from organizational commitment to OCB, and the path from organizational identity to OCB. A path was then added between organizational culture and OCB. The revised model fit the data better, χ^2 (*df* = 3, N = 301) = 1.37, p = .712, with the fit indices of CFI, .99; AGFI, .96; and RMSEA, .04. All changes were theoretically driven.

The final OCB model *civic virtue* (Figure 7) will now be discussed. The model for *civic virtue* did not fit the data well, χ^2 (*df* = 3, N = 301) = 11.20, p = .011. Thus, changes were made to improve the model's overall fit based on the results of the Lagrange multiplier test and the Wald test. Changes involved tweaking the model and all changes were theoretically justified. Modifications included taking out the path from attitude to commitment, as well as the path from organizational commitment to OCB. A path was added between organizational culture and total commitment. The revised model fit the data better, χ^2 (*df* = 4, N = 301) = 9.389, p = .052, with fit indices of CFI, .97; AGFI, .94; and RMSEA, .07.

Another model was examined to determine the impact of culture, identity, attitude, and commitment had on an employee's likelihood of staying at an organization.

The proposed model moderately fit the data well, χ^2 (*df* = 5, N = 301) = 2.19, p = .53, with fit indices of CFI, .99; AGFI, .98; and RMSEA, .00. Several of the paths in the model were not significant, but the proposed model fit the variable likelihood of staying. There was a path from culture to attitude, attitude to organizational identity, identity to commitment, identity to likelihood of staying, as well as commitment to likelihood of staying. The proposed model is in Figure 7. The final model is in Figure 8.

Therefore, hypothesis 7 was partially supported. There is not a single model that can be used to predict OCBs. The variables of organizational culture, organizational identity, organizational commitment vary in predicting a specific OCB, although the similarities across OCBs are considerable. It was also determined that organizational identity has a direct link with an employee's likelihood to stay at an organization. Organizational culture works through organizational identity to impact likelihood of staying. Organizational attitude, when measured as an attitude and not as job satisfaction, did not impact an employee's likelihood of staying at an organization. [1]

Multivariate Analysis for Hypotheses 8 and 9

Manipulation check. Threat is a precursor for inoculation. To test if the inoculation message took, a one-way ANOVA was computed to assess elicited threat for those inoculated and those not inoculated. Omnibus results revealed that those inoculated manifested significantly higher threat levels than those in the control condition, $F(1, 316) = 23.75$, $p < .01$. The manipulation check confirmed significantly more elicited threat for those receiving an inoculation treatment ($M = 4.17$, *S.D.* = 1.22) than those who did not receive an inoculation treatment message ($M = 3.61$, *S.D.* = 1.30). There was also a significant difference in the number of counterarguments, $F(1, 316) = 7.04$, $p < .01$.

Those that were inoculated were able to write more counterarguments ($M = 3.06$, *S.D.* = 1.22) than those in the control condition ($M = 2.52$, *S.D.* = 1.23). The means are depicted in Table 9.

Multivariate Analysis

Hypothesis 8 and 9 examined the differences between the inoculation and control groups in terms of organizational identity, organizational commitment, OCBs, and associative networks. To test these hypotheses, a one-way MANCOVA was computed on the independent variable treatment group (inoculation and control), the covariates gender, knowledge, and past work experience; and the dependent variables organizational identity, organizational commitment (affective commitment, normative commitment, and continuance commitment), OCBs (altruism, conscientiousness, sportsmanship, courtesy, and civic virtue), and associative networks (nodes, links, weight, number of cognitive nodes, number of affective nodes, as well as cognitive weight and affective weight). The omnibus results will be discussed first.

The omnibus results indicated significant differences for the covariates of gender, Wilks' λ $F(16, 296) = 2.08$ $p < .01$, partial $eta^2 = .09$; knowledge, λ $F(16, 296) = 1.75$ $p < .05$, partial $eta^2 = .03$; and the independent variable experimental condition, Wilks' λ $F(16, 296) = 33.28$ $p < .01$, partial $eta^2 = .39$.

Subsequent univariate tests revealed significant differences for the covariate gender on the dependent variable OCB dimension of altruism, $F(1, 316) = 16.57$, $p < .01$, $\eta^2 = .048$, and courtesy, $F(1, 316) = 9.31$, $p < .01$, $\eta^2 = .02$. Significant differences were also found for the number of affective nodes in an associative network, $F(1, 316) = 4.48$, $p < .05$, $\eta^2 = .03$, as well as the affective associative network weight, $F(1, 316) = 4.46$, p

< .05, η^2 = .12. Betas were positive indicating that women were more likely to exhibit these behaviors.

Additional subsequent univariate tests revealed significant differences for the covariate past work experience on the dependent variable organizational identity, F (1, 316) = 3.39, $p < .05$, p η^2 = ..01, OCB dimension of altruism, F (1, 316) = 3.79, $p < .05$, η^2= .01, as well as the number of nodes, F (1, 316) = 48.97, $p < .05$, η^2 = .16, and links, F (1, 316) = 3.54, $p < .05$, η^2 = .18, in associative networks. Betas were positive indicating that those with past work experience were more likely to have a positive organizational identity.

Univariate tests revealed significant differences for the covariate knowledge and the dependent variables organizational identity, F (1, 316) = 4.50, $p < .05$, η^2 = .01, weight of associative networks, F (1, 316) = 4.22, $p < .05$, η^2 = .03, and the number of affective nodes, $F(1, 316) = 5.31$, $p < .05$, η^2 = .04, in an associative network. Betas were positive indicating that those with more organizational knowledge would have a stronger organizational identity.

Subsequent univariate tests also revealed significant differences for experimental condition and the dependent variables: normative commitment, F (1, 316) = 6.19, $p < .01$, η^2 = .03; continuance commitment, F (1, 316) = 5.18, $p < .05$, η^2 = .02; the conscientiousness dimension of OCBs, F (1, 316) = 7.83, $p < .01$, η^2 = .02; associative network weight, F (1, 316) = 5.39, $p < .05$, η^2 = .04; and weight of affective network, F (1, 316) = 3.40, $p < .05$, η^2 = .09. Betas were positive indicating that those in the inoculation condition exhibited more normative and continuance commitment as well as a greater affective associative network weight.

Hypothesis 8 predicted people in the inoculation condition would have greater organizational identity, exhibit greater organizational commitment (affective, continuance, and normative), and display more OCBs. To examine specific differences, a series of planned comparison tests were computed to compare the inoculation and control groups. There were significant differences in organizational identity, $F(1, 316) = 3.97$, $p < .05$; affective commitment, $F(1, 316) = 1.79$, $p < .05$; normative commitment, $F(1, 316) = 7.33$, $p < .01$; continuance commitment, $F(1, 316) = 4.62$, $p < .05$; as well as two dimensions of OCBs, including conscientiousness, $F(1, 316) = 8.75$, $p < .01$, and sportsmanship, $F(1, 316) = 557.11$, $p < .01$. Compared to controls, those in the inoculation condition manifested greater organizational identity, more affective commitment, more normative commitment, and continuance commitment. Those inoculated also manifested more perceptions of OCBs including conscientiousness and sportsmanship. This pattern of results largely supports Hypothesis 8. Those in the inoculation condition had greater organizational identity, manifested more organizational commitment, and certain types of OCBs. Table 10 depicts specific means.

Hypothesis 9 posited those in the inoculation condition would manifest larger networks: more nodes and links within their network as well as a greater associative network weight. To examine specific differences, a series of planned comparison tests were computed to compare the inoculation and control participants. There was a significant difference in associative network weight, $F(1, 316) = 3.76$, $p < .05$. Scheffe post-hoc tests were computed to determine specific differences between the inoculation and control conditions. Those in the inoculation condition had more nodes $t(316) = 23.14$, $p < .05$. Those in the control condition had a greater associative network weight

$t(316) = -4.50$, $p < .05$. This pattern of means contradicts Hypothesis 9. Table 9 depicts the specific mean differences.

Research Questions 4 and 5. Research Questions 4 and 5 examined the differences message type might have on organizational commitment and associative networks. To test these questions, a one-way MANOVA was computed for the independent variable of inoculation or control condition and the dependent variables of affective commitment, normative commitment, continuance commitment, and associative networks number of cognitive and affective nodes as well as strength of cognitive and affective associative networks.

Research Question 4 wanted to examine the differences between different types of inoculation treatments on type of commitment. The omnibus results did not indicate significant differences for the experimental condition (cognitive message). Wilks' λ $F(7, 148) = 1.38$ $p = .22$, partial $eta^2 = .06$. Subsequent univariate tests did not reveal significant differences for the independent variable and the dependent variables of affective commitment, continuance commitment, and normative commitment.

The omnibus results did not indicate significant differences for the experimental condition (affective message). Wilks' λ $F(7, 152) = 1.34$ $p = .23$, partial $eta^2 = .06$. Subsequent univariate tests did not reveal significant differences for the independent variable and the dependent variables of affective commitment or continuance commitment. The univariate tests did depict significant differences for the independent variable of affective message and the dependent variable of normative commitment, $F (1, 159) = 6.25$, $p < .05$, $\eta^2 = .01$. Therefore, cognitive messages did not impact affective,

normative, or continuance commitment. Affective messages impacted normative commitment.

Research Question 5 wanted to examine the associative network differences that might occur after reading an affective or cognitive message. Specifically, it sought to examine the differences in number of cognitive and affective nodes as well as cognitive and affective associative network strength. The omnibus results did not indicate significant differences for the experimental condition (cognitive message), Wilks' λ $F(7, 148) = 1.38$ $p = .22$, partial $eta^2 = .06$. Subsequent univariate tests did not reveal significant differences for the independent variable and the following dependent variables: number of cognitive nodes, number of affective nodes, or cognitive and affective associative network weight.

The omnibus results did not indicate significant differences for the experimental condition (affective message), Wilks' λ $F(7, 152) = 1.34$ $p = .23$, partial $eta^2 = .06$. Subsequent univariate tests did not reveal significant differences for the independent variable and the dependent variables number of cognitive nodes, number of affective nodes, or cognitive and affective associative network weight. Therefore, cognitive or affective messages did not impact cognitive or affective associative networks. There was not enough evidence in this study to support the impact affective or cognitive messages could have on commitment type of associative networks.

VII

Discussion

The purpose of this study was two fold. The first purpose was to examine organizational identity, organizational commitment, and OCBS to determine their antecedents, to see if they change and, if so, what predicted change, and posit a model explaining the relationship between these constructs. The second purpose was to examine if inoculation treatments could be used to bolster these organizational concepts.

Predictors and Change

As previously discussed, organizational identity is a cognitive connection between the definition of an organization and the definition a person applies to him/herself. It is a process of self-definition (Dutton et al., 1994). This study attempted to find out what sociodemographic variables and organizational culture dimensions would predict organizational identity. The study also wanted to examine if identity would change over time, and what predicted change in organizational identity. Hierarchical regression analysis determined that income and likelihood of staying at an organization were significant positive predictors of organizational identity. Brown (1969) states organizational identity is independent of money and seniority, even though the current study found income to be a significant predictor of organizational identity. It is important to note that likelihood of staying at an organization is a variable that an organization can address. Organizations may be able to design messages that can influence employees' identity as well as design programs that make it beneficial for employees to see benefits of service longevity at one organization. Three dimensions of organizational culture positively predicted organizational identity in this study. They were teamwork, flow of

information, and support. This provides information that if organizations are aware of employees' perceptions of organizational culture, the organization might be able to change and address issues that directly impact organizational identity.

It was also important to determine if organizational identity changed, what related to change. It was important to determine if organizational identity was able to change. If it did change, then it was a dynamic concept that organizations could work to develop in their employees. This study predicted that organizational identity would change. A paired-sample t-test confirmed that organizational identity changes over time. This study was one of the first to examine if organizational identity changes over time, rather than examining how it changes with years of service. Hall and colleagues (1970) found organizational identity changes based on years of service. However, the Hall (1970) study was not a longitudinal study taking multiple measures of organizational identity. The current study found that identity changes within a period of a few months. This may imply that organizational identity is not fixed, but rather can be altered from influences in the organizational culture. Hatch and Schultz (1997) state organizational culture and identity are separate concepts. Organizational culture manifests organizational identity.

A hierarchical regression analyses was run to determine what sociodemographic variables and organizational culture variables would predict change in organizational identity. Change in organizational identity was predicted by likelihood of staying at an organization. It makes sense that if an employee is planning on staying at an organization for at least five years, their identity might be stronger than a person who is thinking about leaving. The teamwork dimension of organizational culture predicted change in organizational identity. If one works in teams, this is a positive indicator of change in

organizational identity. Therefore, organizational identity changes. There are several sociodemographic variables that predict organizational identity, and different dimensions of organizational culture predict organizational identity.

This study was also interested in examining organizational commitment. Specifically, this study wanted to examine what predicted organizational commitment, whether it changes over time and, if so, what predicted changes in organizational commitment. Branham (2004) states lowering employee turnover starts with commitment. There are three types of organizational commitment (affective, continuance, and normative). Hierarchical regression analyses revealed that the organizational culture dimension of teamwork was a significant predictor of affective commitment as well as organizational identity. This research confirms that employees will develop affective commitment if "an organization …satisfies their needs, meets their expectations, and allows them to achieve their goals" (Meyer & Allen, 1997, p. 50). Identity is also built on satisfying employees' needs, which is why organizational identity is a positive predictor of affective commitment.

Hierarchical regression analyses showed years of service and likelihood of staying at an organization were significant positive predictors of continuance commitment. Meyer and Allen (1997) state "continuance commitment can develop as a result of any action or event that increases the cost of leaving the organization, provided the employee recognizes that these costs have been incurred" (p. 56). This study supports the idea that tenure at an organization is a "surrogate variable" of continuance commitment (Meyer & Allen, 1997). Meyer and Allen (1997) state this commitment is formed based on employees' awareness of other situations. This explains why involvement negatively

predicts continuance commitment. The more involved an employee is with an organization, the less likely they are to be aware of other career opportunities.

Hierarchical regression analysis found that income and three dimensions of organizational culture were positive predictors of normative commitment. The organizational culture dimensions of teamwork, morale, and information flow predicted normative commitment. This confirms what Meyer and Allen (1996) state about antecedents of normative commitment. They state that individuals form this type of commitment through a process of rewards, punishments, and observations. "Individuals learn what is valued and what is expected of them by the family, the culture, or the organization" (p. 61). Income, teamwork, and morale are all positive predictors of normative commitment. Information flow was a negative predictor of normative commitment. If an employee is making more income, works in teams, and feels like the organization boosts their morale, they were more likely to feel an obligation to the organization. If the employee feels they are lacking information from the organization, they will feel less obligated to the organization.

After determining the antecedents of organizational commitment, this study wanted to examine if organizational commitment would change over time. Once again, it was important to examine if commitment was a dynamic concept. If it changes, then inoculation could be used to bolster commitment.

A paired-sample t-test revealed organizational commitment changes over time. However, only one form of commitment changes over time. Normative commitment was the only form of commitment that changed over time. "Normative commitment refers to an employee's feelings of obligations to remain with the organization" (Meyer & Allen,

1997, p. 60). Meyer and Allen (1991) found that normative commitment develops on the basis of organizations investing in their employees.

Hierarchical regression analyses were computed to examine antecedents of change in normative commitment. Age, education, as well as dimensions of organizational culture (teamwork, morale, and support) were positive predictors of changes in normative commitment. The older an employee is, the more education they have, and the more time they spend working in teams, feel support, and a boost of morale from the organization, the more "obligated" they would become. Organizational identity was negatively related to changes in normative commitment. The stronger the organizational identity the less obligated an employee felt to their organization.

Affective and continuance commitment did not change over time. Therefore, organizational commitment is also a dynamic variable. Affective and continuance commitment are more static than normative commitment. There are a number of predictors of organizational commitment (sociodemographic as well as culture). There are a number of organizational culture dimensions that predict the different types of commitment, so culture does impact commitment.

The study also examined what predicted OCBs and if the amount of perceived OCBs would change over time. There are five dimensions of OCBs (conscientiousness, altruism, sportsmanship, civic virtue, and courtesy). Each was studied independently in this study. Organ and colleagues (2006) state that future OCB research needs to examine the antecedents of OCBs. When they state this, they are talking about OCBs as an aggregate, and this study attempted to examine each OCB type as a unique concept. They also state greater attention should be directed at leadership behaviors, task characteristics,

and organizational characteristics that influence OCBs. This study applies Organ and colleagues (2006) advice by examining organizational characteristics such as organizational culture.

A hierarchical regression analyses found gender and continuance commitment predicted conscientiousness OCBs. Both were positive predictors of this type of OCB. It makes sense that if one feels obligation to an organization that he/she would be likely to be conscientious of other employees. Women were more likely to exhibit conscientiousness OCBs.

Hierarchical regression analyses found altruistic behaviors were predicted by gender, likelihood of staying at an organization, and continuance commitment. Gender and continuance commitment were positive predictors of altruistic behaviors, where as likelihood of staying at an organization was a negative antecedent of one exhibiting altruistic behaviors. Women and employees who felt continuance commitment were exhibited altruistic behaviors. Those that were not sure of how long they were going to stay were less likely to exhibit altruistic behaviors.

A hierarchical regression analyses found sportsmanship behaviors were predicted by age, marital status, and teamwork. Sportsmanship behaviors are the behaviors people choose not to do (Organ, et al, 2006). Age and teamwork were positive predictors of employees exhibiting sportsmanship behaviors. Marital status was a negative predictor. If employees work in teams and are older, they are better sports.

A hierarchical regression analyses also found courtesy behaviors were positively predicted by gender, continuance commitment, and organizational meetings. Organ (1988) posits this as a very distinguishable OCB. Courtesy behaviors include behaviors

that make others jobs easier. It would make sense that if an employee plans on staying at an organization, he/she would be more likely to exhibit such behavior, as well as if they feel committed. If they spend more time in meetings, they might volunteer more, which relieves pressure or stress on other employees.

Hierarchical regression analyses depicted gender and teamwork as antecedents of civic virtue behaviors. Civic virtue "describes a posture of responsible, constructive involvement in the political or governance process of the organization" (Organ, et al., 2006, p. 24). Women were more likely to exhibit civic virtue behaviors. Those that work in teams were less likely to exhibit civic virtue behaviors. Organizational identity and affective commitment were positive predictors of civic virtue behaviors. If one identifies with the organization and has an emotional attachment to the organization, they are more likely to take part in the political processes of an organization.

This study also posited OCBs would change. It was important to note if employees perceive their demonstration of OCBs as changing in order to determine if they could be bolstered. Paired-sample t-tests were computed to see if OCBs would change over time and asked what would predict these changes. Of the five dimensions of OCBs (conscientiousness, altruism, sportsmanship, civic virtue, and courtesy), only altruism and courtesy changed over time. A hierarchical regression analyses found changes in altruistic behaviors were predicted by ethnicity and teamwork. The altruism dimension of OCB is defined by the employee doing selfless acts. They do not want anything in return for doing something for someone else, this is also known as prosocial behavior (Organ et al., 2006). Several personal as well as organizational characteristics were found to predict changes in OCBs. For example, teamwork (organizational culture

dimension) was a positive predictor of one changing their altruistic behavior. However, there are different predictors of OCBs changing over time, and not all OCBs are subject to change over time, or not change within the three months this study was carried out. Changes in courtesy behaviors were predicted by gender, income, continuance commitment, and the organizational culture dimension of meetings. All of these were positive predictors of change in courtesy behaviors. Women were more likely to exhibit these behaviors, as well as those making more money, those who felt somewhat obligated, and those who spent more time in meetings.

This investigation also posited an employee's organizational attitude would change over time, and asked what organizational attitude would predict. A paired-sample t-test failed to confirm organizational attitude changes over time. Employees' attitudes toward an organization did not change over time, which is surprising. Most researchers who study organizational attitudes study job satisfaction instead of attitude (Organ et al., 2006). This study actually used an attitude measure. Perhaps if a job satisfaction scale was included, a better depiction of organizational attitude would have been obtained.

A hierarchical regression analyses was used to examine how attitude toward the organization impacted the other organizational variables (identity, commitment, and OCBs). Attitude failed to predict organizational identity. It was a positive predictor of affective commitment. Attitude also did not predict any type of OCB. This confirms previous research findings (Organ et al., 2006). Therefore, the results did not fully confirm the studies predictions, but at the same time, the study added to the literature by using an actual attitude measure to operationalize attitude.

Another prediction posited an employee's likelihood of staying at an organization would change over time. Another paired-sample t-test failed to prove that likelihood of staying at an organization changes in the sample, although intent slightly increased. If this study was conducted over a longer period of time (e. g., two years) this result might change. Organizations are dynamic, so there may be more things happening to shape the organizational culture over a period of years, rather than just a few months.

Models

This study wanted to examine how organizational culture, organizational attitude, organizational identity, and organizational commitment related to OCBs, and likelihood of staying at an organization. Two models were proposed. One model examined culture, attitude, identity, commitment, and each individual OCB; while the other model examined culture, attitude, identity, commitment, and likelihood of staying at an organization. It posited that organizational culture would work through identity and attitude to affect identity, commitment, OCBs, and an employee's likelihood of staying at an organization.

OCB models. Each OCB was treated as a separate endogenous variable in the SEM analyses. It was deemed appropriate that each OCB was unique, and the antecedents leading to each differed in the regression analyses, and this pattern was predicted to appear again in the SEM models. The initial model examining each OCB had to be theoretically tweaked in order to achieve fit. The revised models provide nuances into what precedes different OCBs. Organizational culture precedes organizational identity as well as organizational attitude. There is also a path leading from organizational attitude to organizational identity. Organizational identity led to

organizational commitment, which leads to employees demonstrating all OCBs except civic virtue. There is also a direct link from organizational culture and organizational commitment.

In three of the models, sportsmanship, courtesy, and conscientiousness, organizational identity led to OCBs. In three of the models, commitment led to OCB (altruism, courtesy, and conscientiousness). In all the models, there was a path from organizational culture to organizational commitment as well as organizational identity. Attitude was inversely related to organizational identity, and attitude did not predict commitment or OCBs. Even though there were small differences for each model, they were overwhelmingly similar.

The model to examine predictors of likelihood to stay at an organization was rather interesting. This model fit the proposed model for OCBs, as well as the proposed model for likelihood of staying. It was very similar in the number of paths as well predictors of the final variable, in this case it was likelihood of staying at an organization rather than an OCB. There was a direct path from organizational culture to organizational identity. There was also a path from organizational culture to organizational attitude. Attitude linked to organizational identity. There was a path from organizational identity to organizational commitment. Finally, both organizational identity and organizational commitment preceded an employee's likelihood of staying at an organization. This model depicts that all the organizational variables examined in this study are related. It also demonstrates that understanding an employee's identity and commitment is vital to understanding an employee's intention to leave an organization.

There is a lack of research examining antecedents of OCBs (Organ et al., 2006). This study examined antecedents of sociodemographic variables as well as specific organizational communication concepts. The regression and SEM models both provide nuances into antecedents of OCBs. This study also adds to the literature by treating each OCB as a unique concept. There is still a lot to learn about the links between these variables. Although the predicted model did not work, the revised models were able to provide insight into how the organizational concepts were related.

Strengthening Identity, Commitment, and OCBs

The second purpose of this study was to examine if one could bolster organizational identity, organizational commitment, and OCBs. An experiment was conducted in order to test these predictions.

It was predicted that those in the inoculation group would manifest greater organizational identity, organizational commitment, and OCBs when compared to those in the control group. Multivariate analyses found that inoculation protects and bolsters organizational identity from hypothetical internal and external attacks. It also strengthens normative and continuance commitment. Post hoc tests revealed that those in the inoculation condition manifested greater organizational identity, affective commitment, normative commitment, and continuance commitment when compared to controls. They also hypothetically exhibited more OCBs. Specifically, those inoculated exhibited more conscientiousness, sportsmanship, and civic virtue behaviors than those in the control group. These types of OCBs are types of behaviors that are demonstrated for the good of the organization. For example, one can inoculate employees to think about others

(conscientiousness), not to complain (sportsmanship), and take part in the organization (civic virtue).

Inoculation did not work with altruistic or courtesy behaviors. Because each dimension of OCBs has different antecedents, it may be these results would change when conducting the study with full-time employees. Organizational identity impacted OCBs when examining the telephone survey data. Culture also impacted OCBs in the survey part of this study. Culture was not measured in the experiment, and identity might have been stronger if the student actually worked at the organization. These two things predicted the demonstration of OCBs in the telephone survey. If organizational culture was a variable in the experiment, there might have been a stronger organizational identity which then predicted OCBs.

Overall, results indicate that inoculation does work in an organizational context. Organizations can produce cognitive or affective internal messages to bolster organizational identity, organizational commitment, and some forms of OCBs.

This study also examined associative networks and the impact of inoculation on them. It questioned how cognitive or affective messages would impact associative networks. It predicted that those in the inoculation group would manifest more nodes, links, and a greater associative network when compared to control group participants. Multivariate analyses proved the opposite of what the study predicted. Those in the control condition had more nodes, links, and a greater associative network weight than those in the inoculation condition. Those in the inoculation condition had more affective nodes and greater affective associative network strength than those in the control

condition, which answers the question of how message type may impact associative networks.

Overall, the pattern of results can be explained as follows. Those in the inoculation condition exhibited higher levels of affective commitment, which may transmit into a more affective associative network. It is unclear why the control participants had larger associative networks, but this pattern of results might not appear with full-time employees. Full-time employees work for actual organization and have more concrete experiences to draw from. Years of service and attitude toward the organization might also impact associative networks. This area still needs additional research to determine what is happening.

Another question the experiment posed asked if one could match a message (cognitive or affective) to a form of commitment (affective, continuance, or normative). Multivariate analyses also failed to find differences between message type and commitment type. Therefore, there is no evidence that suggests affective messages manifest greater affective commitment. Cognitive messages do not manifest greater continuance commitment. Once again, more research should be conducted with full-time employees to see if these specific message types do impact commitment type. There should be key phrases and words used that would manifest a stronger affective or cognitive commitment. This study did not examine if participants had a higher score on one type of commitment. Future research should examine if employees do have a stronger form of commitment and then examine if that commitment can be changed through the process of internal messages.

As stated earlier, the study asked how message type would impact associative networks. Specifically, cognitive or affective messages were examined for impact on cognitive or affective associative networks. Multivariate analyses failed to prove message type impacts cognitive or affective associative networks. It is unclear why message type did not impact associative network type. This is only the second study examining affective and cognitive associative networks (Haigh, under review), and the second study examining associative networks in inoculation (Pfau et al., 2005). This study adds to the current literature trying to understand how inoculation impacts associative networks, and it also expands what is know about affective and cognitive associative networks and their respective weight. Also, if the study was conducted with full-time employees, their associative networks should be larger and already have a stronger or affective component based on past experiences. This should be tested when completing the study in work setting.

Limitations

Telephone Survey Limitations

This study was not without limitations. First, one limitation with the telephone survey was the loss of participants. After the first phase, there were 514 participants. The end sample size was 301, which is only a 58.5% retention rate. Had the same size been more robust, the predictors of organizational identity, organizational commitment, and OCBs that were approaching significance ($p < .10$) may have been significant. Another limitation with the telephone survey was the disproportionate sample of women. Had more men participated, gender might have played a more significant role in predicting organizational concepts.

This survey was conducted by OU Poll. Due to this being a telephone survey all participants are given the option of not answering questions or ending the call in the middle of the survey. This might have impacted the end result. One advantage of doing a telephone survey was having a true random sample. One draw back was not being able to establish more cohesion and information about the type of organization the participants worked at. However, by having a diverse sample of employees from all different types of organizations, it actually made the links from organizational culture to organizational attitude and commitment stronger in the SEM models. There is more support for these paths when examining a large number of organizations rather than one. Organizations are dynamic. This study was planned to be executed at three different organizations over the period of a year. After the organization's management decided to opt out, it was decided a telephone survey was the best alternative. Had the original plan worked, there would be a deeper understanding of what was happening behind the scenes with the employees. A better understanding of the culture and type of work would have provided a richer interpretation of the results.

Another limitation was the large percent of women taking part in the study. There were more women sampled at Time 1 and Time 2. This could have been prevented. NES election surveys ask people who answer the phone if the interviewer can visit with the person in the household who is 18 years of age and is going to have the next birthday. This ensures a more equal sample of men and women. This population made more money and had more education when compared to NES survey participants. This is not necessarily a limitation. This study required participants to have a job. The more education a person has, the more likely they will be to have a job. If they have a job, the

more likely they are to make more money. The requirements for this study are different in those in other national surveys such as the NES because of the variables being measured. Another sociodemographic variable that was measured was ethnicity. There was a large percentage of white participants. The sample was largely white, but there are still more white people living in the U.S., so the chance of randomly calling one is actually higher.

Experiment Limitations

As for the experiment, there were several limitations. The first limitation concerns the sample. The participants were undergraduate students. This was compounded by the fact that the students had to consider hypothetically working at a real organization. However, an advantage of using a sample of undergraduate students worked well for this experiment because of the control over extraneous variables (i.e., changing organizational culture). More than 90% of the participants did have prior work experience. This gave them a frame of reference. They were able to recall past behavior when answering the questionnaire. Future research should examine similar predictions with a non-student sample. Specifically, future research should examine if the process of inoculation can be replicated in an actual work environment, instead of a hypothetical, laboratory setting.

The second caveat of the experiment was the inability to measure organizational culture. Because of the hypothetical situation, organizational culture was not able to be examined in the laboratory setting, which would have added another dimension to the study. A larger sample size would have been welcomed. The sample size was large enough to see effects, but there is always room for more.

Another limitation of the experiment was the inability to draw connections between the type of message and the type of commitment. The ability to write messages

that match or influence different forms of commitment, would be very beneficial. Commitment starts forming when the employee first shows up for work (Meyer & Allen, 1997). Crafting affective messages in new employee materials might lead one to be more affectively committed, so they are not thinking about the other possibilities available to them. Also, the inability to prove the impact of messages on associative networks was disappointing. If the same procedures were employed in an actual business setting, the size and weight of the associative networks should be larger because of the ability to recall past experiences. The type of message should ideally impact associative networks by adding nodes to the existing network or by adding strength.

Overall, the experiment worked well. There was a low attrition rate, which is always a concern when conducting an inoculation study. The students had to return each week to finish a phase, so the high retention rate between phases was satisfactory.

If this experiment was conducted in the world the same results would be expected. A longitudinal study would be carried out. Organizational culture would have more of an impact in an organization. In the experiment, organizational culture was not measured due to the students not experiencing culture first-hand. Organizational culture should also impact organizational identity, commitment, and OCBs as it did in the SEM models. It would be predicted that organizational identity, commitment, and OCBs would be increased through the process of inoculation. Inoculation is occurring naturally in organizations. If it was made more pronounced through internal communication forms, organizational identity, commitment, and OCBs should increase.

Conclusion

This first purpose of the study was to examine the relationships between organizational culture, organizational identity, organizational commitment, and OCBs. This study did that. One of the strengths of this study was that it was longitudinal in nature. Three months is not an optimal amount of time between contacts, but it is a start. This was enough time for several of the concepts to change. This is something that managers should know. The managers should know that identity, commitment, and OCBs do change over time. They are not static. They should also realize that culture, identity, and commitment, impact an employee's likelihood of staying at an organization. It is important that they measure or evaluate those concepts to understand how likely they are to loose good people.

The experiment proved one can use inoculation to bolster organizational identity, organizational commitment, and OCBs. In the end, this study demonstrates that because these organizational concepts are changing and are dynamic, organizations can craft messages through the process of inoculation to prevent these attitudes from slipping. Organizations need to be aware that they can craft internal communication messages to bolster organizational identity, organizational commitment, OCBs, and in the end, an employee's likelihood of staying at an organization.

It contributed to the literature by proving that organizational identity, normative commitment, and certain OCBs change over time. It also examined the linkages between these organizational variables. The study provided a new way of measuring organizational attitude by measuring attitude with an attitude measure and not a job satisfaction measure. It also took on the challenge of Organ and colleagues (2006). It

examined the antecedents of OCBs. It treated each OCB as a distinct variable instead of an aggregate. The hierarchical regression results provided proof that there are many different predictors of each form of organizational commitment and each OCB. These results coupled with the SEM results provide a more accurate picture of the linkages between organizational variables. Examining the use of inoculation in this setting provides practical applications for organizational managers. If inoculation can bolster organizational identity, organizational commitment, and OCBs, then the linkages between the variables may become more distinct.

Notes

1. Before running SEM, error terms were determined for each of the variables. The organizational culture scale, which consists of 36 items and 6 dimensions, were collapsed into one variable and the reliability (.94) was plugged into the formula for estimating measurement error, producing an error estimate of .02. The same procedure was used for each of the variables. Organizational identity was a 25-item measure that collapses into one measure of identity. It had a reliability of .95 and an error term of .03. Attitude consisted of six bipolar adjectives collapsed into one measure of attitude. It had a reliability of .76 and an error term of .11. Because two types of commitment are positive, and the other negative, the negative form of commitment (continuance was not included in the commitment variable. Organizational commitment was measured using 8 items for each dimension. The dimensions were collapsed into one measure of commitment instead of breaking it into affective, continuance, and normative. The error term was computed to be .03 (reliability . 85). There was a reliability and error term computed for each OCB. They were as follows: altruism, reliability of .74, error term of .05; conscientiousness had a reliability of .71 and an error term of .08; sportsmanship had a reliability of .78 and an error term of .09; courtesy had a reliability of .80 and an error term of .08; and civic virtue had a reliability of .76 with an error term of .22. Altruism, conscientiousness, sportsmanship, and courtesy were all measured using five, single-item indicators. Civic virtue was measured using four, single-item indicators.

Standard errors for the parameters of the final model were reasonable. The normalized residuals (*civic model* = skew: -.029, to -1.331; kurtosis: -.399 to 1.664;

conscientiousness = skew: -.2089 to -20.020; kurtosis: -.399 to 14.380; *courtesy* = skew: -.208, to -14.582; kurtosis: -.399 to 6.622; *sportsmanship* = skew: -.208, to -12.048; kurtosis: -.399 to 3.744; *altruism* = skew: -.208, to -10.225; kurtosis: -.399 to 3.491; *likelihood of staying* = skew: .50 to -1.139; kurtosis: -.05 to 1.20) were outside what West, Finch, and Curran (1995) view as acceptable ranges. Kline (2004) states skews above 3.0 and kurtosis of more than 8.0 are extreme. This study found extreme skew and kurtosis. Therefore, a more conservative estimation tool was used. The ADF estimator was employed. It is acceptable according to West and colleagues (1995). The ADF estimator works well regardless of the degree of nonnormality. It usually requires a sample size of 400, but it was deemed the most conservative option to use for this study. There were a limited number of missing observations, all random. Missing observations were handled by imputation of missing observations using one of two approaches (see Kline, 1998). For multiple-item scales in with a single value was missing, the average of the remaining items for the participant was inserted.

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Table 1
Sociodemographic Variables of Survey Sample versus 2004 NES Benchmarks

Variables	Time 1	Time 2	NES Data
Gender			
Male	31.3	29.2	48.2
Female	68.7	70.8	51.8
Age			
18-24	1.4	.7	11.2
25-44	36.9	30.6	36.7
45-64	57.0	63.1	33.0
65+	4,7	5.6	9.3
Education			
Less than high school	1.2	1.7	13.4
High school	19.1	18.9	32.2
Some college	23.9	22.3	20.2
Associate degree	9.7	6.0	8.6
Bachelor's degree	27.4	32.6	16.3
Master's degree	12.1	11.0	9.4
Doctorate or professional degree	2.3	4.3	9.4
Other	4.3	3.3	
Income			
Below $25,000	4,7	3.3	34.1
$25,000 – 34,999	5.8	6.6	11.4
$35,000 – 44,999	10.7	9.3	10.6
$45,000 – 59,999	17.7	18.6	9.1
$60,000 – 74,999	11.7	14.3	5.7
$75,000 – 89,999	9.5	14.0	4.4
Above $90,000	21.0	18.9	6.4
Did not answer	18.9	14.9	
Ethnicity			
White	87.2	89.7	72.6
Black/African American	4.1	4.7	14.2
Native American	1.8	.7	1.1
Hispanic	1.9	2.0	6.9
Asian	1.0	.3	2.2
Other	4.0	2.7	1.6

Married			
Yes	66.7	71.1	66.0
No	33.3	28.9	34.0
Children in Household			
Yes	82.5	83.7	26.7
No	17.5	16.3	73.3
Likelihood of Staying With Organization	74.33 (67.84)	76.75(99.34)	NA
Years of Service	12.51 (11.32)	12.51(10.27)	NA

Note: Data from Time 1 and Time 2 are presented in percentages. The percentages presented in the last column are percentages from the 2004 NES data set. The sample population is slightly different from the NES benchmarks, but one does not have to have a job to take part in the NES survey. Likelihood of staying at an organization and years of service at an organization are not questions asked in the NES survey. The means and standard deviations (in parentheses) are reported for these questions.

Table 2

Change in Organizational Variables Over Time

Variables	Time 1	Time 2
Employee Attitude	5.40 (.92) (n = 301)	5.34 (1.28) (n = 301)
Organizational Identity	4.82 (1.13) (n = 301)	5.06 (.88)** (n = 301)
Affective Commitment	4.89 (1.33) (n = 301)	4.79 (1.28) (n = 301)
Normative Commitment	3.77 (.89) (n = 301)	4.44 (1.30)** (n = 301)
Continuance Commitment	4.48 (1.60) (n = 301)	4.55 (1.62) (n = 301)
Altruism	5.38 (.62) (n = 301)	6.09 (.84)** (n = 301)
Conscientiousness	6.16 (.69) (n = 301)	6.49 (.69) (n = 301)
Sportsmanship	6.25 (.87) (n = 301)	6.24 (.82) (n = 301)
Courtesy	5.76 (.87) (n = 301)	6.11 (1.00)** (n = 301)
Civic Virtue	5.60 (1.31) (n = 301)	5.69 (1.06) (n = 301)
Likelihood of Staying With Organization	76.75 (99.34) (n = 301)	79.59 (82.19) (n = 301)

Note: Means and standard deviations (listed in parentheses) are listed for Time 1 and Time 2. Organizational Identity was measured using the Organizational Identification Questionnaire (Cheney, 1983). This was a 25-item scale measured on a 7-point Likert-type scale (strongly agree to strongly disagree). Respondents' attitude toward the organization was measured using six bipolar adjective pairs developed by Burgoon and colleagues (1978). Adjective pairs included: negative/positive; unacceptable/acceptable; unfavorable/favorable, foolish/wise; wrong/right; and bad/good. These pairs were listed on a 7-point Likert-type scale. Organizational Commitment was measured using the Organizational Commitment Scale (Meyer & Allen, 1997). This is a 34-item scale that obtained responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. This scale breaks down into an affective, normative, or continuance commitment. Organizational Citizenship Behaviors (OCBs) were measured using the Organizational Citizenship scale developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990). The five dimensions of OCBs measured included altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. All dimensions have five, single-item indicators except civic virtue, which had four indicators.

** significant compared to Time 1 at $p < .01$ level

Table 3
Predictors of Organizational Identity

	Organizational Identity
Sociodemographics	
Gender	.04
Age	-.07*
Marital Status	.06
Children	.00
Education	-.03
Ethnicity	.01
Missing Ethnicity	.00
Income	.08*
Missing Income	-.03
Years of Service	-.01
Likelihood of Staying	.14**
Incremental R^2	.19**
Organizational Culture	
Teamwork	.31**
Moral	-.09
Information Flow	.25**
Involvement	.09
Support	.36**
Meetings	-.10
Incremental R^2	.53**
Employee's Attitude	.06
Incremental R^2	.00
Final R^2	**72.5%**
*Model F(16, 293) = 45.75***	

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
*$p < .05$

Table 4
Predictors of Organizational Commitment

	Affective Commitment	Normative Commitment	Continuance Commitment
Sociodemographics			
Gender	.03	.01	.06
Age	.01	-.01	.07
Marital Status	-.03	.02	.08
Children	.04	-.01	.04
Education	.00	-.02	-.05
Ethnicity	-.05	.01	-.09
Missing Ethnicity	.08	-.02	.04
Income	-.02	.03*	-.11
Missing Income	-.04	-.01	-.05
Years of Service	.05	.01	.17**
Likelihood of Staying	.01	-.01	.26**
Incremental R^2	.17**	.07*	.12**
Organizational Culture			
Teamwork	-.01	.14**	-.01
Moral	.07	1.00**	.06
Information Flow	-.11	-.12**	-.03
Involvement	.06	-.03	-.17
Support	.02	.00	-.04
Meetings	-.06	.03	-.03
Incremental R^2	.36*	.89**	.04*
Employee's Attitude	.05	-.01	-.01
Incremental R^2	.01*	.00	.00
Organizational Identity	.95**	-.04*	-.01
Incremental R^2	.24**	.00*	.00
Final R^2	**79.7%** Model $F(19, 291) = 56.05$**	**96.8%** Model $F(19, 291) = 427.01$**	**16.3%** Model $F(19, 291) = 2.79$**

Notes: Coefficients are final standardized β's. $N = 294$
** $p < .01$
* $p < .05$

Table 5
Predictors of Organizational Citizenship Behaviors

	Altruism	Conscientiousness	Sportsmanship
Sociodemographics			
Gender	.13*	.14*	.04
Age	-.04	.06	.15*
Marital Status	-.07	-.06	-.15*
Children	-.02	-.01	.03
Education	.02	.09	-.03
Ethnicity	-.02	-.08	.22*
Missing Ethnicity	.05	.06	.19
Income	.03	.10	.06
Missing Income	.05	.02	-.11
Years of Service	.01	.05	-.01
Likelihood of Staying	-.14*	.03	.05
Incremental R^2	.04	.10*	.09*
Organizational Culture			
Teamwork	.02	.01	.23*
Moral	-.05	-.09	.36
Information Flow	-.02	-.04	-.23
Involvement	-.01	.10	.04
Support	.01	-.12	-.01
Meetings	-.07	.13	.12
Incremental R^2	.05*	.04*	.07**
Employee's Attitude	-.00	-.09	.02
Incremental R^2	.00	.00	.00
Organizational Identity	.26	.03	.12
Incremental R^2	.04**	.01*	.00
Organizational Commitment			
Affective Commitment	.14	.22#	-.03
Normative Commitment	.18	.17	-.30
Continuance Commitment	.13*	.18**	-.01
Incremental R^2	.02	.04**	.00
Final R^2	**16.2%** Model $F(19, 291) = 2.37$**	**20.5%** Model $F(19, 291) = 3.16$**	**16.8%** Model $F(19, 291) = 2.47$**

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
*$p < .05$

Table 5 (Continued)
Predictors of Organizational Citizenship Behaviors

	Courtesy	Civic Virtue
Sociodemographics		
Gender	.13*	.11*
Age	-.03	-.02
Marital Status	-.01	-.11
Children	.02	.00
Education	.09	.04
Ethnicity	-.11	.06
Missing Ethnicity	.17	-.06
Income	.06	-.04
Missing Income	.06	.07
Years of Service	.03	.06
Likelihood of Staying	-.10	-.07
Incremental R^2	.06	.08*
Organizational Culture		
Teamwork	.13	-.29*
Moral	-.03	-.32
Information Flow	-.13	.06
Involvement	.11	.12
Support	-.21	-.18
Meetings	.52**	.09
Incremental R^2	.24**	.11**
Employee's Attitude	-.05	.06
Incremental R^2	.00	.01
Organizational Identity	.08	.33*
Incremental R^2	.01*	.11**
Organizational Commitment		
Affective Commitment	.12	.33**
Normative Commitment	.05	.37
Continuance Commitment	.14*	.07
Incremental R^2	.02*	.02**
Final R^2	**33.1%** Model $F(19, 291) = 6.04$**	**33.6%** Model $F(19, 291) = 6.18$**

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
*$p < .05$

Table 6
Predictors of Change in Organizational Identity

	Organizational Identity
Sociodemographics	
Gender	-.01
Age	-.05
Marital Status	.09
Children	.00
Education	-.10*
Ethnicity	.02
Missing Ethnicity	.05
Income	.10
Missing Income	-.06
Years of Service	.00
Likelihood of Staying	.12*
Incremental R^2	.11**
Organizational Culture	
Teamwork	.25**
Moral	.11
Information Flow	-.05
Involvement	.05
Support	.19
Meetings	.05
Incremental R^2	.27**
Employee's Attitude	.05
Incremental R^2	.00
Final R^2	**37.9%**
*Model F(18, 291) = 9.24***	

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
*$p < .05$

Table 7
Predictors of Change in Organizational Commitment

	Normative Commitment
Sociodemographics	
Gender	.01
Age	.16**
Marital Status	-.01
Children	-.09
Education	.13*
Ethnicity	.11
Missing Ethnicity	-.19
Income	.07
Missing Income	.02
Years of Service	.02
Likelihood of Staying	-.04
Incremental R^2	.09*
Organizational Culture	
Teamwork	.23**
Moral	.59**
Information Flow	-.23
Involvement	.03
Support	.27*
Meetings	-.02
Incremental R^2	.17**
Employee's Attitude	.02
Incremental R^2	.00
Organizational Identity	-.64**
Incremental R^2	.11**
Final R^2	**37.1%**
	Model $F(19, 291) = 8.44$**

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
* $p < .05$

Table 8
Predictors of Change in Organizational Citizenship Behaviors

	Altruism	Courtesy
Sociodemographics		
Gender	.06	.11
Age	.12	.02
Marital Status	.08	.07
Children	-.02	.08
Education	-.01	.04
Ethnicity	-.22*	-.17
Missing Ethnicity	.23	.15
Income	.10	.16*
Missing Income	.08	.04
Years of Service	-.02	-.04
Likelihood of Staying	-.11	-.05
Incremental R^2	.03	.05
Organizational Culture		
Teamwork	.28*	.10
Moral	.11	.02
Information Flow	-.13	-.15
Involvement	.04	.15
Support	-.08	-.22
Meetings	-.10	.46**
Incremental R^2	.08**	.14**
Employee's Attitude	.02	.04
Incremental R^2	.00	.00
Organizational Identity	.07	.05
Incremental R^2	.01	.00
Organizational Commitment		
Affective Commitment	.12	-.00
Normative Commitment	-.01	.02
Continuance Commitment	.11	.12*
Incremental R^2	.01	.01
Final R^2	**12.7%** Model $F(22, 291)$ = 2.37**	**21.1%** Model $F(22, 291)$ = 3.27**

Notes: Coefficients are final standardized β's. $N = 294$

** $p < .01$
*$p < .05$

Table 9
Manipulation Check for Inoculation

	Experimental Condition:	
	Inoculation	Control
Dependent Variable		
Threat	4.17 (1.07)* (n = 214)	3.61 (1.30) (n = 103)
Counterarguing	3.06 (1.22)* (n = 214)	2.52 (1.17) (n = 103)
Weight of Counterarguments	4.88 (1.27) (n = 214)	4.97 (1.22) (n = 103)
Responses	3.09 (1.35)* (n = 214)	2.80 (1.17) (n = 103)
Weight of Responses	5.28 (1.21) (n = 213)	5.41 (1.24) (n = 103)

Note: Counterarguing and responses to counterarguments were assessed following exposure to the inoculative materials After filling out their assessment of threat, participants were asked to complete an open-ended measure in which they wrote down their possible arguments that are contrary to their own position on organizational involvement, and then listed potential responses to those arguments in the spaces provided. Threat elicited by the inoculation treatment was measured using six bipolar adjective pairs employed in previous inoculation studies (Compton & Pfau, 2004). Six 7-interval scales were used to access participant acknowledgement that they could come into contact with information that might cause them to rethink their identity, commitment, or OCB behaviors demonstrated in the organization. The adjective pairs

were: not dangerous/dangerous, non-threatening/threatening, calm/anxious, not harmful/harmful, not scary/scary, and not risky/risky.

*Significant compared to control at $p < .01$.

Table 10
Differences in Dependent Variables Across Experimental Conditions

	Experimental Condition:	
	Inoculation	Control
Dependent Variable		
Organizational Identity	4.76 (.85)* (n = 214)	4.54 (1.02) (n = 103)
Affective Commitment	4.38 (1.15) (n = 214)	4.19 (1.16) (n = 103)
Continuance Commitment	4.71 (1.03)* (n = 214)	4.44 (.97) (n = 103)
Normative Commitment	4.42 (1.14)* (n = 214)	4.03 (1.23) (n = 103)
Altruism	5.49 (1.00) (n = 213)	5.51 (.95) (n = 103)
Conscientiousness	5.83 (.78)* (n = 213)	5.52 (.98) (n = 103)
Sportsmanship	2.59 (1.07) (n = 213)	5.57 (.93)** (n = 103)
Courtesy	5.87 (.86) (n = 213)	5.83 (.80) (n = 103)
Civic Virtue	5.34 (.99) (n = 213)	5.20 (1.07) (n = 103)

Note: Means and standard deviations (listed in parentheses) are listed for Time 4. Organizational Identity was measured using the Organizational Identification Questionnaire (Cheney, 1983). This was a 25-item scale measured on a 7-point Likert-type scale (strongly agree to strongly disagree). Respondents' attitude toward the

organization was measured using six bipolar adjective pairs developed by Burgoon and colleagues (1978). Adjective pairs included: negative/positive; unacceptable/acceptable; unfavorable/favorable, foolish/wise; wrong/right; and bad/good. These pairs were listed on a 7-point likert-type scale. Organizational Commitment was measured using the Organizational Commitment Scale (Meyer & Allen, 1997). This is a 34-item scale that obtained responses on a 7-point Likert-type scale where 1=strongly disagree and 7=strongly agree. This scale breaks down into an affective, normative, or continuance commitment. Organizational Citizenship Behaviors (OCBs) were measured using the Organizational Citizenship scale developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990). The five dimensions of OCBs measured included altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. All dimensions have five, single-item indicators except civic virtue, which had four indicators.

* Significant compared to control at $p < .01$ level

**Significant compared to inoculation group at $p < .01$ level

Table 10 (Continued)
Differences in Dependent Variables Across Experimental Conditions

	Experimental Condition:	
	Inoculation	Control
Dependent Variable		
Nodes	8.57 (3.71) (n = 214)	9.04 (3.94) (n = 103)
Links	8.74 (3.90) (n = 214)	9.07 (4.06) (n = 103)
Weight of Associative Network	5.13 (1.17) (n = 214)	5.49 (2.12)** (n = 103)
Cognitive Nodes	7.22 (3.83) (n = 214)	8.02 (4.33) (n = 103)
Affective Nodes	1.39 (1.56) (n = 213)	1.13 (1.43) (n = 103)
Cognitive Weight	5.08 (1.24) (n = 213)	5.22 (1.29) (n = 103)
Affective Weight	3.28 (2.90)* (n = 213)	2.58 (2.85) (n = 103)

Notes: Associative networks were assessed using concept maps. Concept maps represent mental structures (Jonassen, Beissner, & Yacci, 1993). An example concept map was provided. The map started with a target node, in this node was the words "employee of an organization." After drawing links and labeling nodes, participants were asked to assess how strongly they felt about each of the concepts in their map by rating them from 1 (very weak) to 7 (very strong).

The concept maps were scored using a system that Pfau and colleagues used, which was devised by Novak and Gowin (1984). The researcher identified the number of nodes and links and the node strength for each participant. Node strength required averaging the participant's weighting of nodes. Besides coding the overall number of nodes and associative network weight, the researcher also coded each node as cognitive or affective. The nodes were deemed cognitive if they included cognitive statements. If the node has a feeling listed (e.g., sad, happy, mad) then it was coded as an affective node. The ratings were then examined to devise a cognitive and affective associative network weight, independently from the overall associative network weight.

* Significant compared to control at $p < .01$ level

**Significant compared to inoculation group at $p < .01$ level

Figure 1
Predicted Model

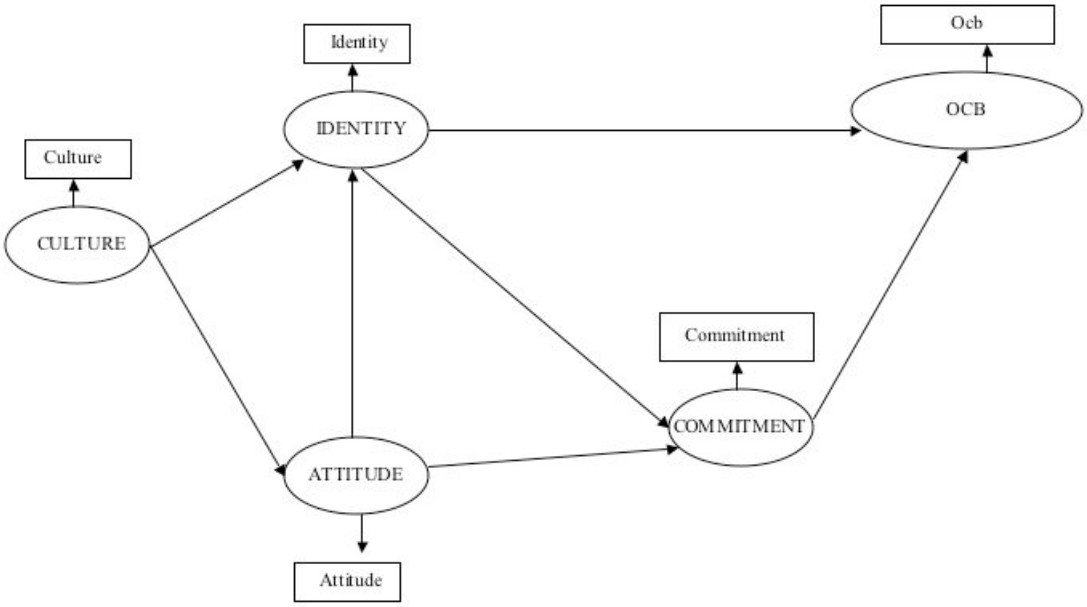


Figure 2
Final Altruism Model

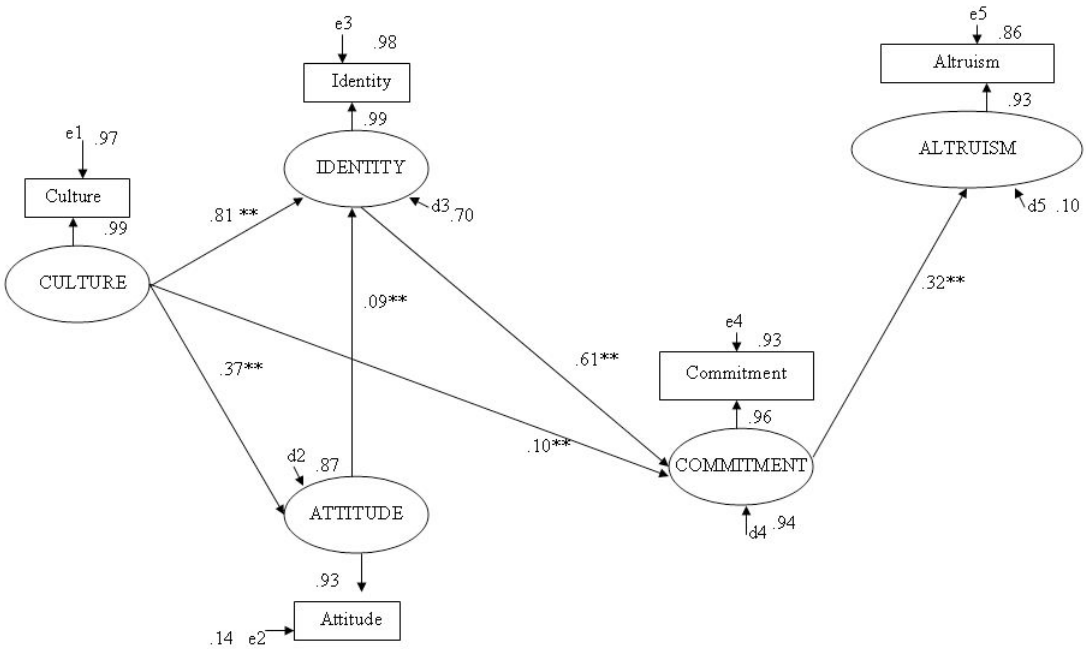


Figure 3
Final Conscientiousness Model

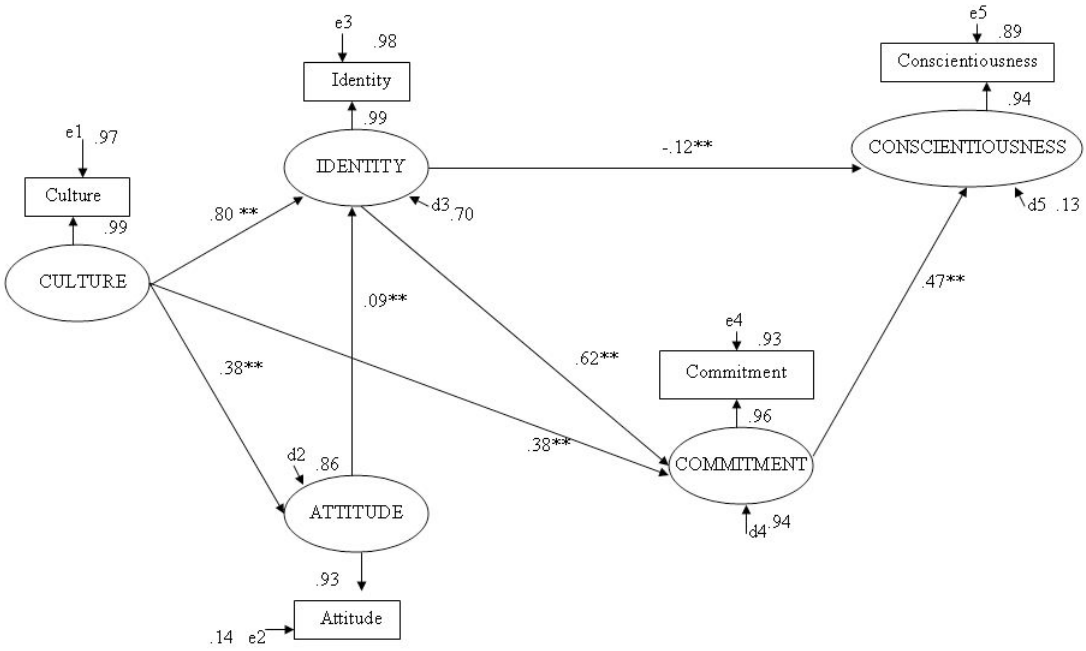


Figure 4
Final Sportsmanship Model

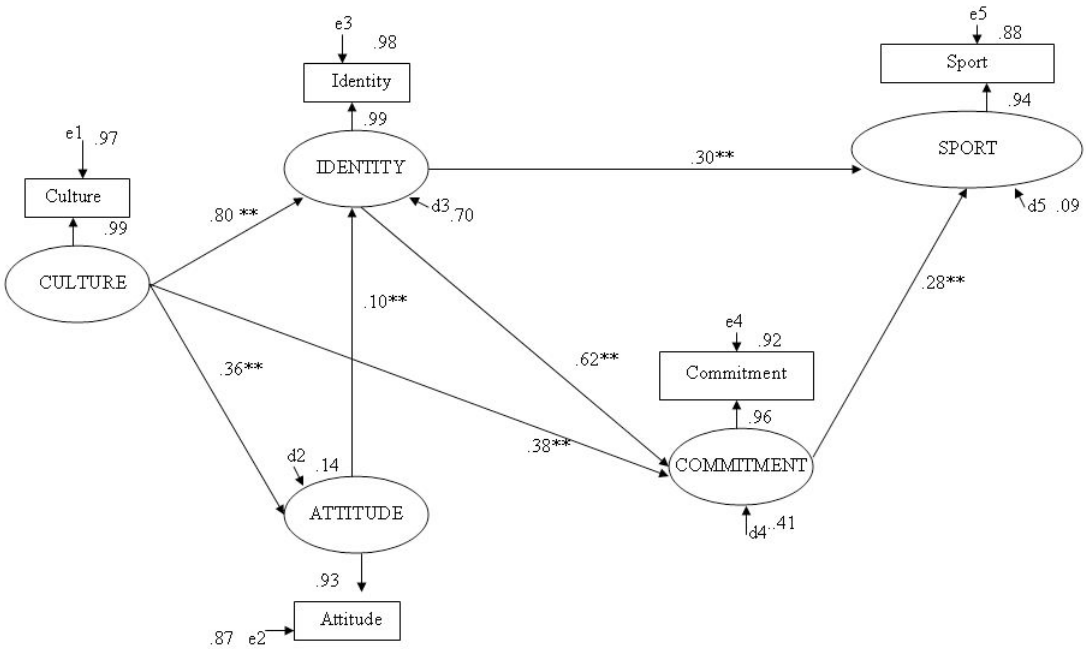


Figure 5
Final Courtesy Model

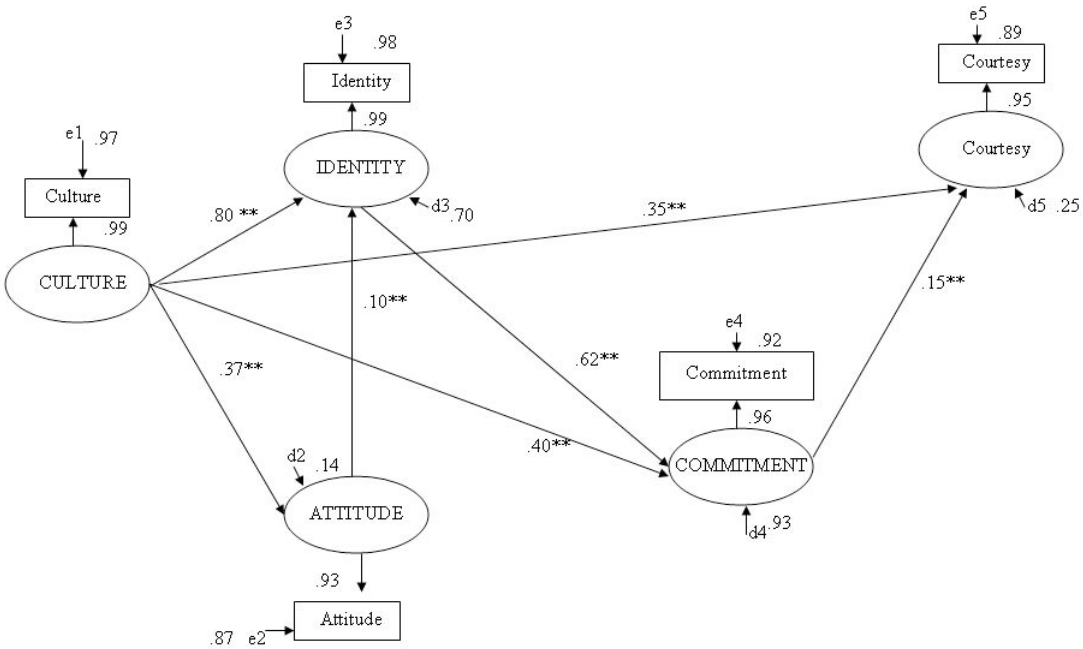


Figure 6
Final Civic Virtue Model

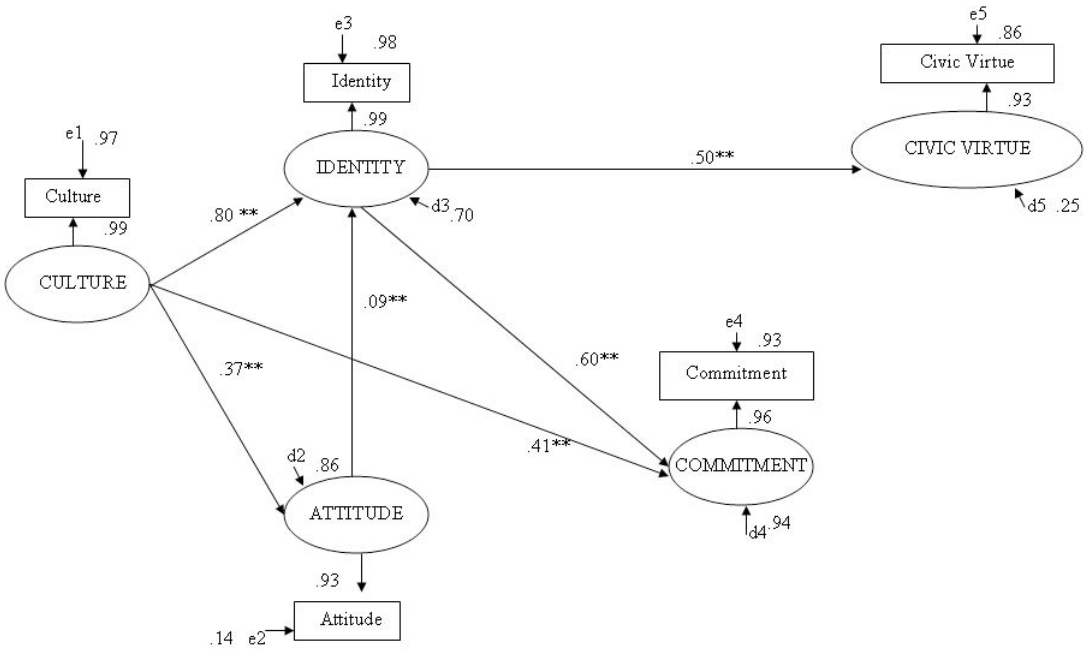


Figure 7

Predicted Model of Likelihood of Staying

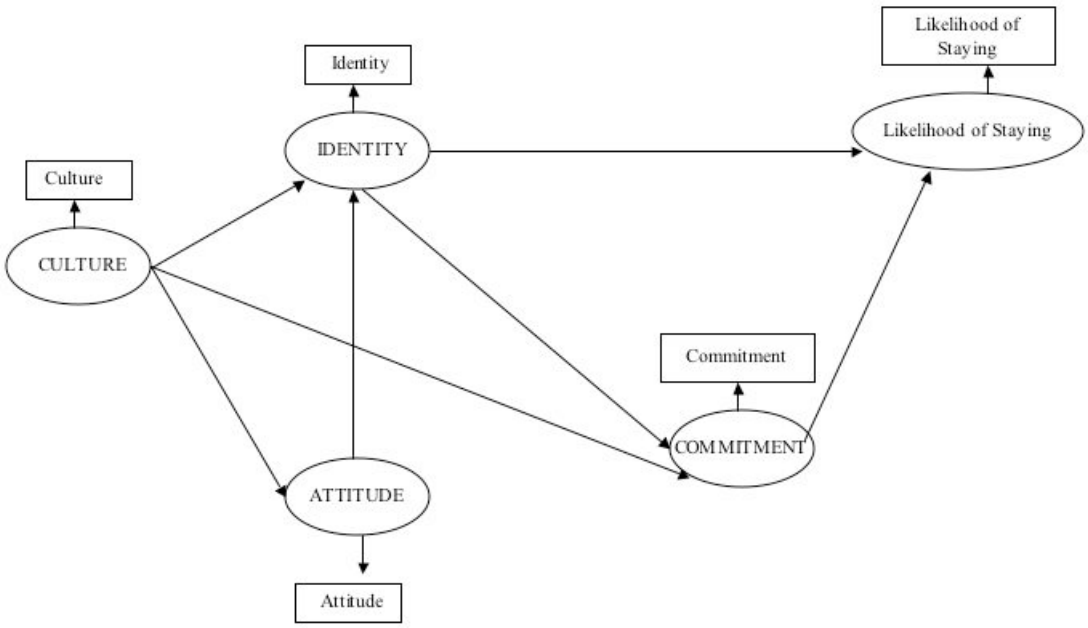
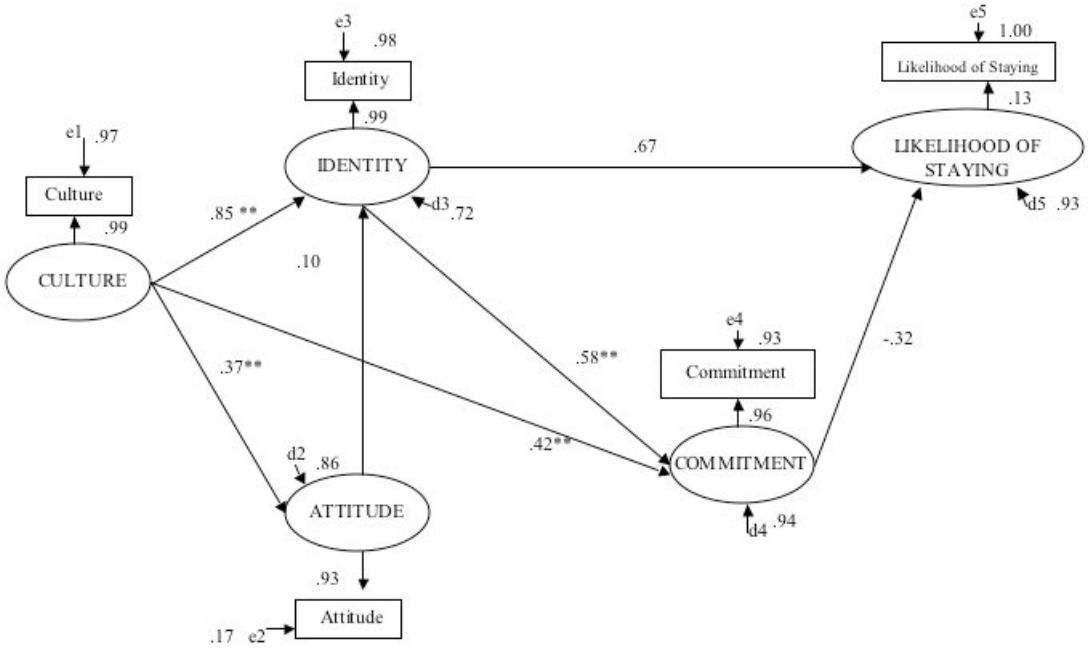


Figure 8

Final Likelihood of Staying Model



Appendix A

Telephone Survey Script and Sociodemographic Questions

Informed Consent Script:

Hello, my name is _____ and I'm conducting a survey sponsored by faculty and graduate students in the Department of Communication at the University of Oklahoma.

We are conducting a study of perceptions of organizational commitment, or your perception about the place that you work. Your number was randomly selected for inclusion in our survey. I am instructed to interview an adult member of this household who has a full-time job working for an organization that employs at least 100 people. Your assistance in this survey is very important and greatly appreciated. Is that person you or is it someone else?

[If yes, then:]
Thank you. And, just to confirm that I am speaking with an adult, are you 18 years of age or older?

And do you work full-time with an organization that employs at least 100 people?

[If no, then:]
We thank you for volunteering to participate. We are obligated to speak to someone who is at least 18 years old and who works at a large organization. Is there someone else in your household who fits that description?

[If yes, then:]
We are required to tell you that participation is voluntary, your individual responses are entirely anonymous, you are free to refuse to answer any question or withdraw at any time, and there are no foreseeable risks or benefits to participation. (If asked, interviewer will tell respondent that the survey will take approximately 15-20 minutes to complete.)

I appreciate your assistance in taking a few minutes to answer some questions. At the completion of the interview I will give you telephone numbers in case you have questions concerning the study or questions concerning your rights as a participant in the study.

Concluding remarks:
Thank you very much for participating in this survey. Would you like to have phone numbers to call regarding the conduct or content of the survey?

[If yes, then:]
If you have any questions about the content, please feel free to contact OU POLL at (405) 325-7655. If you have questions about your rights as a research participant, you may call the University of Oklahoma Norman campus Institutional Review Board at (405)325-8110.

Telephone Survey Items

Finally I would like to ask you some questions about your background for statistical purposes and then we'll be done. Determine gender without asking.

Male 1
Female 2

In what year were you born?

Are you married or single?
Married 1
Single 2

Do you have children?
Yes 1
No 2

How much formal education have you completed?
Less than high school 1
High school 2
Some college 3
Associate degree 4
Bachelor's degree 5
Master's degree 6
Doctorate or professional degree (PhD, JD, MD) 7
Other 8

What race or ethnicity do you consider yourself? Would you say...
WHITE 1
BLACK/AFRICAN AMERICAN 2
NATIVE AMERICAN OR AMERICAN INDIAN 3
HISPANIC 4
ASIAN 5
SOMETHING ELSE 6

What was you total household income, before taxes, for 2004?
BELOW $25,000 1
$25,000 - $34,999 2
$35,000 - $44,999 3
$45,000 - 59,999 4
$60,000 - $74,999 5
$75,000 - $89,999 6
ABOVE $90,000 7

How many years have you been working for this organization?

On a scale of 1-100 (1 being very unlikely and 100 being very likely), how likely are you to still be with this organization 5 years from now?

Appendix B

Inoculation Message – Affective

Employee Commitment Is Appreciated

This organization appreciates hard-working and committed employees. It's so rewarding to have good employees. It owes its success to employees, like you, who believe in its goals and mission. Research indicates that the most successful organizations are those where there is a close fit between the values and goals of the organization and its employees. Such a close match enhances people's commitment to the organization and its mission, which, in turn, fuels success.

As a responsible and informed employee, you understand the importance of commitment to the organization. It means going above and beyond the minimum behaviors that are specified in a job description.

Certain individuals might make you question your coming early or staying late, and other behaviors that make you a committed employee. These extra duties you perform make you a valuable asset to our company. We are a team, and you are an instrumental part of that team.

We know that there are a number of other job opportunities out there for you, but we appreciate you staying with us and working hard. We really appreciate you. The success of our organization depends on people staying and working hard like you have.

If you have worked for any length of time in commerce or industry you will know that there are plenty of people content with being second best. They do a reasonable day's work, but they never excel. They never go above and beyond the basic requirements of their job description. They do a steady job, but are never exceptional. They never look to

improve working practices or suggest better methods. They never put in that exceptional effort to increase output. There is no other feeling like going above and beyond the call of duty and being more than an average employee. It’s so rewarding to have employees working here that want to work here and are in it for the good of the company.

They will never be the leaders or the innovators. They will never rise to high positions of responsibility. If you want to stand out and advance then don't be like them. Don't do work that is 'good enough'. Go above and beyond.

Every study and experiment in the history of mankind concerning attitude proves that positive equals performance. "Great effort springs naturally from a great attitude." Positive employees are more efficient, more willing to accept change, and more apt to project a healthy and professional attitude towards customers, vendors, and other employees (new or old). The words spoken by Theodore Roosevelt, "Every man owes a portion of his time and his income to the business or industry in which he earns his living" are most certainly true. Mark Blume has worked here for more than 20 years. He is known as the “early bird.” He arrives early, stays late, and has lead a number of employee committees to make the work environment here more team oriented. His dedication to the organization is just one example of how our employees go above and beyond.

Imagine how you would feel if you came in contact with people who will question your commitment and the organization’s mission. These people will tell employees they are not earning enough money, are not putting forth enough effort, or doing too much for what they are getting paid. These people can prove influential, causing a person to question their commitment to the organization. These “back channel” messages are

common in all organizations, and they are counterproductive.

Sometimes “back channel” messages belittle employee commitment; sometimes they consist of rank gossip, which seeks to undermine the reputations of individual employees. Whatever their form, don’t be swayed by such messages. They can undermine employee morale and commitment, thus damaging you and the organization. This organization strives to maintain open communication channels with employees. It uses various venues to communicate with you and it invites, indeed encourages, employee input. If you have questions or input, we encourage you to use the available communication channels.

This organization appreciates your commitment, dedication, and support. Together, we can do great things!

Appendix B

Inoculation Message – Cognitive Message

Employee Commitment Is Appreciated

This organization appreciates hard-working and committed employees. It owes its success to employees, like you, who believe in its goals and mission. Research indicates that the most successful organizations are those where there is a close fit between the values and goals of the organization and its employees. Such a close match enhances people's commitment to the organization and its mission, which, in turn, fuels success.

As a responsible and informed employee, you understand the importance of commitment to the organization. It means going above and beyond the minimum behaviors that are specified in a job description. It is reasonable to expect our employees to identify with the organization, its' mission and goals, commit to the organization's mission and goals, and then work hard to achieve the mission and goals.

Businesses experience a 19.2% annual voluntary turnover rate per year (www.nobscot.com). Losing employees costs businesses time and money. Branham, an employee turnover expert, also acknowledged that turnover is costly. It is difficult to quantify the cost of turnover. However, Branham suggested turnover costs can run 25 to 200 % of annual employee compensation. Costs that are hard to estimate include customer service disruption, emotional costs, morale costs, burnout or absenteeism, loss of experience, as well as corporate memory causes of turnover are also equivocal.

Why do people leave the organization? Branham observed that making more money is not necessarily why people leave an organization. She maintained that when

people are compensated comparably, making contributions, have positive work experiences and enjoy positive working conditions, they will be less likely to leave.

Do you receive too much recognition at work? A recent Gallup Poll found that almost two out of three people receive *no* workplace recognition in a given year. This underscores a recent finding from the U.S. Department of Labor that the number-one reason people leave their jobs has nothing to do with pay or promotions -- they leave because they "don't feel appreciated."

In this organization, we want to create a positive work environment. We compensate our employees well, and we understand that having productive, happy employees impacts our bottom-line. Our company is more profitable if you – the employee - goes above and beyond.

It's only reasonable that individuals might make you question about your coming early or staying late and other behaviors that make you a committed employee, but you do not get paid for these things. We have strong evidence that these extra duties you perform make our company more efficient and impacts the company's bottom-line.

Logic tells us that some of you might think that staying with the organization is a necessity, and it would be very hard for you to leave. It would be very costly to the organization as well as you if you decided to quit your job. A rational person would be afraid of not having another job lined up before quitting. Because there is such a high turn over rate per year, and because losing people costs businesses money, we need to have a plan to keep you.

Yet, we occasionally come in contact with people who will question our commitment and the organization's mission. They will tell employees they are not

earning enough money, are not putting forth enough effort, or doing too much for what they are getting paid. These people can prove influential, causing a person to question their commitment to the organization. These "back channel" messages are common in all organizations, and they are counterproductive.

Sometimes "back channel" messages belittle employee commitment; sometimes they consist of rank gossip, which seeks to undermine the reputations of individual employees. Whatever their form, don't be swayed by such messages. They can undermine employee morale and commitment, thus damaging you and the organization. This organization strives to maintain open communication channels with employees. It uses various venues to communicate with you and it invites, indeed encourages, employee input. If you have questions or input, we encourage you to use the available communication channels.

This organization appreciates your commitment, dedication, and support. Together, we can do great things!

Appendix C

Control Message

Town in Two Time Zones

How is it possible for a basketball to be tossed into the air, and not come down until an hour later, with no tricks involved?

In tiny College Corner, Union Elementary School Principal Dan Shepherd has the answer. He straddles the imaginary state line that runs smack dab down the middle of the school's quaint, 80-year-old gymnasium and shares a bit of local lore with a couple of out-of-towners.

"Back in the old days," he said, "before the whole school embraced Eastern Standard Time, it was possible to launch a long shot from the Indiana side of the basketball court at 3 p.m. and the ball wouldn't find the net on the Ohio side until an hour later."

Technically, points out the Connersville News Examiner, despite rules the school observes, that still means "during part of the year, a good shooter can launch a shot from the Indiana side of the court and it will tickle the twine on the Ohio side of the court an hour later."

For more years than most of the 4,000 or so people who call College Corner home can remember, the town has been a rather schizophrenic place when it comes to the time of day.

Because the community, like the local school, is split in half by the Ohio-Indiana line, residents must deal with two time zones for much of the year.

While those on the Buckeye side of State Line Street are governed by Eastern Daylight Time, their Hoosier counterparts on the other side of the two-lane ribbon of concrete step to the beat of Eastern Standard Time.

Though many College Corner businesses and residents on both sides of the line already embrace Eastern Daylight Time, because it is convenient for their customers, they say the double standard still results in plenty of missed doctor's appointments and botched dinner dates.

Vickie Massey, 44, a waitress at Tina's Country Kitchen Restaurant on the Indiana side of town, agreed. "One good thing about having one time zone would be people would quit asking, 'Is that Ohio or Indiana time?' whenever they hear about an event that's going to take place around here," she said.

Scott Cline, a bartender at Deano's College Corner Tavern - one of two Indiana watering holes that sit side-by-side a scant 20 yards from the Ohio-Indiana line - is satisfied with Eastern Standard Time. "We like it," he said, "because it allows us to stay open an hour longer every day. But if they change things and we have to start closing down at 2:30 a.m., well, that's OK, because you gotta go with the flow."

Gary Gayhart, weekend disc jockey at Deano's, recalled the first time his oldest son played a junior high school basketball game for the Union Trojans. "It was about 15 years ago," he said. "Gary scored some of his points in Ohio and the rest in Indiana. It was crazy."

The U.S. Post Office would continue to have two ZIP codes - one for Ohio, the other for Indiana - and local motorists would continue to buy different license plates depending on which side of State Line Street they live on.

Fittingly enough, the building, with its wood floors and trophy cases filled with dusty reminders of yesterday, boasts two front doors: One is marked with an Ohio flag; the other with an Indiana flag.

"The school opted for Eastern Standard Time long before I got here because of the many activities that take place here," said Shepherd, who has been the school's principal for three years. "And whenever we schedule something, we always make sure to remind people the time is Indiana time."

He paused, then added: "Except for an occasional minor problem, I think it's working out pretty well. We recently invited some dentists to come to the school to care for the dental needs of a few students. We even reserved a room for the dentists on the Ohio side of the building. That's when they reminded us they are licensed to practice only in Indiana. So we found them another room."

Appendix D

Affective Attack Message

Employee Meeting Called to Discuss Work Place Behaviors

There will be an employee meeting held Tuesday to discuss the rumors circulating about employee commitment and behaviors. Employee commitment, identity, and behaviors impact this company. It is only reasonable that individuals outside the organization will question what is happening within the organization. Individuals will question your commitment, identity, and behaviors. People who do this include your spouses, friends, co-workers, and family members.

Because of the recent allegations made in the newspaper about the company's employee benefits and hiring procedures, an employee meeting will be held. The paper cited anonymous sources that stated the benefits and hiring procedures were unfair. Mike from HR will be at the meeting to discuss these allegations.

There have been people in the organization talking about the impact that some employees have over others. For example, it has been rumored those that come early or stay late are being compensated in some way. Bill stated that several of you had asked him about his extended hours. People have been taking undeserved breaks, calling in sick, and leaving early. These matters will also be addressed.

Another key point that will be addressed at the meeting is that of employee commitment and identity. There are some of you who do not wish to wear your company logo shirts to work on Friday. It is employee appreciation day on Fridays, and logo shirts are the normal attire. It has been brought to our attention that many employees will remove their shirts before they go to lunch or leave the building. Sally wondered why

people were kidding about her wearing her shirt out to lunch and not having a change of clothes. The idea behind wearing logo shirts will also be discussed.

Rumors of a leadership change have been circulating. You are concerned about your job. This rumor has appeared in the paper and has been circulating internally as well. The stories in the paper have mentioned “anonymous” sources from the company, and we will discuss who has been the media leak from our organization. These leaks to the paper impact our organization tremendously. A major portion of the meeting will address this issue.

Another issue that will be addressed is that of employee commitment. Morale is low and commitment is low. The meeting will also address your concerns and issues about commitment and work place behaviors.

See you on Tuesday. The meeting will start at 9 am in the employee break room.

Appendix D

Cognitive Attack Message

Employee Meeting Called to Discuss Work Place Behaviors

There will be an employee meeting held Tuesday to discuss the rumors circulating about employee commitment and behaviors. Employee commitment, identity, and behaviors impact this company. It is only reasonable that individuals outside the organization will question what is happening within the organization. Individuals will question your commitment, identity, and behaviors. People who do this include your spouses, friends, co-workers, and family members.

Because of the recent allegations made in the newspaper about the company's employee benefits and hiring procedures, an employee meeting will be held. The paper cited anonymous sources that stated the benefits and hiring procedures were unfair. A logical conclusion is to discuss these allegations with all of you.

There have been people in the organization talking about the impact that some employees have over others. For example, it has been rumored those that come early or stay late are being compensated in some way. Research shows that these behaviors impact the organization and also impact how others not going above and beyond treat those who do. People have been taking undeserved breaks, calling in sick, and leaving early. These matters will also be addressed.

Another key point that will be addressed at the meeting is that of employee commitment and identity. There are some of you who do not wish to wear your company logo shirts to work on Friday. It is employee appreciation day on Fridays, and logo shirts are the normal attire. It has been brought to our attention that many

employees will remove their shirts before they go to lunch or leave the building. A logical person would think it is ridiculous to change their shirt in the middle of the day. Research shows that company shirts improve morale. The idea behind wearing logo shirts will also be discussed.

Rumors of a leadership change have been circulating. You are concerned about your job. This rumor has appeared in the paper and has been circulating internally as well. The stories in the paper have mentioned “anonymous” sources from the company, and we will discuss who has been the media leak from our organization. A major portion of the meeting will address this issue.

Another issue that will be addressed is that of employee commitment. Morale is low and commitment is low. The meeting will also address your concerns and issues about these things.

See you on Tuesday. The meeting will start at 9 am in the employee break room.

Appendix E

Organizational Culture, Organizational Identity, Organizational Commitment, and Organizational Citizenship Behavior Scales

Organizational Culture

We would like to know what you think about the culture of your organization. For example, how much time you spend in meetings, the way information flows through the organization, and the types of people who work with you. Tell us the extent to which you find each of the following statements about the people you work with relate to you. The scales range from 1 to 5, where 1 indicates extremely unlike you and 5 signifies extremely like you.

_____1. People I work with are direct and honest with each other.
_____2. People I work with accept criticism without becoming defensive.
_____3. People I work with resolve disagreements cooperatively.
_____4. People I work with function as a team.
_____5. People I work with are cooperative and considerate.
_____6. People I work with constructively confront problems.
_____7. People I work with are good listeners.
_____8. People I work with are concerned about each other.
_____9. Labor and management have a productive working relationship.
_____10. This organization motivates me to put out my best efforts.
_____11. This organization respects its workers.
_____12. This organization treats people in a consistent and fair manner.
_____13. Working here feels like being part of a family.
_____14. There is an atmosphere of trust in this organization.
_____15. This organization motivates people to be efficient and productive.
_____16. I get enough information to understand the big picture here.
_____17. When changes are made the reasons why are made clear.
_____18. I know what's happening in work sections outside of my own.
_____19. I get information I need to do my job well.
_____20. I have a say in decisions that affect my work.
_____21. I am asked to make suggestions about how to do my job better.
_____22. This organization values the ideas of workers at every level.
_____23. My opinions count in this organization.
_____24. Job requirements are made clear by my supervisor.
_____25. When I do a good job, my supervisor tells me.
_____26. My supervisor takes criticism well.
_____27. My supervisor delegates responsibility.
_____28. My supervisor is approachable.
_____29. My supervisor gives me criticism in a positive manner.
_____30. My supervisor is a good listener.
_____31. My supervisor tells me how I'm doing.

_____32. Decisions made at meetings get put into action.
_____33. Everyone takes part in discussions at meetings.
_____34. Our discussions in meetings stay on track.
_____35. Time in meetings is time well spent.
_____36. Meetings tap the creative potential of the people present.

Organizational Identity

Think of your role as an employee of this organization. For each item below, select the answer that best represents your belief about or attitude toward the organization. Please place a number in each black. Use the following scale: 1=strongly disagree; 2=disagree; 3=slightly disagree; 4=neutral, 5=slightly agree; 6=agree; 7= strongly agree.

_____1. I would continue working for this organization even if I did not need the money.
_____2. In general, the people employed by this organization are working toward the same goals.
_____3. I am very proud to be an employee of this organization.
_____4. This organization's image in the community represent me as well.
_____5. I often describe myself to others by saying "I work for this organization" or "I am from this organization."
_____6. I try to make on-the-job decisions by considering the consequences of my actions for this organization.
_____ 7. We at this organization are different from others in our field.
_____8. I am glad I chose to work for this organization rather than another company.
_____9. I talk up this organization to my friends as a great company to work for.
_____10. In general, I view the organization's problems as my own.
_____11. I am willing to put in a great deal of effort beyond that normally expected in order to help the organization be successful.
_____12. I become irritated when I hear others outside the organization criticize the company.
_____13. I have warm feelings toward this organization as a place to work.
_____14. I would be quite willing to spend the rest of my career with this organization.
_____15. I feel that this organization cares about me.
_____16. The record of this organization is an example of what dedicated people can achieve.
_____17. I have a lot in common with others employed by this organization.
_____18. I find it difficult to agree with the organization's policies on important matters relating to me. ®
_____19. My association with this organization is only a small part of who I am. ®
_____20. I like to tell others about projects that the organization is working on.
_____21. I find that my values and the values of the organization are very similar.
_____22. I feel very little loyalty to this organization. ®

_____23. I would describe this organization as a large family in which most members feel a sense of belonging.

_____24. I find it easy to identify with this organization.
_____25. I really care about the fate of this organization.

Organizational Commitment Items

Think of your role as an employee of this organization. For each item below, select the answer that best represents your commitment toward the organization. Please place a number in each blank. Use the following scale: 1=strongly disagree; 2=disagree; 3=slightly disagree; 4=neutral; 5=slightly agree; 6=agree; 7= strongly agree.

_____1. I would be very happy to spend the rest of my career with this organization.
_____2. I enjoy discussing my organization with people outside of it.
_____3. I really feel as if this organization's problems are my own.
_____4. I think that I could easily become as attached to another organization as I am to this one. ®
_____5. I feel like part of the family at my organization
_____6. I feel emotionally attached to this organization
_____7. This organization has a great deal of personal meaning for me.
_____8. I feel a strong sense of belonging to my organization.
_____9. I think that people these days move from company to company too often.
_____10. I believe that a person must always be loyal to his or her organization.
_____11. Jumping from organization to organization is unethical to me.
_____12. One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.
_____13. If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization.
_____14. I was taught to believe in the value of remaining loyal to one organization.
_____15. Things were better in the days when people stayed with one organization for most of their careers.
_____16. I think that that wanting to be a "company man" or "company woman" is sensible.
_____17. I feel obligated to remain with my current employer.
_____18. Even if it were to my advantage, I do not feel it would be right to leave my organization now.
_____19. I would feel guilty if I left my organization now.
_____20. This organization deserves my loyalty.
_____21. I would not leave my organization right now because I have a sense of obligation to the people in it.
_____22. I owe a great deal to this organization.
_____23. I am afraid of what might happen if I quit my job without having another one lined up.
_____24. It would be very hard for me to leave my organization right now, even if I wanted to.
_____25. Not much in my life would be disrupted if I decided to leave my organization now.

_____26. It would be too costly for me to leave my organization right now.

_____27. Right now staying with my organization is a matter of necessity as much as desire.
_____28. I feel that I have too few options to consider leaving this organization.
_____29. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.
_____30. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits that I have here.

Organizational Citizenship Behaviors

Think of your role as an employee of this organization. For each item below, select the answer that best represents your belief about the actions of being an employee here. If you have had other jobs, think of how you acted at those jobs. Use the following scale: 1=strongly disagree; 2=disagree; 3=slightly disagree; 4=neutral; 5=slightly agree; 6=agree; 7= strongly agree.

_____1. I help others who have been absent.
_____2. I help others who have heavy work loads.
_____3. I assist my supervisor with his/her work when not asked.
_____4. I take time to listen to co-workers' problems and worries.
_____5. I go out of my way to help new employees.
_____ 6. I take a personal interest in other employees.
_____7. I pass along information to co-workers.
_____8. My attendance at work is above the norm.
_____9. I give advance notice when unable to come to work.
_____10. I take undeserved work breaks. ®
_____11. I spend a great deal of time on personal phone conversations. ®
_____12. I complain about insignificant things at work. ®
_____13. I conserve and protect organizational property.
_____14. I adhere to informal rules devised to maintain order.
_____15. I complete assigned duties adequately.
_____16. I fulfill responsibilities specified in my job description.
_____17. I perform tasks that are expected of me.
_____18. I meet formal performance requirements of the job.
_____19. I engage in activities that will directly affect my performance.
_____20. I neglect aspects of the job that are my responsibility to perform. ®
_____21. I fail to perform essential duties. ®
_____22. I help others who have heavy workloads.
_____23. I am always ready to lend a helping hand to those around me.
_____24. I help others who have been absent.
_____25. I willingly help others who have work-related problems.
_____26. I help orient new people even though it is not required.
_____27. I am a very conscientious employee.

_____28. I believe in giving an honest day's work for an honest day's pay.
_____29. My attendance is above the norm.
_____30. I do not take extra breaks.
_____31. I obey company rules and regulations even when no one is watching.
_____32. I am the classic squeaky wheel that always needs greasing. ®
_____33. I consume a lot of time complaining about trivial matters. ®
_____34. I tend to make mountains out of molehills. ®
_____35. I always focus on what's wrong, rather than the positive side. ®
_____36. I always find fault with what the organization is doing. ®
_____37. I try to avoid creating problems with my co-workers.
_____38. I consider the impact of my actions on co-workers.
_____39. I do not abuse the rights of others.
_____40. I take steps to try to prevent problems with other employees.
_____41. I am mindful of how my behavior affects other people's jobs.
_____42. I keep abreast of changes in the organization.
_____43. I attend meetings that are not mandatory, but are considered important.
_____44. I attend functions that are not required, but help the company image.
_____45. I read and keep up with organization announcements, memos, and so on.

Appendix F

Counterarguing and Threat Measures

The next section is designed to help us understand how you feel about the idea that DESPITE YOUR OPINION ABOUT loyalty to the organization, THERE IS THE POSSIBILITY YOU MAY COME IN TO CONTACT WITH ARGUMENTS CONTRARY TO YOUR POSITION THAT ARE SO PERSUASIVE THAT THEY MAY CAUSE YOU TO RETIHINK YOUR POSITION. I find THIS POSSIBILITY to be:

1. Not dangerous	1	2	3	4	5	6	7	Dangerous
2. Non-threatening	1	2	3	4	5	6	7	Threatening
3. Calm	1	2	3	4	5	6	7	Anxious
4. Not scary	1	2	3	4	5	6	7	Scary
5. Not harmful	1	2	3	4	5	6	7	Harmful
6. Not risky	1	2	3	4	5	6	7	Risky

Think about the issue of remaining loyal to your organization. On the left side, write down any arguments that you can think of AGAINST your position. On the right side, list your responses (thoughts and feelings) to each of the arguments (from the left side).

Arguments against my position for being loyal to this organization	Responses to each of the arguments listed to the left (thoughts/feelings)

Please go back to each argument you listed above and rate your arguments from 1 (weak) to 7 (strong). Then go back to the column on the right and rate your thoughts and feelings from 1 (weak) to 7 (strong).

Appendix G

Issue Involvement and Attitude Measures

The next items are designed to measure your sense of the overall importance several issues. *Please circle a number for each adjective pair.*

Overall attitude toward your organization.

1. Negative	1	2	3	4	5	6	7	Positive
2. Bad	1	2	3	4	5	6	7	Good
3. Unacceptable	1	2	3	4	5	6	7	Acceptable
4. Foolish	1	2	3	4	5	6	7	Wise
5. Wrong	1	2	3	4	5	6	7	Right
6. Unfavorable	1	2	3	4	5	6	7	Favorable

How important is the issue of staying at your organization and not leaving?

7. Unimportant	1	2	3	4	5	6	7	Important
8. Of no concern	1	2	3	4	5	6	7	Of much concern
9. Means nothing	1	2	3	4	5	6	7	Means a lot
10.Doesn’t matter	1	2	3	4	5	6	7	Matters to me
11. Insignificant	1	2	3	4	5	6	7	Significant
12. Irrelevant	1	2	3	4	5	6	7	Relevant

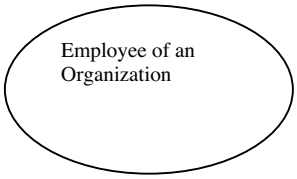
Appendix H

Concept Maps

We want to understand what individuals think about, and how they organize information about being an employee of an organization. All your THOUGHTS and FEELINGS are helpful, and there are no correct answers. In the space provided, jot down the ALL THE THOUGHTS AND FEELINGS that come to mind when you think about the being an employee of this organization.

REMEMBER:
-Number each idea as you add it to the map, we want to know the order in which you wrote down your thoughts and feelings.
-Evaluate each idea as it is written + for positive; - for negative; or 0 for neutral.

After your map is complete, we want to know how strong your thoughts and feelings are on a scale from 1-7. 1 means the thought or feeling listed is very weak whereas 7 means the thought or feeling listed is very strong. Turn back to your map and number each node (circle) with a number between 1 and 7. Circle the number to distinguish it from the number you used to show the order in which you first entered your thoughts.



Appendix I

Knowledge Items Used in Experiment

Please place the correct answer in the blank provided.

1. Who is the CEO of your organization? _____
2. What does this organization produce? _____
   (service/product)
3. How old is this organization? _____
4. Where is this organization's main office? _____
5. How many employees does this organization have? _____
6. What is this organization's mission? _____
7. What does this organization's logo look like? _____
8. What is this organization's name? _____
9. Is this a public company? _____
10. What is this organization's slogan/motto? _____
11. What year was this organization started? _____
12. List an employee benefit from this organization. _____