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Complex Organizations: A Cultural Analysis of a Christian College

Daniel Bennett

Clemson University, dtbenne@g.clemson.edu

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COMPLEX ORGANIZATIONS: A CULTURAL ANALYSIS OF A
CHRISTIAN COLLEGE

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Educational Leadership

by
Daniel Bennett
August 2011

Accepted by:
Dr. Russ Marion, Committee Chair
Dr. Tony Cawthon
Dr. James Satterfield
Dr. Tom Zagenzcyk

ABSTRACT

The purpose of this study was to understand the emergent dynamics that shape the organizational culture of a faith-based college incorporating a comprehensive network approach. The study adapted Martin's (2002) Three Perspective Theory of Culture utilizing the Dynamic Network Analysis methodology. To understand the cultural manifestations of the organization, several networks of beliefs and agent interactions were examined.

The results demonstrated that religious values are deeply embedded in the institution and there is a rich diversity of beliefs within the institution and its subcultures. The role of resources was examined, and financial resources emerged as a crucial element that stresses the operational culture. These findings combined to identify the emergent dichotomies related to ideological and operational cultural manifestations and how they interact together.

Additionally, there were two findings that supported Complexity Leadership Theory (CLT). The first finding was that while organizational learning did occur within homogeneous subcultures, greater organizational learning was demonstrated when the subcultures were brought together. This finding supported the premise of CLT, which suggests that a diversity of perspectives foster enhanced organizational learning. The second finding supported CLT through identification of clusters of employees utilizing common resources, tasks, and knowledge sets. The implication is for the organization to create bottom-up approaches that interact with existing top-down structures which would enable organizational learning, knowledge development, and problem-solving.

DEDICATION

This study is dedicated to all who faithfully serve and bear witness to Christ transforming culture in faith-based ministry organizations. May the integration of our beliefs and actions shape the cultures in which we live and work so that Jesus Christ is glorified and God receives all honor.

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CHAPTER ONE

INTRODUCTION

Organizational culture as a theoretical construct offers a window into understanding useful aspects of organizational dynamics. Culture theory provides a framework for understanding the values, beliefs, norms, and ambiguities within an organization. Within higher education, the complexity of the dynamics that culture addresses is vast as it can unpack assumptions and beliefs, improve the information managers work with, enhance policy development, aid individuals in better understanding the particular context of an institution of higher education (Kuh & Whitt, 1988), and enhance the meaning-making of all employees.

Statement of Problem

Organizational culture researcher, Edgar Schein (2004), argued, “The bottom line for leaders is that if they do not become conscious of the culture in which they are embedded, those cultures will manage them” (p. 23). This assertion, if true, has far reaching implications for higher education leaders who desire to bring healthy change, improved decision making, and better administrative processes to their institutions (Blau, 1973). However, the challenges inherent in Schein’s statement extend beyond leadership and affect members at every level. As Trice and Beyer (1993) observed, “Cultures are collective phenomena that embody people’s responses to the uncertainties and chaos that are inevitable in human experience” (Trice & Beyer, 1993, p. 2).

Within higher education, the term “institutional culture” (Kuh & Whitt, 1988; “Understanding Institutional Culture,” 2005) has been used to describe the values,

beliefs, norms, and commonly held assumptions that comprise general notions of organizational culture. Through understanding the culture of an organization, leaders and subordinates can make more informed decisions consistent with organizational values and beliefs, enable human resources to thrive, create an adaptive environment, and sustain the knowledge necessary to flourish as an organization (Martin, 2002; Trice & Beyer, 1993; Kuh & Whitt, 1988; Austin & Gamson, 1983). However, a lack of understanding organizational culture and how to deal effectively with that culture leads to confusion, conflict, and disconnects between the espoused values and the actual values (Martin, 2002; Martin & Myerson, 1986). In addition, a lack of understanding organizational culture leads to incongruent relational dynamics between leaders and members, formal values and informal practices, and subcultures and larger groups (Hill & Carley, 2008; Carley, 2003; Martin, 2002); it can foster decisions that harm employees (Driskill & Brenton, 2005), organizational morale (Flowers, 1992; Austin & Gamson, 1983), and organizational learning (Marion, 2008; Schreiber & Carley, 2007).

Statement of Purpose

Researchers of organizational culture have historically focused only on the shared values and assumptions from a leadership perspective, which captures what Martin (2002) called, the integration (consensus) perspective of organization. Other organizational culture researchers have focused on variations of particular subcultures within an organization (Martin's, 2002, differentiation perspective) while a few have focused on the ambiguities of culture (Martin, 2002, fragmentation perspective). Few studies have attempted to address the realities of all three perspectives including

integration, differentiation, and fragmentation (Martin, 2002). Missing from the literature is research focused on comprehensive organizational culture studies and faith-based institutions in particular. The purpose of my study is to explore the “particular webs of significance within an organizational setting” (Tierney, 1988, p. 4) or the networks of relationships and artifacts that shape the culture. Specifically, this study seeks to understand the emergent dynamics that influence the culture of a faith-based college from a comprehensive network perspective. Underlying this purpose is the desire to understand the cultural manifestations that both stifle and enhance the work environment of this particular culture.

Theoretical Model

Martin’s (1992; 2002) Three Perspective Theory (TPT) of culture argues that the majority of culture studies have tended to favor either the integrationist or differentiationist perspective. However, these tendencies have fallen short of providing an accurate understanding of the fragmented components of a particular culture (Martin & Meyerson, 1986). Martin’s (2002) model argues for the need to improve how researchers capture the realities of the TPT of culture.

Hill and Carley (2008) used social networking analysis (SNA) to examine Martin’s (1992; 2002) TPT model in a study of the perceptions of employees at a temporary placement agency. To understand the integrationist perspective, Hill and Carley (2008) focused on the formal values of the organization, including the perceptions of management and policies within the organization. Hill and Carley (2008) defined the differentiationist perspective, as “agreement on values and practices [that is] localized in

subgroups. . . that groups of employees would form based on their perceived similarity to each other” (p. 370). They used SNA “to explore the influence of social relationships on the transmission of culture” (p. 371). Lastly, Hill and Carley (2008) understood the fragmentationist perspective, as similar to the differentiationist approach but that such groups were characterized by ambiguity, conflict, or confusion.

My model adapts Martin’s (1992, 2002) TPT of culture and utilizes methodologies and definitions similar to those Hill and Carley (2008) used, but rather than using SNA, I am using the extension of SNA called Dynamic Network Analysis (DNA). This approach allows the researcher to include other dynamics that influence the cultural network in addition to the agent by agent networks which are the focus of SNA. This DNA model examines the role artifacts like formal and informal values, agent attributes, tasks, and other entities, and their influence on the complexities of the culture (Marion, 2008).

The DNA methodological approach has been used to explore matters related to ethics at a college (Hanson, 2009), to uncover the student-athlete experience at a university (Young, 2010), and to understand the role of vision in a complex organization (Christiansen, 2011). My model utilizes Martin’s (1992; 2002) TPT of culture combined with the application of Hill and Carley’s (2008) SNA approach while extending this approach through the use of DNA (Hanson, 2009; Young, 2010; Christiansen, 2011).

Research Questions

The following question guided this study: How do the interactions and interdependencies of a small, private, faith-based, liberal arts college (LAC) with work-related agents and other entities within the institution influence the cultural dynamic?

Supporting questions include:

1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?
2. What cultural clusters at the targeted LAC emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?
3. How does the structure of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?
5. How do the interactions of resources and other entities within the network influence the cultural dynamic?

Research Methods

This study uses DNA methods, an exploratory, qualitative methodology to examine the research questions. Qualitative research methods such as DNA yield “thick descriptions” (Geertz, 1973) from an emic perspective. For this study, a social construction interpretivist epistemological approach was most appropriate because the focus of this study was on the interactions that constitute culture at the group level as

opposed to an emphasis on the individual (Crotty, 1998). Socially constructed studies of culture examine the shared values and assumptions in the culture or subculture and the implications of those patterns for the organization.

The DNA research methods have followed the tradition of grounded theory, focusing on describing patterns of activity in data and developing a theory based on those descriptions. DNA focuses on identifying relationships among people, groups, and on the role of attributes, tasks, beliefs, and other entities in shaping those networked relationships. DNA strategies can be used to organize data and to describe, analyze, and simulate changes in that data. DNA is exploratory and lends itself to theory building, which is why it is described as grounded theory (Hanson, 2009).

Data Collection

The full time staff and faculty employees at a small, faith-based, private liberal arts college served as the primary agents in the organizational culture network for this study. Information related to agent attributes, agent interactions, influences, tasks, and beliefs were collected to understand the emergent network dynamics and to contribute to a description of the organizational culture of the particular institution.

Organizational Culture

Organizational culture provides a theoretical framework for understanding organizational processes with an emphasis on seeking to understand the collective group or subgroup of people within an organization. Culture studies have focused on an emic approach that observed group norms, behaviors, beliefs, and attitudes (Martin, 2002; Trice & Beyer, 1993; Schein, 2004). By understanding culture from this perspective,

sense can be made of the forces and dynamics within an organization that influence people and shape how these dynamics and their meanings are described collectively. Similarly, organizational culture provides a lens to make sense of behavior, assumptions, and disagreements that otherwise can appear to be irrational and unexplainable.

Building on the work of Martin (2002), the historic trends of organizational culture research can be categorized into three single theory perspectives: (a) the integrationist perspective, (b) the differentiationist perspective, and (c) the fragmentationist perspective. The bulk of culture studies have focused on the integrationist perspective (Martin, 2002), which operates on the assumption that there are shared assumptions and beliefs from the CEO at the top of the ladder to the employee at the bottom tier of the organizational chart. The integration theory approach to organizational culture predominantly focuses on managers and senior leadership based on an assumption that senior leadership plays a major role in shaping the organizational culture. There are many benefits to this type of culture research; however, Martin (2002) pointed out that there may be multiple organizational cultures and subcultures within an organization in which there are not shared values.

Martin's (2002) differentiation perspective provided a helpful lens for recognizing multiple realities may exist simultaneously within an organization. For example, an organization may have multiple subgroups, and each subgroup may share common assumptions about organizational mission, vision, and values. However, these interpretations and the meaning attached to the organizational values may vary greatly between subgroups. For example, multiple interpretations and meanings may be

dichotomized between senior leadership, middle management, and the front line employees completing production tasks.

The third theoretical perspective is the fragmentation perspective. This theoretical perspective captures the ambiguous realities that exist within an organization. The fragmentation perspective recognizes that power can be diffused through an organization and that the environment is constantly in flux (Martin, 2002). The fragmentation perspective recognizes that boundaries within the culture or subcultures are blurred as a result of constant flux (Martin, 2002). The fragmentation perspective suggests that the dynamics may be more complex, with elements of ambiguity or dissonance (Trice & Beyer, 1993), than the assumptions commonly held about the organizational culture or subculture.

Martin (2002) explained that for any organization, one of these three perspectives may be the “home” perspective or dominant theoretical perspective, but in reality, all three perspectives likely exist within all organizations. This study validates the Martin (2002) model in advocating a TPT approach to organizational culture involving integration, differentiation, and fragmentation cultural manifestations within an organization.

For this study, culture is defined as a group’s subjective interpretation of ideational and material processes and artifacts related to the group values, norms, and beliefs (Martin, 2002). This definition is built upon by Martin’s (2002) observations that the ideational and material artifacts of culture include the internal and external content themes, the formal and informal practices along with the stories, rituals, jargon, and

physical arrangements unique to a particular organization (Martin, 2002). This definition of organizational culture allows for multiple dynamics and realities to exist within an organization and addresses the potential limitations of culture studies that focus only on a single theory perspective. Finding ways to embrace the three perspective approach presents challenges for the researcher in seeking to understand the various dynamics within the organization.

Christian College Cultural Context

Previous studies have focused on the integrationist perspective and most often on the leadership of the institution (Cramer, 2002; Flowers, 1992). Other studies have employed quantitative research methods using an etic perspective that lacks the emic perspective, in-depth analysis (Obenchain, Johnson, & Dion, 2004; Lemaster, 2004). No studies were found that have provided a comprehensive picture of the organizational culture of a Christian college from an emic perspective. This gap in the literature indicated a need for a better understanding of the cultural dynamics of Christian colleges, and this study seeks to begin to address this gap.

Complexity Leadership Theory

Both formal and informal leadership practices have been studied within the organizational culture literature (Schein, 2004; Martin, 2002; Trice & Beyer, 1993). Traditional approaches to leadership have reflected a hierarchical, authoritative, top-down approach to leadership within organizations (Schreiber & Carley, 2008), which has been classified as administrative leadership (Schreiber & Carley, 2007). Alternatively, complexity leadership theory (CLT) has suggested that in addition to administrative

leadership, there exists enabling leadership and adaptive leadership (Marion, 2008), both of which are important for “the production and dissemination of learning and adaptive responses” (Schreiber & Carley, 2008). CLT is an approach to understanding leadership within organizations that places an emphasis on collective interactions that foster learning and adaptability (Marion, 2008; Schreiber & Carley, 2008). For the purposes of this study, CLT provided a helpful framework to support the exploration of the hierarchical versus shared leadership patterns within an organizational culture through a nonlinear approach that is consistent with the realities of complex organizations.

Dynamic Network Analysis

Based on CLT, DNA is an emerging field of research that seeks to understand the multiple interpretations that may exist within the networks of an organization. Grounded theory provides a helpful qualitative framework that can embrace DNA methodology and provides a structure for examining the interaction of the social networks, knowledge development, and cultural manifestations within an organization. My approach included an exploratory analysis followed by interviews and document analysis based on collected data. The intent was to provide a baseline for developing a description of a particular organizational culture that embraces the nonlinear realities of the complex system.

Limitations of the Study

While the epistemological approach for this study was primarily interpretivist, focusing on symbolic interactions, there were other epistemological worldviews that may offer additional insights related to the particular organizational culture. Another limitation of this study was the subjectivity of the researcher. While I do bring an emic

perspective to this research, it was important that I exercise reflexivity appropriately to balance my own personal background and experience as an insider within a faith-based institution. Corbin and Strauss (2008) stated, “Background, knowledge, and experience not only enable us to be more sensitive to concepts in data, they also enable us to see connections between concepts” (p. 34). Strauss and Corbin developed the concept of sensitivity to the data and offered guidelines that will be utilized throughout the research to mitigate the biases of the researcher.

A third limitation to this study was due to the emic perspective being taken in this study and the distinctiveness of the particular culture being studied (Trice & Beyer, 1993). Given the social constructionist approach to this research, to assume the findings from one organization can be applied generally to another organization is problematic despite the allure to scholars and practitioners. As an emic researcher, it is important to not impose “category systems or other ideas on a culture” (Trice & Beyer, 1993, p. 15).

Significance of the Study

A gap exists in the literature with traditional organizational culture studies neglecting to provide a comprehensive perspective of an organizational culture within higher education that includes the threefold theoretical perspective set forth by Martin (2002). In addition, there is a gap in the literature related to organizational culture studies in Christian higher education. While there are over 900 faith-based institutions in higher education (Andringa, 2009; Obenchain, Johnson, & Dion, 2004) in the United States, the scholarly literature describing a segment of these cultures is minimal, and the gap is

wider when considering the dearth of comprehensive approaches for describing the organizational culture of a particular faith-based institution from an emic perspective.

Definition of Terms

Integration: The shared or assumed norms, values, and beliefs throughout the organization (Martin, 2002).

Differentiation: The shared or assumed norms, values, and beliefs within the distinct subcultures of an organization (Martin, 2002).

Fragmentation: The elements of dissensus culture that are not shared organization wide or distinctly within subcultures that are ambiguous (Martin, 2002)

Informal Leader: Agents who are connected to influence others outside of one's own group based the greatest number of relationships in the network (Carley, 2010; Young, 2010).

Entities: "A who, what, where, how, why, or thing that is being studied such as people, agents, organizations, beliefs, expertise, resources, tasks, events, or locations" (Carley, 2010)

Meta-network: The representation of a collective set of networks (Carley, 2010).

Network: The representation of a set of entities of one type (Carley, 2010)

Nodes: A singular entity such as a "who, what, where, how, or why item" (Carley, 2010)

Cultural cluster: Group of agents with more relationships within the group than outside of the group (Young, 2010).

Organizational learning: The process of changing attitudes over time.

Faith-based institution: Protestant colleges who embrace a Christian worldview that acknowledges the incarnational concept that God has manifested himself to people through the person of Jesus Christ (Ringenberg, 2006).

Organization of the Study

This study is comprised of five chapters. The first chapter provides the context for this culture study and its conceptual model. In addition, chapter one addresses the overarching and guiding research questions, methodology, limitations, and significance of this study.

Chapter two provides a theory and conceptual review of the related literature. This includes epistemological foundations for the study, historical foundations for organizational culture research, and definition issues related to organizational culture. Then, the chapter shifts to focusing on culture and subcultures in higher education, the distinctives of Christian higher education, and empirical studies in the field of Christian higher education culture research. The chapter concludes with a review of networks and organizational culture literature and discusses methodological considerations for answering the guiding questions in this study.

Chapter three presents an overview of the methodology used in this study. It begins by describing the research design, the participants and setting, and the data collection procedures. Then, the data analysis is detailed with an explanation for how DNA will be used through the Organizational Risk Analyzer (ORA). The guiding questions are linked to specific tools in ORA and explain how ORA will support the guiding questions. The chapter concludes with a review of guiding principles of grounded

theory research related to open and axial coding and addresses issues related to objectivity, sensitivity, and ethical considerations.

Chapter four presents the findings in this study based on the data collected through the structured interviews, questionnaire, and DNA. The findings are organized chronologically to answer each of the five guiding questions. The findings utilized several analytical tools in ORA through the meta-networks to describe the interactive dynamics of the culture.

Chapter five provides a review of the theme findings and then presents a conceptual model. The story of the conceptual model is presented based on the findings in the data. This is followed by an additional acknowledgement of the limitations of this study. The chapter is concluded by a synthesis of general implications as a result of this study and recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

Theoretical and Conceptual Overview

The primary purpose of this study is to explore how the cultural artifacts of a small private faith-based LAC influence the dynamics of the institution. This literature review begins with a discussion on organizational culture including its philosophical purposes and background. Martin's (2002) three perspectives framework is utilized to understand the story of culture research and how the study of artifacts and symbols can contribute to understanding a particular culture. The discussion will then shift to introducing the context of Christian higher education, including a critique of empirical culture studies to show both what has been studied and what is missing in the current scholarship. Network research is introduced and explores how networks have been linked in the literature to organizational culture. Methodological approaches that have studied organizational culture in the literature are considered to understand how questions have been researched in the past and to frame the methodology used to answer the questions in this study. The chapter concludes with a summary of the literature review highlighting the conclusions and direction of this study including the methodology.

Organizational Culture

The study of organizational culture provides a framework for understanding organizational life which places an emphasis on the collective group of people instead of the individual. Schein (2004), in explaining the importance of studying the forces of culture, stated that "if we don't understand the operation of these forces, we become

victim to them” (Schein, 2004, p. 3). Further, by studying organizational culture, the voices of those who are heard, unheard or silenced, or invisible can begin to be accessed and understood by the observer. By understanding culture, employees at every level can begin to make sense of behavior that otherwise seems irrational and unexplainable. One can begin to understand assumptions that may be held by an organization or subgroups of which one was previously unaware or did not understand. Through understanding organizational culture, knowledge can be developed and examined for a multitude of purposes which may include providing a description of the realities of what is going on in an organization, an assessment that will result in change for the betterment of the people who are impacted by the organization, and in some cases leading to greater organizational effectiveness (Schneider, Erhart, & Macey, 2011; Driskill & Brenton, 2005).

Epistemology

Constructionism is “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context” (Crotty, 1998, p. 42). In constructionism, truth is not objective, but rather, constructed. Crotty states, “What constructionism drives home unambiguously is that there is no true or valid interpretation” (Crotty, 1998, p. 47). The social part of social constructionism is concerned with “mode of meaning generation” (Crotty, 1998, p. 55) in terms of the process by which a group makes meaning of something. These social influencers may be animate or inanimate. Constructivism, by contrast, is concerned with the meanings that derive exclusively from intrinsic individual

characteristics (influenced by dispositions, dreams, personality, etc.) whereas constructionism is concerned with the group (Crotty, 1998). This distinction has important implications for this research because this study is approaching culture from a constructionist viewpoint with an emphasis on the collective group dynamics.

Symbolic interactionism is a form of interpretivism that serves as the theoretical perspective (Crotty, 1998) for my research. The interpretivist approach “looks for culturally derived and historically situated interpretations of the social life-world” (Crotty, 1998, p. 67). Influenced as a student by George Herbert Mead, Blumer (1969) articulated three premises of symbolic interactionism:

. . . The first premise is that human beings act toward things on the basis of the meanings that the things have for them. . . The second premise is that the meaning of such things is derived from, or arises out of, the social interaction that one has with one’s fellows. . . The third premise is that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters.

(Blumer, 1969, p. 2)

Blumer (1969) explained these assumptions of symbolic interactionism differed from other forms of meaning that often emphasize either the intrinsic meaning of something or the psychological meaning of something. Instead, symbolic interactionism “sees meaning as arising in the process of interaction between people” (Blumer, 1969, p. 4). It is therefore the interaction between people that gives meaning to something. In addition, Blumer (1969) explained that the third premise is significant for social

interaction because it emphasizes the multiple meanings that could be at play and the importance of an interpretation by the person for deriving meaning.

In addressing the qualitative nature of symbolic interaction Blumer (1969) argued for the importance of studying group life in close proximity and for these types of studies to be developed over time to allow the researcher to know the world under investigation (Blumer, 1969). Crotty (1998) stated “only through dialogue can one become aware of the perceptions, feelings and attitudes of others and interpret their meanings and intent” (p. 76). Crotty in following the examples of Mead (1934) and Blumer (1969), who argued for an emic perspective in cultural research, stated “one is to observe ... [a social phenomenon] as closely as possible, attempt to take the place of those within the culture, and search out the insider’s perspective” (Crotty, 1998, p. 76). There are pitfalls to an insider approach. For example, while traditional organizational culture studies take the insider approach to describing and understanding meaning of a culture, it is possible for one to become too close to the subject. As a result, for the purposes of this study, this research takes an emic perspective in agreement with Crotty (1998) and Martin (2002) while cautiously exercising reflexivity in recognizing my subjective biases.

Methodological Considerations for the Literature Review

Because the general topic of organizational culture has been addressed extensively in the literature, the focus in this study is on the major theoretical constructs and authoritative authors who have contributed to the literature on this topic as recommended by Boote and Biele (2005) for literature reviews. Texts containing exhaustive literature reviews, handbooks on the topic of organizational culture, and texts

considered authoritative on the topic were consulted (Ashkanasy, Wilderom, & Peterson, 2000; Denison, 1996; Kuh & Whitt, 1988; Martin, 2002; Pettigrew, 1979; Schein, 2004; Schneider et al., 2011; Trice & Beyer, 1993; “Understanding Institutional Culture,” 2005; Van Maanen & Barley, 1985). Secondly, when the current or most recent review was available or when key authorities on the topic were cited numerous times, these texts became the foundation upon which an overview of the topic was deemed suitable (Boote & Biele, 2005).

In addition, the literature selection criteria included peer reviewed published theory and theory development pieces related to organizational culture. For research related to culture in Christian higher education, empirical studies were gathered for critique based upon the TPT of culture framework set forth by Martin (2002) to understand the framework of prior culture studies and to see the dominance of the integration perspective. The reference collection process for this review involved four general methods and began with the invisible college approach through personal communication with professors and colleagues to identify key texts in the culture literature (Cooper, 1982). Secondly, the ancestral approach was utilized through scanning the references of at the end of documents which led to additional publications (Cooper, 1982).

Lastly, a manual web-based search (Cooper, 1982) was conducted through the use of several databases including the *EbscoHost* Research Engine, which simultaneously utilizes multiple databases including *Educational Research Complete*, *ERIC*, *Academic Source Premier*, *Business Source Premier*, and *Psychinfo*. Keywords used in multiple

combinations included organizational culture, institutional culture, higher education, and Christian higher education. In addition, multiple searches using the same keywords were applied to dissertation searches through Proquest and the Clemson University Theses and Dissertations through the Clemson University Library website.

Organizational Culture Defined

Historical Roots of Organizational Culture

The study of organizational life dates back at least to the 1930s (Trice & Beyer, 1993). Schneider et al (2011) described the relationship between organizational climate and culture as the tale of two siblings with climate being the older sibling and culture being the younger sibling. Therefore, the following begins with a focus on the foundations of organizational climate followed by the general development of organizational culture with the understanding that both siblings are concerned with group dynamics and organizational life.

The study of organizational life can be traced to the work of Kurt Lewin (Ashkansasy et al., 2000; Dennison, 1996; Schneider et al., 2011). Lewin, Lippitt, and White (1939) published an article in which the term “social climate” was first used to understand the attitudes and social structuration of groups of boys attending clubs during the summer (Lewin et al., 1939). Interestingly, Lewin had grown up in Germany and was deeply concerned with the ability of leaders to shape a social context, which he had witnessed take place with fascism in the German education system (Lewin, 1948 as cited in Ashkanasy et al., 2000). Lewin viewed fascism as a dangerous social climate that needed to be disproven scientifically (Ashkansasy et al, 2000). For Lewin, social climate

theory provided a way for understanding group life ranging from a small group of boys at a summer camp to the impact of national ideological and political approaches to society (Lewin et al, 1939; Ashkanasy, et al. 2000). With deep rooted questions about how groups interact at multiple levels in light of his experience and personal observations of fascism in Germany, Lewin et al. (1939) asked:

What underlies such differing patterns of group behavior as rebellion against authority, persecution of a scapegoat, apathetic submissiveness to authoritarian domination, or attack upon an outgroup? How many differences in subgroup structure, group, stratification, and potency of ego-centered and group-centered goals be utilized as criteria for predicting the social resultants of different group atmospheres? Is not democratic group life more pleasant, but authoritarianism more efficient? These are the sorts of questions to which ‘opinionated’ answers are many and varied today, and to which scientific answers, are, on that account all the more necessary. (Lewin et al., 1939)

Lewin et al. (1939) began to answer the above stated questions with groups of boys at a summer camp. With the various groups of boys, they employed three separate philosophies of leadership with one philosophy of leadership being espoused by one adult leader per group (Lewin et al., 1939). The three philosophies of leadership that were being studied were authoritarian, democratic, and laissez-faire (Lewin et al., 1939). Clearly, Lewin had a research agenda through studying group life to provide answers to larger questions related to social and political problems through applied psychology.

Later, two of Lewin's former students, Argyris and McGregor further developed the concept of climate (Schneider et al., 2011). Argyris (1957, as cited in Schneider et al., 2011) provided an early notion of how an industry socializes new employees (Schneider et al., 2011). Then in, 1960, McGregor published a book called *The Human Side of Enterprise* (as cited in Schneider et al., 2011) in which he famously described theory X and theory Y with management strategies for how to motivate employees (Schneider et al., 2011). Concurrently, Lewin's ideas were considered by Rensis Likert (Ashkanasy et al., 2000; Schneider et al., 2011). Likert focused on individuals when he defined climate as demonstrated through the development of attitude measurements in the early 1960s (Ashkanasy et al., 2000).

The study of organizational life returned to MIT when Edgar Schein published a book in 1965 called *Organizational Psychology* (Schein, 1965). At the time of publishing this book, Schein and McGregor were colleagues. Schein wrote in his new book that "the material covered in this book will reflect the general historical trend from an individual-oriented industrial psychology toward a group-and-systems-oriented organizational psychology" (Schein, 1965 as cited in Schneider et al., 2011). After that, the research slowly went in two distinct directions during the 1970s and 1980s with climate research tending to focus more at the individual level using quantitative methods and culture research focusing more on the group dynamics utilizing qualitative methods (Schneider et al., 2011).

It is noteworthy that climate research on organizational studies has been dominated by the field of social psychology (Ashkanasy et al., 2000). As climate research

continued to develop in the 1970's with the increased focus of quantitative survey analysis on the individual, the organizational culture research framework grew with increasing popularity for its focus on the group level. Where climate was dominated by the field of psychology, the culture research was drawing from anthropology and sociology. Anthropologists such as Mead (1934) and Geertz (1973), provided examples of ethnographies that studied a particular culture to understand a society or to understand a particular problem (Ashkanasy et al., 2000).

Pettigrew (1979) was credited with first applying culture to organizational studies with a focus on the internal relationships within organizations that impact a system's ability to be competitive (Ashkanasy et al., 2000; Schneider et al., 2011). Schneider et al. (2011) also pointed out that both Pettigrew (1979) and Weick (1985) were interested not merely in culture in and of itself, but how the culture related to strategy for the sake of organizational effectiveness.

Schein stated in Ashkanasy et al. (2000) that climate can capture levels of teamwork in an organization, and that organizations have climates that are "embedded in the physical look of the place, the emotionality exhibited by employees, the experiences by visitors or new employees upon entry, and myriad other artifacts that are seen, heard, and felt" (p. 24). Schein goes on to explain that he defines climate "as a cultural artifact resulting from espoused values and shared tacit assumptions" (p. 24).

Another area of diversion between the climate and culture literature was the emphasis culture research has placed on "language, including language used in myths and stories, [which] is a key focus of cultural research regardless of whether it is in

organizations or in the field with native peoples” (Schneider et al., 2011). Schneider et al. (2011) explained that the myths and stories carried through organizations that come out in culture research are untouched areas of study in the climate research realm. In addition, organizational culture researchers were concerned with socialization processes regarding how new employees learned the rules of the organization (Schneider et al., 2011; Schein, 2004).

Denison (1996) argued that both “research traditions should be viewed as differences in interpretation rather than differences in the phenomenon” (Denison, 1996, p. 645). On one hand, this perspective offered by Denison is helpful and consistent with the earlier historical discussion and the epistemological discussion; however, Martin’s (2002) three perspectives approach applied to the climate and culture discussion revealed the similarities and larger gap between the terms climate and culture which will be discussed next.

Theory Perspectives of Culture

Based on an extensive review of studies conducted on organizational culture, Martin (2002) identified three separate single perspective theories that typify most organizational culture studies. These single theory perspectives include the (a) integration, (b) the differentiation, and (c) the fragmentation perspective. The *integration* perspective assumes that shared values exist and that there is some underlying level of consensus throughout the organization (Martin, 2002; Trice and Beyer, 1993). The *differentiation* perspective captures the reality of the multiple subcultures that can exist with great individual clarity within each subculture and an interaction with the other

subcultures that can “exist in harmony, independently, or in conflict with each other” (Martin, 2002, p. 94). The fragmentation perspective views “the relationship among cultural manifestations as neither clearly consistent nor clearly inconsistent” (Martin, 2002, p. 94). The *fragmentation* perspective embraces ambiguity. With these three single theory perspectives in mind, Martin (2002) suggested that upon her review of the literature, most studies in organizational culture can be characterized with one and sometimes two of these perspectives. However, based on the concepts of each single theoretical perspective, the potential exists for significant perspectives to be missing from the culture study. Therefore, Martin (2002) posited a threefold theory that embraced all three theories. Figure 2.1 outlines an adaptation of the relationship between the three perspectives set forth by Martin (2002).

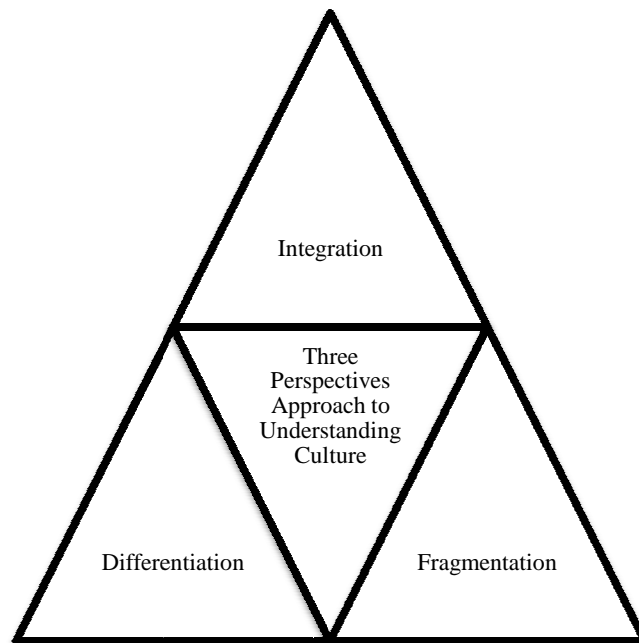


Figure 2.1

General depiction of the complementary relationships of the three perspectives theory adapted from Martin (2002)

Martin (2002) argued that those who focus on the similarities of culture and climate are taking an *integration* approach to the two fields. However, where culture can be defined to include the *differentiation* and *fragmentation* perspective, the focus of climate literature is built on a linear assumption necessitating some level of consistency with an *integrationist* perspective and does not have the ability to embrace inconsistency or ambiguity based on its definition and typical methodology (Martin, 2002).

Leadership and Organizational Culture Context

Schein (2004) focused on the role leaders play in shaping organizational culture. Schein (2004) stated, “The bottom line for leaders is that if they do not become conscious of the culture in which they are embedded, those cultures will manage them” (p. 23). This statement has far reaching implications for leaders working within organizations and represents an area where there has been great emphasis and interest in organizational culture research. The emphasis on leader-focused culture studies has yielded research for managers on how to develop strong cultures and build consensus (Martin, 2002; Trice & Beyer, 1993). Trice and Beyer (1993) recognized the general dichotomy and reality that exists between consensus and dissensus, but the potential application of the three perspectives offered by Martin (2002) proposed that while leadership does play a role in shaping a culture, there are other important factors to be considered. Martin provided a level of detail in the analysis that was missing if the focus is only on consensus versus dissensus as generalized by Trice and Beyer (1993). The emphasis on the role of leaders in cultural studies provides examples of the single theory *integrationist or consensus* perspective in action.

Organizational Culture Formally Defined

Denison (1996) has conducted both climate and culture studies using quantitative, qualitative, and mixed method strategies. He demonstrated how the two terms, climate and culture, and their respective research literatures, compare, contrast, and overlap, but concluded that they examine the same phenomenon through different interpretive frameworks.

Denison (1996) defined culture as referring to:

. . . the deep structure of organizations, which is rooted in the values, beliefs, and assumptions held by organizational members. Meaning is established through socialization to a variety of identity groups that converge in the workplace.

Interaction reproduces a symbolic world that gives culture both a great stability and a certain precarious and fragile nature rooted in the dependence of the system on individual cognition action. (Denison, 1996, p. 624)

To better understand culture, Denison also defined climate as a perspective that:

. . . portrays organizational environments as being rooted in the organization's value system, but tends to present these social environments in relatively static terms, describing them in terms of a fixed (and broadly applicable) set of dimensions. Thus climate is often considered as relatively temporary, subject to direct control, and largely limited to those aspects of the social environment that are consciously perceived by organizational members. (Denison, 1996, p. 624)

In further explaining the distinctions between culture and climate research, Denison observed that climate researchers have approached their subject from an etic

perspective while culture researchers approached the data from an emic perspective (Denison, 1996). Where climate research has sought to be comparative and often used quantitative measures, culture research was contextualized and traditionally qualitative in nature. Where culture literature has endeavored to understand the historical context, climate literature has tended to be a snapshot and is clearly ahistorical (Denison, 1996). Denison's (1996) dichotomy of the culture and climate literature underscored the epistemological and ontological differences between the two topics and underpinnings of the social construction and symbolic interaction epistemology/methodology of culture studies.

Therefore, in moving towards an operational definition of organizational culture, many culture studies have adopted the definition set forth by Schein (2004):

The culture of a group can now be defined as a pattern of shared basic assumptions that was learned by the group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Schein, 2004, p. 17)

This formal understanding of culture provided by Schein has been supported and built upon by other researchers of organizational culture. For example, Martin (2002) provided a helpful analysis of 12 definitions of organizational culture used in research studies. He noted that some definitions of culture and their subsequent studies tended to focus on cognitive elements of culture and some focused more on the material manifestations of culture such as observed artifacts. Martin (2002) countered Schein's

articulation and emphasis of multiple levels of interpretation that must be investigated in a sequential order to get to the deeper levels based on the argument that even surface level artifacts may hold deep meaning. Martin also contradicted Schein and others use of the word “shared” in defining culture. This distinction on the use of the word “shared” is an interesting counterargument set forth by Martin (2002) because the notion of a shared set of assumptions, values, beliefs, norms, etc. does point towards an integrationist perspective and does not leave room for conflict or ambiguity. As a result, the definition for organizational culture for this study was (Martin, 2004):

. . . consisting of in-depth subjective interpretations of a wide range of cultural manifestations (a generalist rather than a specialist view), both ideational and material. Culture I argue should be viewed from all three theoretical perspectives, not sequentially but simultaneously. In accord with the integration view, some aspects of culture will be shared by most members, producing consistent clear interpretations of manifestations. The hallmarks of the integration perspective are consistency across manifestations, collectivity-wide consensus, and clarity. In accord with the differentiation perspective, other aspects of the culture will be interpreted differently by different groups, creating subcultures that overlap and nest with each other in relationships of harmony, independence, and/or conflict. The defining characteristics of the differentiation perspective are inconsistencies across manifestations, with consensus and clarity only within subcultures. Subcultures can exist in harmony, conflict or independently of each other. Finally, in accord with the fragmentation view, some aspects of the culture will be

interpreted ambiguously, with irony, paradox, and irreconcilable tensions. The fragmentation view focuses on ambiguity, excluding the clarity implicit in both consistency and inconsistency. Rather than seeking consensus within cultural or subcultural borders, the fragmentation perspective finds only transient, issue-specific affinities. (Martin, 2002, p. 120)

While the above definition is long, it helpfully moves the conversation regarding *organizational culture* forward. By embracing the three perspectives, the researcher gains a comprehensive picture of an organization that more accurately depicts its realities.

Artifacts and Symbols Defined

Schein (2004) suggested that there are three levels or layers of culture and the artifacts are at the most basic level and include things that are observable using the five senses. Schein explained that artifacts included:

. . . the visible products of the group, such as the architecture of its physical environment, its language, its technology, and products, its artistic creations; its style as embodied in clothing, manners of address, emotional displays, and myths and stories told about the organization, its published list of values; its observable rituals and ceremonies; and so on. (Schein, 2004, p. 26)

Rafaeli and Worline (2000) used the term “symbols” synonymously with Schein’s definition of artifacts stating “Schein (1990) specifically identifies symbol as the first layer of culture, comprising the observable artifacts that make up the sensory experience of the organization” (Rafaeli & Worline, 2000, p. 75). Rafaeli and Worline (2000) argued that symbols serve four functions including a reflection of the organizational culture,

revealed internal values and norms, providing a framework for conversation, and contributed to the development of how members of an organization make sense of their circumstances. Martin (2002) used the term “cultural forms” synonymously with artifacts and included the four categories of stories, rituals, jargon, and physical arrangements. Regardless of the terms used—cultural forms, artifacts, or symbols—these tangible manifestations of culture provided a helpful tool to “enable us to take aim directly at the heart of culture” (Gagliardi, 1996 as cited in Rafaeli & Worline, 2000).

Schein (2004) outlined three levels of culture that included artifacts at the most basic level followed by espoused beliefs, values, and norms. The third level included the deep underlying assumptions that define the culture. Schein (2004) explained that to understand and interpret a culture, a researcher must be able to access data related to level one and level two. Otherwise, it is impossible to move to level three and actually understand a culture. Martin (2002) pointed out that artifacts and values at level one and level two according to Schein’s model are not necessarily superficial gateways to the deeper level three. Instead, Martin argued that artifacts and values may actually hold deep meaning (Martin, 2002).

Martin (2002) used the phrase cultural forms to capture the concept of symbols and artifacts. For Martin (2002), “cultural forms include rituals, organizational stories, humor, and physical arrangements including architecture, interior décor, and dress codes” (p. 65). In addition, cultural forms were one type of cultural manifestation that should be included in any study of culture along with formal practices, informal practices, and content themes (Martin, 2002). For the purposes of this study, the cultural manifestations

described by Martin (2002) will be utilized as artifacts to explore and describe the culture of one particular organization.

Organizational Culture Applied to Higher Education

Several researchers have applied *organizational culture* to higher education (“Understanding Institutional Culture, 2005”; Bell, 2010; Bergquist & Pawlak, 2008; Birnbaum, 2000; Kuh & Whitt, 1988; Schroeder, & Scribner, 2006; Tierney, 1988). In applying the study of culture to higher education, Tierney (1988) stated:

Geertz defines culture by writing, “Man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not experimental science in search of law, but an interpretive one in search of meaning” [25, p. 5]. Thus an analysis of organizational culture of a college or university occurs as if the institution were an interconnected web, but also at the actors’ interpretations of the web itself. Organizational culture, then, is the study of particular webs of significance within an organizational setting. That is, we look at an organization as a traditional anthropologist would study a particular village or clan. (Tierney, 1988, p. 4)

This quote captures the essence of the relationship between the study of organizational culture and higher education as well as insights for how such studies should be carried out and what they can accomplish. Tierney (1988) provided a helpful contribution to the literature by offering a framework from which to examine organizational culture in higher education. Noteworthy is his statement that “strong, congruent cultures supportive of organizational structures and strategies are more

effective than weak, incongruent, or disconnected cultures” (p. 7) reflecting the trends of the culture studies in that era as well as an *integration* perspective.

Models and Frameworks of Institutional Culture

Within higher education, the phrase institutional culture is sometimes substituted for organizational culture. Several researchers of culture have developed frameworks for gaining understanding of a culture in higher education. The framework suggested by Tierney (1988) was based on a case study that was conducted at one institution, and it provided an example of how the framework helped draw insights about the culture of that particular institution and how the framework might also assist in understanding the culture of other institutions. The framework offered by Tierney (1988) included an analysis of the organization’s culture in six key areas. The framework was as follows:

Environment:	How does the organization define its environment? What is the attitude toward the environment? (Hostility? Friendship?)
Mission:	How is it defined? How is it articulated? Is it used as a basis for decisions? How much agreement is there?
Socialization:	How do new members become socialized? How is it articulated? What do we need to know to survive/excel in this organization?
Information:	What constitutes information? Who has it? How is it disseminated?
Strategy:	How are decisions arrived at? Which strategy is used? Who makes decisions? What is the penalty for bad decisions?

Leadership: What does the organization expect from its leaders?
 Who are the leaders?
 Are there formal and informal leaders? (Tierney, 1988, p.8)

To further explain the meaning of these six primary areas of organizational culture within a higher education context, Tierney (1988) used a case study approach as a participant observer and conducted interviews that were assembled to describe each element of culture related to the case study. After providing the case study example, Tierney concluded with recommendations for future research by exploring “organizational use of time, space, and communication” (p. 18) and their use in both formal and informal settings. Similarly, Kuh and Whitt (1988) argued:

Structuring an institute of higher education into work units, roles, and living units influences who is likely to interact with whom. Differential interactions among faculty, students, and professional staff are shaped by hierarchical arrangements, physical proximity, sharing of common tasks or status, functional demands made on some workers by others, perceptions of the organization’s relationship with other units. . . (Kuh and Whitt, 1988, p. 51).

Kuh and Whitt (1988) identified a framework for understanding culture in higher education and drew upon the work of Allaire and Firsirotu, (1984), Becher (1984), Clark (1970), Clark et al. (1972), and Van Maanen and Barley (1985). Their cultural framework is:

- 1) The external environment that surrounds a college or university
- 2) The institution itself

- 3) Subcultures within the institution (e.g. faculty, professional staff) and within subcultures (e.g., faculty in the humanities and sciences)
- 4) Individual actors and roles (e.g., university president)

(Kuh & Whitt, 1988, p. 57)

Kuh and Whitt (1988) stated that it is impossible to develop a perfect framework and referenced the reality that their intent is in search for meaning and undoubtedly the framework they set forth can guide the researcher of institutional culture. At the same time, while they do acknowledge culture studies were about studying whole groups of people, evidence of the trend in the literature of placing emphasis on individuals and traditional linear or orderly hierarchies can be found (Van Maanen, 1984). However, the trends have omitted the interactions that occur by members who are not part of senior management or towards the top of the hierarchy despite the reality that these dynamics also shape culture (Hill & Carley, 2008; Hill, 1998). These trends place this framework within what Martin's (2002) TPT would characterize as part of the integration or differentiation (subcultural) perspective or general forms of consensus (Trice & Beyer, 1993). However, little or no room remains for the ambiguity and fragmented voices of employees who are not in middle management, senior roles, or faculty (Martin & Meyerson, 1986). While every framework has its limitations, given the increasingly nonlinear dynamics in organizations where bottom-up approaches are contributing to culture creation and maintenance (Hill & Carley, 2008), new approaches to assist in understanding these organizational cultures are needed.

Another challenge alluded to by Tierney (1988) and Kuh and Whitt (1988) was

the governance structure. There is some debate among culture theorists as to whether institutions reflect a collegial, participatory, or shared governance approach versus a more hierarchical approach as a reflection and description of the culture (Adkinson, 2005; Austin, Rice, and Splete, 1987; Bell, 2010; Bergquist and Pawlak, 2008; Kuh & Whitt, 1988; “Understanding Institutional Culture,” 2005). The debate is reflected in the literature by research that has sought to understand the organizational governance and environment as reflective of the culture (Bell, 2010; Austin, Rice, & Splete, 1987; Obenchain, Johnson, & Dion, 2004; Deshpande, Farley, & Webster, 1993). Obenchain, Johnson, and Dion (2004) applied Deshpande, Farley, and Webster’s (1993) adapted model of organizational culture types (clan, maintenance, adhocracy, and market) to understand the role of culture on innovation. Austin, Rice, and Splete (1987) developed a survey for the Council of Independent Colleges (CIC) with the intention of better understanding the academic workplace and culture of liberal arts colleges and the survey included measures to assess levels of perceived participation and collaboration within the organization.

More recently, Bergquist and Pawlak (2008) offered a slightly different framework for understanding organizational culture in higher education that reflected a combination of an *integration* and *differentiation* perspective. They made the case for six types of cultures that exist within every higher education culture, and while one of the six cultures has tended to be primary, all six cultures interact with one another (Bergquist & Pawlak, 2008, p. 7). The six cultures set forth by Bergquist and Pawlak (2008) included the collegial culture, the managerial culture, the developmental culture, the advocacy

culture, the virtual culture, and the tangible culture. While these elements of culture were clearly embedded in most institutions, Bergquist and Pawlak (2008) offered more of a discussion and language for considering the dynamics of organizational culture. Their discussion helps one to label different elements of culture that can be observed with commentary of the interplay of these various elements.

Subcultures and Higher Education

Subcultures are assumed to exist in every form of administrative organization (Bell, 2010; Birnbaum, 1988; Martin & Siehl, 1983; Van Maanen & Barley, 1985; Schein, 2004; Trice & Beyer, 1993; Trice & Morand, 1991; “Understanding Institutional Culture,” 2005). Trice and Morand (1991) defined subcultures as:

Distinct clusters of understandings, behaviors, and cultural forms that identify groups of people in organizations. They differ noticeable from the common organizational culture in which they are embedded, either intensifying its understandings and practices or deviating from them.

(Trice & Morand, 1991, p. 1)

Martin and Siehl (1993) suggested subcultures could be labeled as enhancing, orthogonal, and countercultural. The enhancing subculture was described as adopting the core values to a greater degree than the other members of the organization (Martin & Siehl, 1983). The orthogonal subculture agrees with the core values of the organization while also maintaining a separate set of values that are compatible with the core values (Martin, & Siehl, 1983). Last is the counterculture that “presents a direct challenge to the core values or dominant culture” (Martin & Siehl, 1983, p. 54). In addition, Van Maanen

and Barley (1985) identified several elements that often are part of subcultures in organizations which included (a) segmentation, (b) importation, (c) technological innovation, (d) ideological differentiation, (e) contracultural movements, and (f) career filters. Each of these elements of subcultures provided examples of additional language for describing subcultures in organization. The majority of studies addressing subcultures in higher education have focused on faculty subcultures (Kuh & Whitt, 1988; “Understanding Institutional Culture,” 2005).

Organizational Culture and Christian Higher Education

In general, the review of peer reviewed articles and dissertations for this research proposal revealed a gap in the literature in the study of organizational culture in Christian higher education. When narrowing the search to qualitative research, the gap is even greater, which further substantiates the need for research in this area. The following is a summary of the research reviewed for this proposal related to organizational culture and Christian higher education.

General Background of Christian Higher Education

Adrian (2003) provided a historical overview of the Christian university that contributed an important contextual background for understanding the culture of Christian higher education. One of the overarching themes in this historical overview was that the Christian university “was born in a dominant Christian culture and is presently ‘one of many’ in a pluralistic culture” (Adrian, 2003, p. 16). While much of the article focused on historical and philosophical development of the role of Christianity and role of the university, Adrian (2003) pointed out that theoretically, the strength of the

Christian university has been its clarity of purpose. This insight by Adrian was helpful for understanding what may be considered a generally held assumption or espoused value within Christian higher education.

In general, there are approximately 900 religious colleges and universities in the United States (Andringa, 2009; Obenchain, Johnson, & Dion, 2004). In support of Adrian's (2003) comments regarding the increasingly pluralistic nature of the United States, Andringa (2009) identified the increased use of the term faith-based to reflect multiple faiths that influenced the United States. Andringa (2009) stated that distinctions of religiously affiliated institutions include "articles of incorporation, bylaws, mission statements, histories, curricula, and personnel, all include a religious purpose and presence" (Andringa, 2009, p. 169). Within this umbrella of religiously affiliated institutions, there was a wide continuum of the faith traditions and denominations represented. In terms of the role that denominations play in shaping the institution, some institutions have been classified as nondenominational or only hold a historical tie to a denomination where other institutions are exclusively owned and supported by a denomination (Andringa, 2009).

Financially Stressed Institutions

The size of financially stressed institutions ranged from 100 to 30,000 students and the endowments have ranged from non-existent to over \$500 million, with degrees offered beginning at an associate's degree to some doctoral programs (Andringa, 2009). Many of the faith-based institutions were challenged financially and fit one of the 20 criteria for being considered a financially stressed institution by having an endowment of

less than \$10 million (Andringa, 2009; Martin & Samels, 2009). Subsequently, with the shortage of financial resources, many of these institutions were stressed, fragile, and operate with a survivor mentality from year to year (Andringa, 2009). As a result of the increased stress on these institutions and through his work and visits to Christian colleges, Andringa (2009) cited the following as the “Seven major causes of fragility among religiously affiliated institutions”: location, the burden of the liberal arts, the challenge of church relations, Church-campus governance conflicts, institutional independence and political decision making, the costs of residence life, and faith and accountability.

Christian College Defined

At the beginning of this section, numerous terms were identified that are associated with church-related colleges such as faith-based, religiously affiliated, and Christian colleges. Ringenberg (2006) noted that most Roman Catholic institutions were using the term Catholic institution to describe themselves. Ringenberg also noted “many of the mainline Protestant colleges preferred to be known as church-related” (Ringenberg, 2006, p. 9). For the remainder of this study, the term Christian college is used in reference to describing Protestant colleges that embrace a Christian worldview with the “educational philosophy that the key to understanding the human condition is the incarnational idea that God has come to us in Christ” (Ringenberg, 2006, p. 9). This description sets the evangelical faith tradition and denominations therein apart from other religions. Ringenberg provided the following description to further clarify the dynamics of a Christian college:

A college is a company of seekers of the truth. A Christian college is a voluntary community of those who share the central conviction that the key to understanding the human condition is the incarnational idea that God has come to us in Christ. While we seek individually, we do so in a group context. The Christian college experience then is an especially focused period of truth-seeking, usually during the formative years, when the company of the committed develop a life-long practice of continual seeking and of being transformed by the truth that they find. Such is the Christian ideal. (Ringenberg, 2006, p. 243)

With this description of a Christian college, we now turn to empirical studies that have been conducted on Christian college campuses with a focus on some aspect of *organizational culture*.

Empirical Studies Related to Culture and Christian Higher Education

Empirical studies related to *organizational culture* and Christian higher education are limited. The following overview provides a summary and critique of the major contributions in the field organizational culture and Christian higher education within the past 20 years. The critique is intended to identify what has been learned as well as areas that are missing from the existing knowledge base.

Flowers (1992) used a mixed methods study that began with a national survey of independent colleges and universities involving 142 institutions with a combined total of 3,917 respondents; Christian colleges represented 14% of the institutions with 19 colleges participating and 572 faculty respondents from the Christian colleges. The data was collected in 1986 (Flowers, 1992). The purpose of the study was to follow-up a

quantitative analysis with qualitative case studies to understand morale, commitment, and satisfaction at Christian LACs and to see if these factors were different than at other LACs. Flowers found differences between the four Christian college cases studied compared to the other liberal arts in “higher levels of satisfaction and morale among faculty reinforce the sense of commitment to the intrinsic values of the institution” (p. 242). Additionally, Flowers (1992) found that faculty at these faith based institutions possessed a “commitment to a higher goal or mission” (p. 242). One limitation of the Flowers (1992) study was the scope of the study was focused on senior leaders and faculty which was countered by the strength of comparing four institutions.

Cramer (2002) focused on the phenomenon of transformation in a Christian college during the decade of 1990-2000 that was previously unhealthy as gauged in part by its lack of financial resources. Cramer drew upon the work of Birnbaum (1988) who emphasized the importance of three areas for transformation including (a) the Board of Trustees, (b) the President and Administration, and (c) the Faculty. The qualitative case study at a single institution sought to understand the perceptions of key stakeholders who witnessed the financial transformation of the institution from being on the brink of closure to becoming regarded as one of the leading institutions in the Coalition for Christian Colleges and Universities (CCCCU). Cramer (2002) found evidence to support a top-down management style for moving the institution which supported a clarified vision and resulted substantial financial resources being infused to support the organizational change. While elements of organizational culture were uncovered through the study, there were several limitations, and Cramer (2002) acknowledged that one of the

limitations was that the study focused only on trustees, the president and administration, and the faculty. Undoubtedly, this focus on a particular phenomenon as described by a subset of three constituent groups was not capable of yielding a comprehensive picture of the dynamics taking place to bring institutional transformation to all areas of the institution. Another major limitation of this work was that the phenomenon of transformation was being explored and success was being defined through the eyes of the selected individuals within the three groups. Cramer (2002) recommended that future research was needed that focused on descriptions of the cultural context of Christian institutions that are declining and then compared to institutions that have been transformed or are flourishing. The future recommendation by Cramer (2002) supported the direction of my research in seeking to gain a description of the culture of a Christian college that is financially stressed in a manner that is comprehensive and dynamic.

Lemaster (2004) conducted a quantitative culture study of Christian colleges in Southern California. The study used sample respondents who completed a web-based survey that evaluated the effect of affective, continuance, and normative commitment among the staff, faculty, and administrators on individual-culture congruence (Krakower & Niwa, 1985 as cited in Lemaster, 2004). One of the strengths of this research was that it attempted to consider the multiple subcultures that can exist simultaneously within an institution. Response rates were an issue as 98% of the respondents were actually from two of the three institutions, and the responses from staff were disproportionately higher than responses from faculty or administrators. These tended to be staff members who had worked at the institution for ten years or less (Lemaster, 2004). The results of the study

found some correlation between individual-culture congruence and some parts of commitment particularly with affective commitment and mildly with normative commitment, but not continuance and commitment overall. Lemaster (2004) stated that there may be other factors involved in individual-culture congruence and that the model used to address these questions did not consider the complexity of the factors involved. Additionally, the research was gathered from an etic perspective and does not provide a comprehensive picture of the cultural dynamics related to culture-congruence and commitment. Lemaster (2004) identified the need for qualitative research methods to be employed in the study of culture and commitment at Christian colleges.

Obenchain, Johnson, and Dion (2004) conducted a quantitative study to understand how organizational type and organizational culture impact innovation for Christian colleges and universities. They used the Competing Values Framework developed by Deshpande, Farley, and Webster (1993) to classify the cultures of Christian colleges. The sample populations included chief academic officers and directors of institutional research with the thinking that their roles would support accurate responses for determining the culture type. The overall number of institutions surveyed was 1,912 institutions ranging in size and type in terms of public, private independent, and Christian institutions (Obenchain et al., (2004). Organizational type and organizational culture were the independent variables used to predict levels of organizational innovation. The five types of culture included clan, adhocracy, market, hierarchy, and no dominant type. Obenchain et al. (2004) found that “Christian institutions are more innovative than independent private institutions and less innovative than public institutions” (p. 35).

Additionally, Obenchain et al. (2004) found that from the sample of Christian institutions surveyed, the clan culture was the dominant organizational type identified and that this may be a hindrance for innovation. One limitation of this study is that it does not account for the unique cultural factors that may be involved in a private Christian college as it is focused on four types to classify all institutions. This information is helpful for understanding some broad generalities regarding cultural types within higher education and furthers the assertions of Christian higher education scholars who have observed the financial pressures that challenge Christian institutions in their “struggle to preserve the history, tradition, and distinctive cultures of their organizations resulting in focusing more on the market than faithfulness to mission (Adrian, 1997; as cited in Obenchain et al., 2004, p. 31; Andringa, 2009; Dockery & Gushee, 2002).

Upon review of the organizational culture literature on Christian higher education, there is clearly a gap in the literature. None of the above studies attempted to provide a context-specific description of the organizational culture. All of the above mentioned studies were conducted from a single perspective. As a result, none of the above studies provided a fragmented, differentiated, and integrated perspective to accurately describe the realities of the institutional cultures that were studied. A study that embraces the three perspective approach and seeks to capture the realities of the cultural dynamics of a financially stressed Christian college is needed to meet a need in the literature.

Networks and Organizational Culture

The emerging field of network leadership has enabled researchers to better understand the informal interactions that emerge to shape group dynamics (Schreiber &

Carley, 2008). This field of study recognizes the complex and multiple dynamic realities of leadership within an organization and places the emphasis on the collective group dynamic as opposed to traditional notions of an individual leader (Marion, 2008). Schreiber and Carley (2008) found “that network leadership enables productive collective action through cultures which are focused on informal network dynamics and on integrating informal outcomes with the formal system” (Schreiber & Carley, 2008, p. 326). Subsequently, the focus of network leadership has been on understanding the influencers within the network and how informal leadership and formal leadership can be integrated (Schreiber & Carley, 2008).

Research is emerging that links organizational culture with social networks (Carley, 1999; Hill, 1998; Hill & Carley, 2008; Schreiber & Carley, 2008; Stevenson & Bartunek, 1996). SNA is based on the assumption that “the details of any particular culture are determined by an underlying system of relations” (Kilduff & Corley, 2000, p. 211). In one example, researchers focused on “people’s interpretations of such cultural artifacts as goals, slogans, myths, and stories” (Monge & Eisenberg, 1987).

DNA is a related methodology that recognized the importance of relationships within the network but also recognized the network is dynamic and that it changes (Carley, 2003). Carley and Hill (2001) stated that through a knowledge level perspective, “characterizations of culture, norms, values, stories, goals, and ambience, are artifacts that emerge from the changing pattern of knowledge and interaction in the organization” (Carley & Hill, 2001, p. 3). Through dynamic network analysis, Carley and Hill (2001) suggested that we can understand and predict organizational behavior by understanding

the social relationships and knowledge development. Further, Carley and Hill (2001) pointed out that traditional understandings of culture have assumed shared values while sometimes neglecting the possibility of multiple interpretations (Martin, 2002). Carley and Hill (2001) explained that culture can embrace multiple viewpoints through this approach. Carley and Hill (2001) stated:

This process of adding or dropping particular nodes and relationships from the network results in access to knowledge (experiences, beliefs, basic assumptions, etc.) possessed by other individuals in their networks. As knowledge diffuses through this network culture is created and maintained. Culture is thus a product of knowledge diffusion. Unlike knowledge, culture is a distributed object. As knowledge is communicated in the context of social relationships among members culture is created and maintained. As culture is a product of knowledge, as knowledge changes with the addition or dropping of nodes and relations, culture changes. As such the nature of culture is dynamic and constantly in the process of being negotiated. Consensus observed in an organization's cultures is simply a tentative answer to a problem that can be reaffirmed or renegotiated as organizational members see fit. (Carley & Hill, 2001, p. 10)

Utilizing the dynamic network approach, Hanson (2009) focused on the development of an institution's ethics logic and its capacity to bring about ethics reform. With a similar methodological framework, Young (2010) focused on understanding the interactive dynamics of student athletes to bring about increased reform to improve the lives of student athletes within both the athletic and academic cultures of higher

education. These provided examples of how a DNA offers a nonlinear approach to understanding a phenomenon.

The significance of the roles people play within networks is highlighted by Kuh and Whitt (1988):

Role orientation is the tendency to associate with others who are like oneself and to behave in a manner compatible with the group's values and beliefs. In a sense, role orientation is a bridge between personality and formal behavioral expectations in a collegiate setting and may be a more appropriate concept than subculture for categorizing students and, by extension, faculty and other groups. (Kuh & Whitt, 1988, p. 52)

Through understanding the roles, tasks, and beliefs of people within the network structure, the culture can be better understood.

Methodological Approaches in the Literature

Quantitative, qualitative, mixed methods, and hybrids have been developed as methodologies for studying organizations with a cultural construct (Hill, 1998; Hill & Carley 2009; Carley, 1999; Denison, 1990; Kilduff & Corley, 2000; Martin, 2002; Schneider et al, 2011). In light of the social constructionist epistemology focusing on a symbolic interaction, a grounded theory based approach utilizing DNA theory to organizational studies presents an opportunity to explore uncharted territory for developing an understanding of the dynamics occurring at a small Christian college. The nonlinear DNA approach also allows the researcher to analyze the three perspectives approach to culture (Martin, 2002) and a similar approach has been done by Hill and

Carley (2008) who combined social network analysis with the three perspectives of culture to understand the values of a temporary placement firm. Similarly, the DNA methodological approach has been used to explore matters related to ethics at a college (Hanson, 2009), to uncover the student-athlete experience at a university (Young, 2010), and to understand vision in complex organizations (Christiansen, 2011). In all four instances referenced (Hill & Carley, 2008; Christiansen, 2011; Hanson, 2009; Young, 2010), the exploratory nature of a network analysis applied to a particular context has proven to yield a deeper understanding of the issues under investigation.

Summary of Literature Review

This literature review has supported the guiding questions for this study. The guiding question is: How do the interactions and interdependencies of a small, private, faith-based, LAC with work-related agents and other entities within the institution influence the cultural dynamic? Supporting questions include:

1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?
2. What cultural clusters at the targeted LAC emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?
3. How does the structure of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?

5. How do the interactions of resources and other entities within the network influence the cultural dynamic?

Support for these guiding questions was included in the review of the literature beginning with a theoretical and conceptual review of the literature on organizational culture with treatment given to the historical backdrop and the importance of precision in terms used to describe culture research. Definitions were reviewed along with a conceptual framework identified by Martin (2002) that can assist in the scholarly critique of *organizational culture* research. The usefulness of artifacts, symbols, and cultural forms was identified in the culture research providing a foundation for how to begin a descriptive study of a particular culture. Moving from a general review of culture theory and concepts, the literature review shifted to focusing on culture studies in higher education and briefly reviewed frameworks set forth for studies in higher education that have tended to be based on an *integration* and/or *differentiation* based approach while completely neglecting the *fragmentation* perspective. Upon the review of frameworks and traditional descriptions that have been used to study institutional culture in higher education, the literature reviewed became more specific to the area in focus for this study—Christian higher education.

The context of Christian higher education was set forth, and a critique of the organizational culture literature was provided that revealed a gap in the literature. Specifically, upon review, the culture scholarship on Christian higher education is missing a comprehensive description of the cultural dynamics of a small Christian college. While Cramer (2002) provided a qualitative description focusing on financial

transformation of an institution within the senior leadership, there are no studies that focus on the dynamics of a financially stressed institution. In addition, upon review of the culture studies in Christian higher education, no study to date has undertaken the task and challenge of capturing the realities of all three perspectives including integration, differentiation, and fragmentation.

Lastly, DNA was reviewed to understand how a methodology that emphasizes the understanding of networks can support a social constructionist perspective that seeks to understand the symbolic interactions of a culture research study. A DNA has the potential to uniquely embrace the three perspectives approach and therefore is the focus of the next chapter as the proposed methodology.

CHAPTER THREE

METHODOLOGY

Introduction

The purpose of this study is to explore how the cultural artifacts at a small private Christian college influence the interactive dynamics of the institution. The research design is based on DNA, a qualitative approach which allows one to develop a unique understanding of cultural dynamics at a small, faith-based LAC and for developing a theory based on the data. This methodology also enables exploration of the three perspectives approach to culture (Martin, 2002) in ways that are not possible with other analytical procedures.

This chapter begins with a review of the guiding research questions in this exploratory study, and it is followed by reviewing the research design aimed at providing a description based on a DNA. The discussion shifts to theory development followed by addressing objectivity and sensitivity issues. The chapter concludes with ethical considerations including the researcher's subjectivities and action steps to minimize bias in the data collection and analysis process.

Guiding Questions

Given the exploratory nature of this research, the intent of the research question is to “lead the researcher into the data where the issues and problems important to the persons, organizations, groups, and communities under investigation can be explored” (Corbin & Strauss, 2008, p. 25). The following question guided this study: How do the interactions and interdependencies of a small, private, faith-based, LAC with work-

related agents and other entities within the institution influence the cultural dynamic?

Supporting questions included:

1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?
2. What cultural clusters at the targeted LAC emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?
3. How does the structure of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?
5. How do the interactions of resources and other entities within the network influence the cultural dynamic?

These questions are exploratory and are consequently best answered with qualitative procedures (Corbin & Strauss, 2008). Creswell (2007) stated that qualitative research is especially appropriate for studying groups, for identifying and describing the complexities of issues, and for understanding the interactions of people—conditions that are implicit in the guiding questions. For this study, a combined social construction and interpretivist epistemological approach was most appropriate because the focus of this study was on the interactions (Crotty, 1998; Blumer, 1969; Mead, 1936) that form culture at the group level as opposed to a constructivist emphasis on the individual (Crotty, 1998). A combination of qualitative methods was used for analyzing respondent

perceptions (Corbin & Strauss, 2008; Creswell, 2007) and qualitative procedures for analyzing social network dynamics.

Research Design

Overview

The framework for my research design included a multi-faceted exploratory approach similar to prior network analysis research designs (Hanson, 2009; Hill, 1998; Young, 2010; Christiansen, 2011). Techniques included in the data collection phase were observations, structured interviews, and a questionnaire. First, observations and preliminary data were used to develop predetermined thematic categories as described in Table 3.1. These predetermined categories were then used to develop the structured interview. The structured interview identified the emergent participant realities which were coded and categorized to develop a questionnaire for use in the network analysis phase of the research. The network was analyzed using the ORA program developed at Carnegie Mellon University. The data was analyzed for clustering patterns that indicate the nature of cultural groupings, for interactions among clusters and individuals, for various statistics that define the nature of clustering and the distribution of informal leadership in the system. Finally, several simulations were conducted to identify the impact of various artifacts on cultural dynamics.

Participants and Setting

The setting for this research was a small, private, Christian, LAC offering bachelor and master level degrees located in the Southeast region of the United States. The sample population for this study was all full-time faculty and staff of Southern

Christian College (SCC; a pseudonym). SCC is comprised of a Traditional undergraduate LAC program and an Adult Studies program. The Traditional program has one primary location and a second campus location approximately eight minutes away when travelling by car. SCC originated as a four-year preparatory school and two-year college in 1916. The primary Traditional campus had served as a four-year institution originally from 1945 to 1959 at which point it returned to being a junior college. In 1986, the Traditional campus returned to being a four-year baccalaureate institution which it remains through 2011. The Adult Studies program was implemented for the institution as a revenue generating program and was launched in 1994 at one location. During the past 17 years, the Adult Studies program has expanded to three locations within a two-hour driving distance of the Traditional program location. Collectively, SCC has four locations.

Data Collection Procedures

The data collection process for this study was two-fold and included observations (Creswell, 2003) and conversations to inform the structured interview (Fontana & Frey, 1994) and a questionnaire (Christiansen, 2011; Hanson, 2009; Young, 2010). The predetermined thematic categories in Table 3.1 were based on a combination of the organizational culture literature (Martin, 2002), network literature (Schreiber & Carley, 2007), and observations and conversations with employees at the field site (Creswell, 2003).

Table 3.1

Predetermined Thematic Categories

Category	Explanation
Agent	Individual full-time employee of LAC
Goals	The goals or accomplishments individual agents hope to achieve while working for LAC
Location	Locations where work-related tasks and activities take place
Pressures	The pressures or stress felt by an employee related to work
Tasks	The major tasks conducted by employees to accomplish the work of the college
Resources	The people, tools, and materials necessary for carrying out work-related tasks
Informal Activities	The extra-curricular activities related to work
Internal Influences	The people groups, departments, policies, and artifacts within the organization that are perceived to shape the institutional culture
External Influences	The outside forces that most shape the institutional culture
Knowledge	The type of information that is important to understand in order to perform work-related tasks
Formal Values	The official beliefs of the institution that shape and guide the culture
Informal Values	The unspoken beliefs and values that are not officially written anywhere but are considered normative practice

Structured Interview

The purpose of the structured interviews was to gather data based on participant realities (Fontana & Frey, 1994) and to identify emergent themes that would then inform the development of a questionnaire that was issued to the entire population (Christiansen, 2011; Hanson, 2009; Young, 2010). The development of the structured interview has been based upon an instrument used previously on studies using a similar methodology based on Young (2010) and Hanson (2009). Participants were asked to write their responses to the open ended questions. Open ended questions are considered a useful tool for gaining descriptive responses (Morse, 2000) which was helpful in this methodology for coding to inform the development of the questionnaire. Based on the comments, the interviewer reserved the opportunity to ask follow-up questions for clarification based on the interviewee's written responses.

The theoretical sample for this study was ultimately aimed towards the development of a questionnaire in Part 2 of the study that would embrace the complexities of the cultural dynamics of the institution. To this end, the theoretical sample for the structured interview was administered to individuals from every division. In addition, considerations were made for attributes such as age, employment longevity, gender, and at least one member of functional area general role within the organizational hierarchy was represented. The structured interviews were administered to a sample of the population that totaled 30 respondents which enabled the researcher to reach a point of saturation (Corbin & Strauss, 2008).

Questionnaire

To address the proposed research questions, a questionnaire was issued to the full-time employees of the selected organization to examine the network dynamics of the institution's organizational culture related to attributes, tasks, values, and beliefs based on the meta-matrix framework (Schreiber & Carley, 2007). The meta-matrix provides the framework for the researcher to identify required matrices based on the research context for then inputting the collected data and utilizing DNA tools such as ORA are described in-depth under the DNA subheading.

The questionnaire was pilot tested with individuals who are not members of the organization being researched. The questionnaire required approximately 30 minutes or less to complete. Names were collected to insure accurate entry into ORA, anonymized, and no identifying data was reported to the organization being researched or used in any publication as a result of this study. Upon approval from the Clemson University Institutional Review Board, the questionnaire was implemented at the field site. The questionnaire was administered using a web-based tool and was open for responses for approximately three weeks with reminder emails sent to potential respondents to encourage and maximize responses. An incentive of a free lunch was offered to all individuals who complete the questionnaire. To account for internal validity, member checking and peer debriefing (Creswell, 2003) assisted in ensuring the accuracy of the questions and applicability of the questions to all employees within the organization under investigation.

Data Analysis Procedures

Questionnaire data from the second level analysis was entered into the ORA toolkit to conduct the DNA. A description of the findings was developed. Following the steps outlined by Corbin and Strauss (2008) the processes described was analyzed to begin conceptualizing categories or themes observed in the data. Based on the analysis, a model was developed.

Once the theory begins to emerge, Corbin and Strauss (2008) outlined how the researcher should proceed with the process of refining the theory, which involves:

- A) Reviewing the scheme for internal consistency and for gaps in logic,
- B) Filling in poorly developed categories and trimming excess
- C) Validating the scheme (Corbin & Strauss, 2008, p. 109)

During this process, depending on how the theory was derived from the data, the goal for the researcher was to reach a point of saturation in the data. Depending upon the findings, observations were employed to further make sense of the concepts and/or emergent theory found in the data (Corbin & Strauss, 2008). Corbin and Strauss (2008) stated:

Integration is the final step of analysis for researchers whose research aim is theory building. Integration is probably the most difficult part of doing analysis because it requires sifting and sorting through all the memos and looking for cues on how all the categories fit together. Rereading memos, creating the story line, doing diagrams, and just plain thinking are all techniques that analysts can use to help them arrive at final integration. (Corbin & Strauss, 2008, p. 274)

Dynamic Network Analysis

DNA provided a multi-dimensional network methodology that was useful for understanding network dynamics related to a particular phenomenon. Carley (2003) explained that “Traditionally, SNA has focused on small, bounded networks, with 2-3 types of links (such as friendship and advice) among one type of node (such as people), at one point in time, with close to perfect information.” (p. 3). In other words, traditional social networking has provided a flat one-dimensional view of a network with a central focus on the social relationships within the network. DNA extends SNA in several ways. First, it considers larger networks and develops the capacity to consider multiple nodes and dynamic networks as opposed to static networks. As an extension of SNA, DNA offered three developments that include “(1) the meta-matrix, (2) treating ties as probabilistic, and (3) combining social networks with cognitive science and multi-agent systems” (Carley, 2003, p. 3).

The Meta-Matrix

The multiple levels explored by DNA interact to constitute a meta-matrix. Levels include agent by agent networks, agent by task networks, and so on (see Table 3.1). A meta-matrix is “a multi-color, multiplex representation of the entities and the connections among them” (Carley, 2003, p. 3). Carley (2003) explained that “the entities of interest are people, knowledge/resources, events/tasks, and organizations” (p. 3). The meta-matrix helps researchers see how a change in one level, or network (such as an agent by agent network), can affect changes in another network (such as a task by knowledge network; Carley, 2003). In addition, the meta-matrix allows researchers to see processes

and changes where traditional SNA simply showed representation and method (Carley, 2003).

In turn, Carley and Frantz (2009) stated that “the meta-network provides a snapshot of the organization at a particular point in time and provides insight into the vulnerabilities and strengths of the organization” (p. 724). A meta-network provides a picture “of relations linking the people, resources, knowledge, tasks, locations, and norms/beliefs, along with the processes by which these networks change and evolve” (Carley & Frantz, 2009, p. 724). This approach assumed that “within organizations it is the norm that things change: the rules or processes, the personnel, the resources, the knowledge, tasks, and sometimes even the locations change” (Carley & Frantz, 2009, p. 724).

To prepare for the DNA, the artifacts identified in the first stage of research were translated into questions that address multiple dimensions of perceived reality. Table 3.1 exhibits the different dimensions available with ORA; the bold cells represent data that were needed to address the research questions for this study. Schreiber and Carley (2007) defined the meta-matrix as “a theoretical framework of network structure and change as well as schema for storing data that is used for input to the other DNA tools” (p. 302). Nodes can include “people, technologies, events, knowledge, and organizations” (p. 302). Schreiber and Carley (2007) define relations as including “friendship, advice, resource-access, task assignment and participation” (p. 302). The meta-matrix captures the complexity of these relationships by combining the nodes and the relations as depicted in Figure 3.1.

Figure 3.1

The Multiple Dimensions of Dynamic Network Analysis (from Schreiber and Carley, 2007)

	<i>People/ Agents</i>	<i>Knowledge/ Resources</i>	<i>Tasks/ Events</i>	<i>Groups/ Organizations</i>
<i>People/ Agents</i>	Social Network	Knowledge/ Resource Network	Assignment Network	Membership Network
<i>Knowledge/ Resources</i>		Information/ Substitutes Network	Needs Network	Core Capabilities
<i>Tasks/ Events</i>			Precedence Ordering	Institutional Relations
<i>Groups/ Organizations</i>				Inter-Organizational Network

On both the outside column and row, there is a particular node type. The node types run on both the columns and the rows because there are various types of relations that can exist between them. For example, the people x people nodes form what is called a social network which describes one type of relationship between two nodes.

Simultaneously, there can be people x knowledge node relationship. Schreiber and Carley (2007) noted that the node relationships described in the meta-matrix are not independent but rather are interdependent; for example, the people x knowledge network is influenced by the people x people network and vice versa. The meta-matrix provides the framework for the researcher to identify required matrices based on the research context and then inputting the collected data and utilizing DNA tools such as ORA. The questionnaire that was generated for my research from this table (and from the research questions) is available in Appendix K. For the purposes of this study, the meta-matrix

included agents (employees), knowledge, tasks, groups (clusters), locations, activities, influences, and beliefs (a form of belief).

Organizational Risk Analyzer (ORA)

ORA is “a software program that computes traditional social network, dynamic network, and link analysis metrics on single and meta-network data. It also allows for traditional node-link and advanced visualizations and user editing of the meta-network data as well as providing several other aids for advanced analysis, including error detection, and what-if analysis using simulation tools” (Carley & Frantz, 2009, p. 746). ORA serves as the toolkit for applying the DNA methodology assisted in computations for developing a description of a networked system and then deducing a theory from the data. In other words, “data can be entered into an Excel spreadsheet [as, for example, agent by agent matrices] and saved as a CSV file and transported into ORA or entered directly into ORA Editor” (Young, 2010, p. 52). ORA calculates influential agents, distinct groups and subgroups, and the threats to the network based on the information submitted. ORA, then, presents data in ways that demonstrate meta-network interactions with features that allow the research to identify specific aspects and dynamics of the meta-network. Table 3.2 describes how ORA as part of the DNA methodology assisted in answering the guiding research question.

Table 3.2

Application of Guiding Questions to ORA

Supporting Questions	Method	Organizational Risk Analyzer Tool
1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?	Dynamic Network Analysis	The Visualizer -Applies the meta-matrix concepts graphically Key Entry Report (Cagley, 2010) -Identifies critical entities and groups based on position in the network
2. What cultural clusters at the targeted Liberal Arts College (LAC) emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?	Dynamic Network Analysis	Newman's grouping algorithm (2006) -Identifies and visualizes clusters within large networks Key Entry Report (Cagley, 2010) -Identifies critical entities and groups based on position in the network
3. How does the structure of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?	Dynamic Network Analysis	Immediate Impact Simulations -Provides what-if analysis to understand network dynamics of subgroups through filtering or changing the network All Measures Report -Computes collection of measures to understand network structure, influences, and belief values Belief Propagation Simulations (Friedkin, 1998) -Identifies initial contention and dispersion for beliefs and provides a measure of how the variation of the beliefs change over time. Near Term simulations (Lim & Cagley, 1997) -shows the diffusion of knowledge in network over time.
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?	Dynamic Network Analysis	Immediate Impact Simulations -Provides what-if analysis to understand network dynamics of subgroups through filtering or changing the network All Measures Report -Computes collection of measures to understand network structure, influences, and belief values Belief Propagation Simulations (Friedkin, 1998) -Identifies initial contention and dispersion for beliefs and provides a measure of how the variation of the beliefs change over time. Near Term simulations (Lim & Cagley, 1997) -shows the diffusion of knowledge in network over time.
5. How do the interactions of resources and other entities within the network influence the cultural dynamic?	Dynamic Network Analysis	The Visualizer -Applies the meta-matrix concepts graphically All Measures Report -Computes collection of measures to understand network structure, influences, and belief values

The Visualizer

Building upon the framework of the meta-matrix, the ORA Visualizer is a tool that applies the meta-matrix concepts pictorially through creating a “graphical model of a Meta-Network comprised of links and nodes” (Carley, 2010). The Visualizer has several features and allows the researcher to interact with the created Meta-Network model through “removing key actors, isolating certain links, focusing on any particular relationship between two nodes using tools” (Carley, 2010). For the purposes of this study, the Visualizer was particularly helpful for identifying groups or subcultures within the institutions under investigation.

Newman’s Grouping Algorithm

Newman’s grouping algorithm (2006) is a tool within ORA that is designed to identify and visualize clusters within large networks (ORA, 2010). For this study, the ability to identify clusters within the network was helpful for understanding the influence of interactions between agents and entities which is core the guiding research question. Newman’s groupings are based on a comparison of the “number of links within a cluster or between clusters to the expected number of links in a random grouping” (Young, 2010, p. 55). The comparison generated a measure called modularity (Young, 2010); depending on the value of the measurement, a positive value can indicate “the possible presence of community structure” (Newman, 2006, p. 8578).

Simulations

With different cultural dynamics or conditions within the institution being studied, Simulations were run within ORA to understand how different cultural

conditions affect knowledge diffusion and task efficiency. Schreiber and Carley (2007) stated:

Simulation allows for what-if scenarios or strategic interventions to forecast how these interventions affect the natural evolution of the network and emergent outcomes. Results of the simulation can also be used for theory creation. (p. 307)

Simulations provide researchers with a snapshot of potential scenarios to enhance understanding and decisions without running the inherent risks potential losses from actually implementing the potential intervention (Schreiber & Carley, 2007).

The Simulation tool was useful for understanding the cultural dynamics related to organizational learning by accounting for the diversity of agents and their interactions within a complex organization (Schreiber & Carley, 2007). For this study, Immediate Impact simulations and Belief Propagation simulations were run to consider what-if scenarios.

Immediate Impact

Immediate Impact simulations provide a way to isolate particular nodes within a network by filtering out other nodes (ORA, 2010). Immediate Impact allows the user to then compare and contrast the newly created hypothetical network in light of the change and provides statistics for this comparison (ORA, 2010). Other measures and reports like the All Measures Report and Key Entity Report can be run using the newly created network to further understand the what-if scenarios if a particular change were to occur in the network.

Belief Propagation

Belief Propagation was a tool within ORA designed to estimate how beliefs are spread throughout a social network (Carley, 2010). The report that was generated identified the most common beliefs shared by people in the network, the beliefs with the highest coefficient—known as the Gini coefficient, the most strongly held beliefs, the most likely to change beliefs, the most neutral individuals, and the most opinionated individuals in the meta-network (Carley, 2010). This tool yielded valuable insights for developing a descriptive understanding of how religion influences the beliefs of a faith-based culture as articulated in the guiding research questions.

Grounded Theory

Creswell (2007) stated, “the intent of a grounded theory is to move beyond description and to generate or discover theory, an abstract analytical schema or process [or action or interaction; Strauss & Corbin, 1998]” (Creswell, 2007, p. 62-63). Part of the key concept is that theory emerged from the data acquired through the research process (Creswell, 2007) and the focus was on developing an explanation or description of an interaction or phenomenon (Creswell, 2007). Creswell (2007) stated that:

Grounded theory is a good design to use when a theory is not available to explain a process. The literature may have models available, but they were developed and tested on samples and populations other than those of interest to the qualitative researcher. Also, theories may be present, but they are incomplete because they do not address potentially valuable variables of interest to the researcher. On the practical side, a theory may be needed to explain how people are experiencing a

phenomenon, and the grounded theory developed by the researcher will provide such a general framework. (Creswell, 2007, p. 66)

Currently there are no theories regarding the cultural dynamics and processes related to small, private, faith-based, liberal arts institutions. Corbin and Strauss (1990) stated:

The procedures of grounded theory are designed to develop a well integrated set of concepts that provide a thorough theoretical explanation of social phenomena under study. A grounded theory should explain as well as describe. It may also implicitly give some degree of predictability, but only with regard to specific conditions. (Corbin & Strauss, 1990, p. 5)

Corbin and Strauss (1990) explained two important principles for grounded theory:

1. Phenomena do not change in and of themselves but rather they change in response to conditions.
2. Grounded theory assumes that agents have some level of control over their responses to conditions.

Corbin and Strauss (1990) explained that in grounded theory, the data collection process can involve anything that illuminated the questions being explored, and the information was coded in a consistent manner.

Open and Axial Coding

Corbin and Strauss (2008) noted that the processes of open coding and axial coding are intertwined in that the researcher is in an ongoing process of both identifying categories, breaking apart the data, and then putting it back together to relate key

concepts. Open coding is the initial process of looking at the data to identify categories (Creswell, 2007). Open coding involves the process of “breaking data apart and delineating concepts to stand for blocks of raw data. At the same time, one is qualifying those concepts in terms of their properties and dimensions” (Corbin & Strauss, 2008, p. 195) and breaking these categories apart through a process referred to as “Crosscutting or relating concepts to each other” (Corbin & Strauss, 2008, p. 198), and then re-assembling the blocks together.

Objectivity and Sensitivity

Understanding the potential biases of both the participants and me was helpful to mitigate the potential for unfair or unethical interpretations for participants involved in and impacted by the study. Corbin and Strauss (2008) discussed the importance of reflexivity and awareness of the subjectivities and biases influencing both the participants and the researcher at a given sight in support of the above discussion. Corbin and Strauss (2008) stated that the use of personal experience can be beneficial insofar as the researcher does not allow personal opinions to distort the interpretation of the data. After all, the reality is that all research involves some level of bias, and it is impossible to completely remove the subjectivity of the researcher (Corbin & Strauss, 2008). Therefore, Corbin and Strauss (2008) suggested an alternative process to navigate the challenges of personal bias that influence interpretation of the data by encouraging researchers to appropriately embrace biases (Corbin & Strauss, 2008).

First, Corbin and Strauss (2008) suggested that through the exercise of sensitivity as a tool for ongoing reflexive efforts to conduct research ethically and with integrity. I

anticipate sensitivity being an important virtue in my research as undoubtedly a potential criticism of my research is that my personal experience sets me too close to the data which could lead to interpretations that go beyond the data observed. Conversely, based on the work of Corbin and Strauss (2008), my close proximity to the data is arguably one of the greatest potential strengths as it could allow me to make interpretations far quicker than a researcher brand new to a site. Corbin and Strauss (2008) outlined recommendations for maintaining sensitivity to the potential dangers of close proximity to the research site. Lastly, similar to Creswell's recommendation to use forms of validation of the data, Corbin and Strauss (2008) recommended continuously comparing the researcher's experience to what the observed data is actually saying. If there are discrepancies, the researcher must go with the data. Corbin and Strauss (2008) also warned that it is not about the researcher's perception, but rather the research is about what the data and participant members are saying.

With this sensitivity in mind, the researcher is freed to reflexively observe and analyze data while maintaining an ongoing log that recognizes when the researcher's perceptions may blur understanding what the data is indicates.

Ethical Considerations

The focus of this study was to understand the culture of a faith-based institution through the perspective of the employees of the institution. Permission to conduct this study was acquired through the Institutional Review Board at Clemson University. In addition, a letter of approval from a senior ranking official to conduct the research at the particular institution was solicited since an active institutional review board at the site

was not in place. The analysis required the collection of names in order to properly prepare the data, the names were anonymized (names replaced with codes) once the data was formatted and secure. No identifying data (including demographic information that might identify an individual) were reported to the institution being researched or used in any publication or presentation that might result from this study. The identity of the participating college was protected.

The intent of this research is to inform practitioners and scholars with a description of the interactive dynamics related to the culture one particular faith-based institution and consistent with culture research, the emphasis is on the collective group dynamics and not on individuals. Consistent with prior studies utilizing this methodology, the emphasis is on describing the methodological process and ethical considerations were designed with an emphasis on how the study was conducted (Hanson, 2009; Young, 2010; Christiansen, 2011).

CHAPTER FOUR

FINDINGS

Introduction

The purpose of this study is to explore how cultural artifacts at a small, private Christian college influence the interactive dynamics of the institution. The research design is based on dynamic network analysis, a qualitative methodology that helps to develop an understanding of social dynamics in a system and is based on complexity theory grounded in the data. This methodology enables exploration of Martin's (2002) Three Perspectives approach to culture in ways that are not possible with other analytical procedures.

Guiding Questions

Given the exploratory nature of this study, the intent of the research question is to “lead the researcher into the data where the issues and problems important to the persons, organizations, groups, and communities under investigation can be explored” (Corbin & Strauss, 2008, p. 25). The following question will guide this study: How do the interactions and interdependencies among constituent agents and other entities at a small, private, faith-based, liberal arts college (LAC) influence the cultural dynamics of the school? Supporting questions include:

1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?

2. What cultural clusters at the targeted LAC emerge from the interactions of agent-level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?
3. How does the structure of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?
5. How do the interactions of resources and other entities within the network influence the cultural dynamic?

Findings

The Meta-Network

For this study, I created a Christian College Culture (CCC) Meta-Network using 16 matrices, or networks of relationships. The elements (or nodes) of the network were derived from 30 structured interviews at Southern Christian College (SCC, a pseudonym). The responses to the structured survey resulted in the identification of 22 activities nodes, 16 external influence nodes, 20 formal values nodes, 23 informal values nodes, 51 internal influences nodes, 18 categories of knowledge nodes, 17 location nodes, 10 leadership dynamics nodes, 30 pressures nodes, 21 resources nodes, 19 different roles nodes, and 23 task nodes. These nodes were then organized into 16 matrices (e.g., an agent by activities matrix) and reduced to questions that were used to populate the matrices (who do you interact with, what tasks do you perform, what do you believe, etc.). Fourteen of these matrices reflected relationships between full-time employees and

elements of the organizational culture (i.e. agent by formal values network, informal values network, activities, network, etc.). The remaining two matrices were (a) a capability network based on the tasks employees perform and accessible resources, and (b) a knowledge network comprised of knowledge required to do particular tasks. There were 154 full-time employees who interact with each other to form agent by agent networks or agent by entity networks. The study was validated by 139 respondents out of 154 possible for an overall response rate of 90 percent. The values for these node classes were then input into the Organizational Risk Analyzer version 2.2.8 (ORA) for analysis.

Table 4.1 reflects a generally even spread in the age range of the employees surveyed. This distribution suggests a potentially rich and heterogeneous group of employees.

Table 4.1

Age Range of Employees

Age Range	18-30	31-42	43-55	55 and up
Employees in Range	28	36	38	37
Percentage	20%	26%	27.3%	26.6%

Table 4.2 shows the tenure of the respondents at SCC. When the first two tenure categories are combined (0 to 3 years plus 4 to 7 years), the research found find that 95 people, or 68% of the respondents, have worked for the institution for seven years or less. On review of the new positions created compared to employee turnover, there are very few new positions that have been created at this institution within the past seven years. And, with the economic downturn that began in 2008, there have been positions cut that

have not been filled. It appears, then, that high levels of employee turnover help explain the anomaly of low level tenure at the institution.

Table 4.2

Tenure of Respondents at the Institution

Tenure at Institution	0-3	4-7	8-11	12-15	16-19	20-23	24-27	28 or more
Total People	45	50	15	11	8	2	3	5
Percentage of Population	32%	36%	10.80%	8%	5.70%	1.40%	2%	3.60%

Table 4.3 denotes the breakdown of the respondents by role at the institution under investigation. Additionally, Table 4.4 shows an overall gender balance of respondents.

Table 4.3

Full Time Employee Role Distribution

Unit	Academic Affairs and Services	Registrar	Library	Faculty	Adult Studies Administration	Advancement
Responses	3	4	5	40	16	9
Population	4	4	5	46	21	10
Response %	75%	100%	100%	87%	76%	90%

Unit	Athletics	Finance Office	Enrollment Services	Facilities	Technology Department	Student Affairs	Total
Responses	13	6	9	17	6	11	139
Population	13	6	10	17	6	12	154
Response %	100%	100%	90%	100%	100%	92%	90%

Table 4.4 shows a nearly even split in responses by gender.

Table 4.4

Gender of Respondents

Female/Male	Percentage
72 women	52%
67 men	48%

Introduction to Question One

To review, the purpose of the study is to understand the cultural dynamics of a small, Christian LAC through a dynamic network analysis (DNA). As a religious institution, the first guiding question asked: What role does religion play in the beliefs and behaviors of the culture of a faith-based institution? A three-step process of inquiry was developed for answering this question.

Process of Inquiry

Phase 1

To answer this question, demographic data related specifically to the role of religion was presented based on the coded themes (nodes) that emerged from the structured interviews for this study. Additional sources of data included official documents of the institution such as the website, mission statement, stated institutional values, faith statement, academic catalog, institutional history, and student handbook. A third source of evidence came from focus group sessions conducted as part of the institutional strategic planning process. Themes were identified from these focus groups and supported response options related to internal and external influences in the Culture Questionnaire.

Phase 2

To understand the role of religion at SCC, the structured interview results were integrated into the matrix questionnaire that was issued to all full-time employees (see Appendix K). Questionnaire data was then prepared and uploaded into the ORA. Reports and analyses were run using ORA to understand the data. Notably, Key Entity reports were run which enabled the researcher to identify the central entities within the Meta-Network (those nodes that exhibited the highest numbers of direct and indirect links from agents and from other nodes). Several Key Entity Reports were run specifically to analyze the Formal Values Network, the Informal Values Network, and the religious themes that emerged. Other values related to the culture were also identified to better understand the role of religion within the culture of the small Christian college.

Phase 3

Last, using the Newman (2006) grouping algorithm in ORA's Visualizer, distinct clusters of values emerged within the CCC Meta-Network. These clusters helped to further identify the role of religion in terms of how it intersected with the subcultures or groups identified by ORA. In Part Three, the clusters are identified and described.

Religious Demographics

Table 4.5

Church Type for All Respondents

Reformed	Methodist	Baptist	Non-Denominational	Charismatic	Catholic	Other
67	4	38	16	4	5	5
48%	2.9%	27%	12%	3%	3.6%	3.6%

The results show that 48% of the respondents indicated affiliation with a reformed denomination, inclusive of a Presbyterian, Anglican, or Episcopalian church (see Table 4.5). This 48% reflects the historically reformed tradition of the institution, and in particular, its historical tie to the Presbyterian Church.

Nearly 27% of the respondents indicated that they attend a Baptist affiliated church (Table 4.6). Over one-tenth of respondents indicated attendance at a non-denominational church, and over eight percent combined attend a Charismatic, Methodist, or Catholic Church. Five respondents indicated attending a Catholic church, which is not typically considered part of the protestant evangelical movement but rather is considered a counter-movement. The mixture of several denominational types point to the diversity of church denominations and church traditions represented at this particular institution among its faculty and staff.

Table 4.6 documents a fairly homogenous group of faculty church memberships in the Traditional program. As a reminder, the Traditional program is the undergraduate, liberal arts, residential program that occurs at the core campus. As can be seen, most of these faculty are Reformed.

Table 4.6
The Church type for faculty serving in the Traditional program

Reformed	Baptist	Non-denominational	Methodist
25	2	2	1
83%	6.6%	6.6%	3.3%

Table 4.7 shows that the staff who serve in the Traditional campus are fairly balanced between Reformed and Baptist churchgoers, which together comprise nearly 80% of the staff population. Table 4.7 reflects the 74 staff respondents.

Table 4.7

The Church type for only staff serving in the Traditional program (does not include faculty)

Reformed	Baptist	Non-denominational	Methodist	Catholic	Charismatic	Other
30	27	10	1	1	2	3
41%	36%	14%	1%	1%	3%	4%

Overall, within the Traditional program on the core campus, over 80% of the staff and faculty attend Reformed, Baptist, and non-denominational churches. Table 4.8 reflects the responses of 110 agents who work full-time and are located at the Traditional campus.

Table 4.8

Church type for faculty and staff serving on Traditional Campus location

Reformed	Baptist	Non-denominational	Methodist	Catholic	Charismatic	Other
58	31	13	2	1	2	3
52%	28%	12%	2%	1%	2%	3%

The Adult Studies program includes staff and faculty who serve at four different locations including the traditional campus. Because the number of staff and faculty who serve the Adult Studies program is much smaller than the undergraduate program, the members of the Adult Studies operation was combined (25 members total) for analyzing

church type. It is noteworthy that the Adult Studies program was launched in 1994 with courses offered at a major metropolitan location. In 1996, the Adult Studies program launched an additional location, and in 2001, the administration building for the Adult Studies program was moved to a third location that was a few miles from the primary traditional campus location. Table 4.9 reveals a diverse group of religions within the Adult Studies program.

Table 4.9
Church type for staff and faculty within Adult Studies program

Reformed	Baptist	Non-denominational	Methodist	Catholic	Charismatic	Other
7	6	3	2	4	2	1
28%	24%	12%	8%	16%	8%	4%

Structured Interviews

Structured interviews can be a helpful tool for understanding the tacit knowledge that is assumed and embedded within an organization and for identifying nodes that will be used in the DNA. For this study, 30 structured interviews were conducted at the organization to draw out the latent content themes (Martin, 2002) of the culture. From these structured interviews, responses were coded and reviewed for emergent themes. The data collected from these structured interviews provided examples of the role of religion in the culture of a faith-based institution.

During the structured interviews, employees were asked, “What are the formal values that most shape Southern Christian College (i.e. religious beliefs, official written

statements, etc.)?” Based on the results, eight out of 20 nodes identified by respondents reflected the role religion plays in shaping formal values at the college (Table 4.10).

Table 4.10

Identified Religious Nodes (Formal Values) from Structured Interviews

Chapel and convocation program
Faith statement
Integration of faith and learning
Presbyterian heritage
Reformed tradition
Values Pyramid (levels in the pyramid emphasized Academic Excellence, Community, Honesty and Integrity, Truth, Biblical worldview)
Mission Statement
Educational Objectives

The mission statement was included in the questionnaire as a formal value for this particular institution as it contains explicit biblical language that clearly delineates the school’s religious distinctiveness. Also, the Educational Objectives were included as part of the *2010-11 Academic Catalog* as a formal value that emphasized religion. For example, the *2010-11 Academic Catalog* included the following religious statements in the preamble:

Approaching the integration of faith and learning from a Reformed, biblical perspective, faculty, staff, and students form a Christian community of learners that seeks to pursue the premise that all truth is God’s truth and explore the significance of this in the various academic disciplines. We are committed to a thorough exploration of the complementary relationship between biblical truth and academic inquiry. We openly embrace students of all cultures, races, and

faiths in an atmosphere of academic inquiry, and Christian love. (*Academic Catalog*, 2010, p. 15)

In addition, the Educational Objectives included the following statements:

Develop an informed, biblical worldview that includes the following:

- The sovereignty of God over all creation and knowledge
- A lifestyle of Christian service to others and the community

(*Academic Catalog*, 2010, p. 15)

A few other Educational Objectives included competencies in the development of communication skills and ethical decision making, but the religious language was clearly embedded within the Educational Objectives of the institution. Subsequently, references to the formal values as espoused through the Educational Objectives were assumed to be evidence of the role of religion at this faith-based institution.

To understand the informal values of SCC, respondents were asked on the questionnaire “What are the informal values and unspoken rules that most shape Southern Christian College (not officially written anywhere, but clearly considered normal practice)?” With this question, respondents identified 23 coded nodes, five of which were overt religious elements and related to the informal values of the institution. These included the following: (a) compassionate community that extends grace to both students and employees, (b) college-wide emails sharing prayer requests, celebrations (personal or professional), (c) integration of faith and learning, (d) motivation to work extra hours based on the faith-based mission of the institution, and (e) prayer or devotional is offered before event, class, meeting, etc.

To understand the central activities of SCC, respondents were asked on the questionnaire “What kind of informal activities related to work are you most likely to engage in (i.e. sharing a meal with fellow employees, attending music or sports events, etc.)?” The responses to this question yielded 23 nodes, and six of those nodes were explicitly religious. These included: (a) attending Chapel worship services, (b) special lectures, (c) participation in Fellowship of Christian Athletes services, (d) small group Bible studies, (e) attend the same church with fellow employees, and (f) church events with fellow employees.

In addition, data was collected from the institution’s strategic planning process that included a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis during the Spring and Fall of 2010. This SWOT analysis was used to develop two survey questions (subsequent nodes in ORA) related to perceived internal and external influences in the organization. Nearly 20% (10 out of 51) internal influences were religiously based. These supported and paralleled other already identified values and included: (a) chapel and convocation program, (b) Christian worldview and orientation, (c) faith integration in the classroom, (d) faith integration in co-curricular activities, (e) faith integration in administrative support services, (f) faith statement, and (g) institutional history.

With respect to external influences, four out of 16 forces were identified through the SWOT data that are of a religious nature and that applied to the questionnaire. These included the (a) Coalition of Christian Colleges and Universities, (b) local churches, (c)

denominational ties, and (d) a conference center located near the main campus of the institution.

The Role of Religious Themes

Based on the responses to the questionnaire, the data was prepared for analysis in ORA. A Key Entity Report was run identifying the Top Ten Formal Values within the Christian College Meta-Network. (Were this report run on the people networks, it would identify key informal leaders; in this analysis, then, this report identifies the key “informal leaders” among the values identified earlier in the structured interviews). Religious references showed up throughout the cultural analysis in various analytical reports and network clusters generated by ORA. The following Figure 4.1 identifies the Top Ten Formal Values involving religious references.

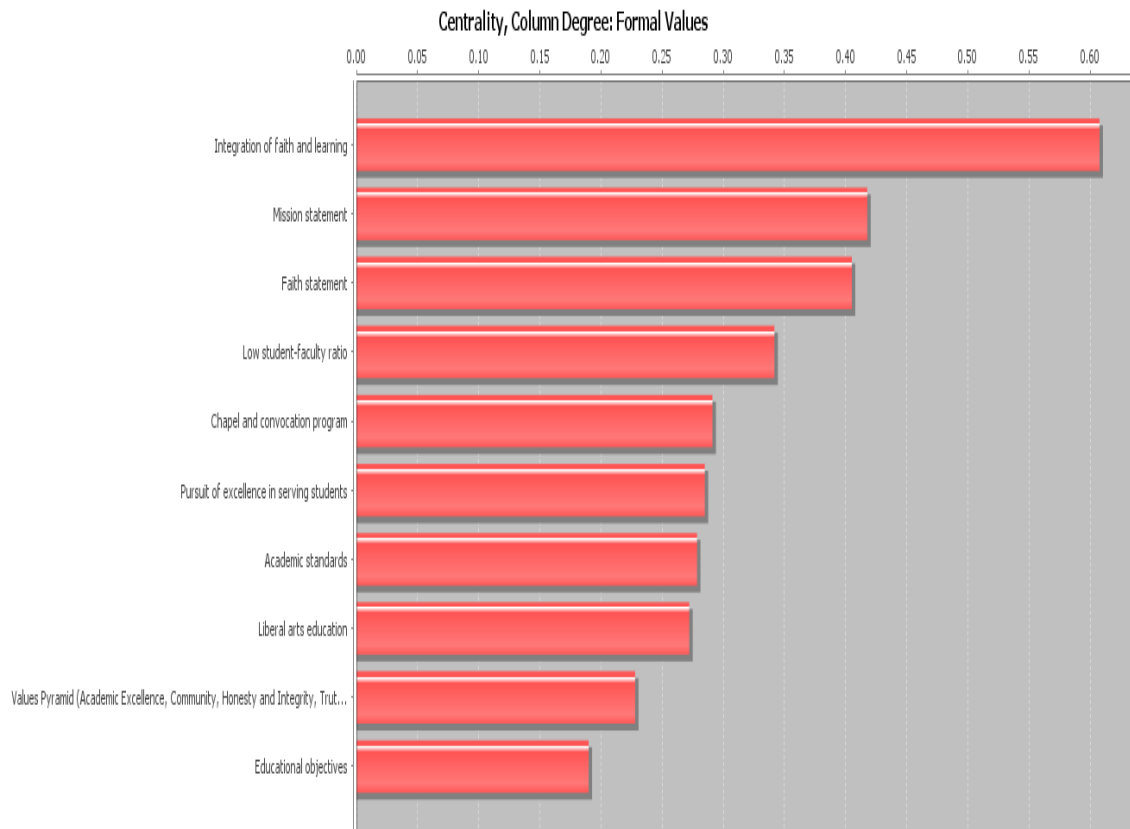


Figure 4.1
Top Ten Formal Values in the CCC Meta-Network

Beliefs related to religion showed up in six out of the top ten ranked formal values out of a total of 20 formal values that were identified and included in the questionnaire (see Figure 4.1). The top ranked religious formal values include: (a) faith integration, (b) institutional mission, (c) Faith statement, (d) worship services, (e) Values Pyramid, and (f) Educational objectives. These religious references point to the emphasis that employees place on religion within the explicit formal values of SCC.

For the informal values (see Figure 4.2), the role of religion emerged in at least three of the top ten informal values. These include compassionate community (the top ranked informal value), faith integration, and communication of prayer requests. Other

informal values that are associated with religion in the organization included the informal value, thrift—do more with less, which is an associated concept of biblical stewardship. The family-like atmosphere implies community as part of a biblical mandate that began in the gospel of Luke at the inception of the early church. Figure 4.2 shows the Top Ten Informal Values.

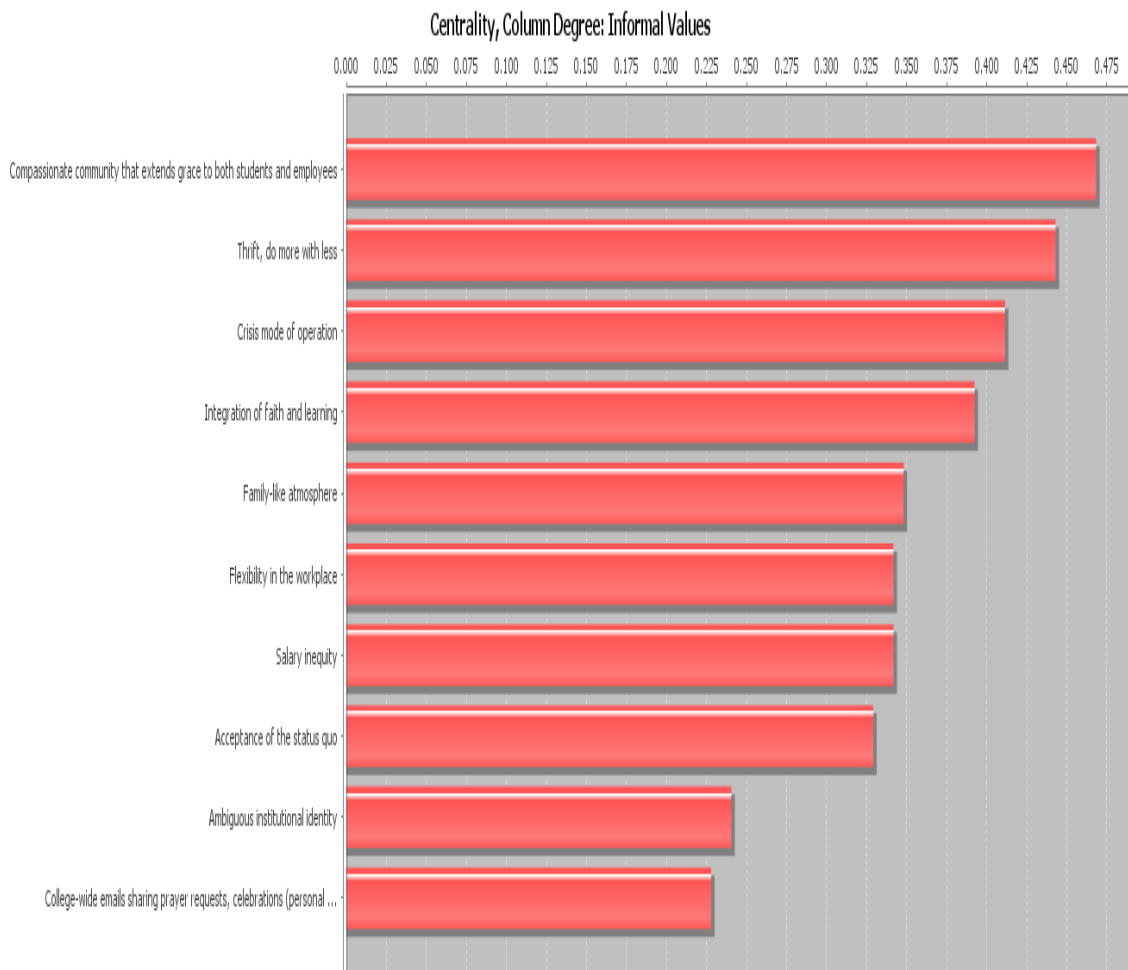


Figure 4.2
Top Ten Informal Values for CCC Meta-Network.

In the Activities Network (the informal, college-related activities people engage in), respondents likewise reported that religion plays an explicit role in at least five of the most frequent activities of full-time employees, as indicated in Table 4.11. In addition to serving as indicators of the role of religion, the Activities Network demonstrates cultural manifestations related to physical arrangements (Martin, 2002), and other activities that have shaped the culture of the school. It should be noted that some items that do not exhibit overt religious nodes may also implicitly be understood as a religious activity by members of SCC. This could be true of conversations, meals (communion), hiking (fellowship), and other activities.

Table 4.11

Ranked Activities (unscaled scores represent the number of links for the given node)

Activities	Centrality, Column Degree	Centrality, [unscaled]
Informal conversations with students	0.6899	109
Informal conversations with staff and faculty while walking through campus	0.677	107
Lunch with fellow employees on campus	0.513	81
Celebratory events (Christmas party, birthday party, etc.)	0.506	80
Share a meal with fellow employee(s) off-campus	0.468	74
Attend athletic events	0.348	55
Attend the same church with fellow employees	0.329	52
Catch up with people at the document center	0.323	51
Coffee breaks on or off-campus	0.285	45
Attend chapel and convocation	0.278	44
Attend special college lectures	0.259	41
Attend drama, music, theatre or other fine arts events	0.234	37
Financially contribute to the college after receiving paycheck	0.222	35
Email college-wide words of encouragement, affirmation, or personal thoughts	0.215	34
Church events with fellow employees	0.196	31
Exercise with fellow employees	0.108	17
Hiking with fellow employees	0.101	16
Bible study/small group with fellow employees	0.051	8
Playing golf with fellow employees	0.044	7
Attend FCA	0.032	5

Role of Religion in Cultural Clusters

Using the Newman's grouping algorithm (2006), cultural clusters for the Formal Values, Informal Values, and Informal Activities networks were identified. The following describes the findings for each set of clusters.

Cultural Clustering—Formal Values

There are five distinct clusters in the formal values network, and all five are influenced by religion. Based on the items that clustered together, a thematic label was identified to summarize or define each cluster. Table 4.12 presents the formal values (nodes) that align with each thematic category.

Table 4.12

Formal Values Groups

Formal Values		Thematic Category
Educational objectives	1	Educational values
Guidance from the Board of Trustees	1	
Professionalism is practiced	1	
Pursuit of excellence in serving students	1	
Student learning outcomes	1	
Low student-faculty ratio	2	Past and Present Tensions
Presbyterian heritage	2	
Revenue generating programs	2	
Salary structure	2	
Strategic Plan	2	
Academic standards	3	College Goals
Departmental goals	3	
Faith statement	3	
Mission statement	3	
Training and ongoing professional development	3	
Integration of faith and learning	4	Traditional Values
Liberal arts education	4	
Reformed tradition	4	
Values Pyramid (Academic Excellence, Community, Honesty and Integrity, Truth, Biblical Worldview)	4	
Chapel and convocation program	5	

Formal Values Group 1 linked 28 agents; it includes only one value, educational objectives, that could be considered religious in nature. The Educational Objectives of the college include several biblical nodes. The other nodes for Group 1 are (a) pursuit of excellence in serving students, (b) guidance from the Board of Trustees, (c) professionalism is practiced, and (d) student learning outcomes. This group could best be labeled as education-focused. The reason for the Board of Trustees being included in this cluster is likely due to its role as the final approval and decision-making authority for the execution of the educational mission of the institution.

Formal Values Group 2 includes 28 agents and has five nodes—one node being religious in focus. The recognition of the institution’s Presbyterian heritage in Formal Values Group 1 emerged as a key node; other values in this group include (a) revenue generating programs, (b) low student-faculty ratio, (c) salary structure, and (d) strategic plan. Formal Values Group 2 is best labeled “past and present tensions;” this captures theological, social, and financial pressures that affect the college now and in its past.

Formal Values Group 3 is the second largest of the clusters, with 30 agents linked by five nodes. The religious nodes for Group 3 include the faith statement and the mission statement. The other nodes include (a) departmental goals, (b) training and ongoing professional development, and (c) academic standards. This cluster was labeled college goals.

Formal Values Group 4 is the largest group with 37 agents and four nodes. Three of the four nodes are religious in nature. The religious nodes are reformed tradition, the Values Pyramid, and integration of faith and learning. The only other defining node for

this group is the formal value for a liberal arts education. This group was labeled, traditional values.

Formal Values Group 5 includes 12 members and centers around one theme: chapel and convocation programs. The chapel and convocation programs at SCC occur two times per week; they include music, a pastoral message, lecture, or some other medium considered to have educational value. This cluster was centered in the Traditional program and the one unifying formal value that defines this group as worship focused.

In summary, all five Formal Values clusters have at least one religious node. The two largest clusters were dominated by religious nodes. Religious values are clearly embedded in the Formal Values of the institution.

Cultural Clustering—Informal Values

Four distinct groups were identified in the informal values network. Three out of the four groups contain at least one or more religious elements, which aided in defining the group. Table 4.13 lists the informal values corresponding to each thematic category.

Table 4.13

Informal Values Clusters

Informal Values		Thematic Category
Ambiguous institutional identity	1	Critical Concern Counterculture
Conflict related to differences of opinion	1	
Conflict based on job related tasks	1	
Crisis mode of operation	1	
Don't rock the boat attitude	1	
Insufficient experience, skills, and training to accomplish job related tasks	1	
Acceptance of the status quo	2	Blending of Professional and Personal Life; Gemeinschaft
Blending of professional and personal life	2	
College-wide emails discussing opposing viewpoints	2	
College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	2	
College-wide emails sharing prayer requests, celebrations (personal or professional)	2	
College-wide emails to the "for sale" email list	2	
Compassionate community that extends grace to both students and employees	3	Faith and Family Atmosphere
Expectation to be fully committed	3	
Family-like atmosphere	3	
Flexibility in the workplace	3	
Integration of faith and learning	3	
Laid back and informal demeanor of students, staff, and faculty	3	
Motivation to work extra hours based on the faith-based mission of the institution	3	
Optimism for future	4	
Prayer or devotional is offered before event, class, meeting, etc.	4	

Informal Values Group 1 did not include any explicitly religious nodes and is the largest group (linking 44 agents) in the Informal Values network. The nodes for this

group include (a) crisis mode of operation; (b) insufficient experience, skills, and training to accomplish job related tasks; (c) conflict related to differences of opinion; (d) ambiguous institutional identity; (e) “don't rock the boat” attitude; (f) salary inequity; and (g) conflict based on job related tasks. This group identifies informal values related to mediocrity, constant crisis and lack of clarity in institutional identity. This group appears to long to see higher standards and movement toward excellence; they operate out of a critical concern countercultural perspective.

Informal Values Group 2 has 27 agents, with two religious nodes out of six defining characteristics. These religious nodes reflect the communal lexicon or language (Clark, 1996; Martin, 2002) identified through college-wide emails that share prayer requests, celebrations, and discussion of opposing viewpoints. The third node, blending of professional and personal life, arguably holds religious meaning for many in the institution due to shared religious activities inside and outside of the institution. The non-religious nodes are (a) college wide emails sharing work related information, (b) college-wide emails to the ‘for sale’ email list, and (c) the acceptance of the status quo. As a result of the nodes identified, this group is characterized by the blending of the professional and personal life, and is labeled, “Gemeinschaft” (community).

Informal Values Group 3 had 45 people and includes three religious nodes out of six total nodes. The religious nodes are: (a) compassionate community that extends grace to both students and employees, (b) motivation to work extra hours based on the faith-based mission of the institution, and (c) the integration of faith and learning. The other nodes for this group are: (a) flexibility in the workplace, (b) laid back and informal

demeanor of students, staff, and faculty, and (c) family like atmosphere. This group is defined by the family atmosphere that it observes and upholds, and is so labeled.

Informal Values Group 4 has 22 agents and includes one clearly religious node out of three total nodes. The defining religious node for Group 4 is tied to the act of prayer or devotional offered before event, class, meeting, etc. The other two nodes are thrift—do more with less, and a general optimism for the future. While there is a survivalist element to this group, it was defined by its hope for the future.

Cultural Clusterings—Activities

There are five distinct clusters in the activities network. Two of the five clusters are explicitly religious in nature (Groups 1 and 3); these nodes link nearly 53% of the population of the college. Arguably, Group 2 also has implicit religious connotations. All activity groups show additional evidence of the role of religion.

Table 4.14

Activity Groups

Activity		Thematic Category
Attend athletic events	1	Actively Engaged in College Community, Gemeinschaft
Attend chapel and convocation	1	
Attend FCA	1	
Bible study/small group with fellow employees	1	
Lunch with fellow employees on campus	1	
Playing golf with fellow employees	1	
Share a meal with fellow employee(s) off-campus	1	
Attend drama, music, theatre or other fine arts events	2	Fine Arts Connoisseurs
Attend special college lectures	3	Cosmopolitan Community
Attend the same church with fellow employees	3	
Celebratory events (Christmas party, birthday party, etc.)	3	
Church events with fellow employees	3	
Exercise with fellow employees	3	
Financially contribute to the college after receiving paycheck	3	
Hiking with fellow employees	3	
Catch up with people at the resource center	4	Local culture
Coffee breaks on or off-campus	5	Accessibility culture
Email college-wide words of encouragement, affirmation, or personal thoughts	5	
Informal conversations with staff and faculty while walking through campus	5	
Informal conversations with students	5	

Activities Group 1 has 40 agents, and three of seven nodes are religious in nature. The explicitly religious nodes include attend chapel and convocation, Fellowship of Christian Athletes (FCA), and Bible study/small group with fellow employees. The non-religious nodes include attending athletic events, sharing a meal with fellow employee(s)

on or off campus, and playing golf with fellow employees. The thematic category identified for this group was “actively engaged in the college community, gemeinschaft.”

Activities Group 2 includes 11 people. There is one non-religious node, attendance at drama, music, and theatre events (although there could be religious overtones to a drama, music, or theatre event at a faith-based institution). This group was labeled “the fine arts connoisseurs.”

Activities Group 3 had 33 agents and includes three religious nodes out of seven total nodes for this cluster. The religious nodes are attending special college lectures, the same church, and church events with fellow employees. The non-religious activities include exercising with fellow employees, hiking with fellow employees, celebratory events, and giving back financially to the institution. This group is defined as those who are committed inside and outside of the college community through formal and informal interactions related to college, church, exercise, and recreation. This group was labeled “the cosmopolitan community.”

Activities Group 4 has 11 agents and only one node: catching up with people at the resource center. Subsequently, this group was defined by its informal interactions that occur at the resource center and was labeled “the local culture.”

Activities Group 5 has 37 agents and does not have any overtly religious nodes. The nodes that define Group 3 are informal conversations with students, email college-wide words of encouragement, coffee breaks on or off-campus, and informal conversations with staff and faculty. As a way of connecting the common activities shared by these agents, this group is defined as “the accessible culture.”

Summary

This section reviewed the data based on the reports from the structured interviews to begin to understand the role of religion in the culture of the college. Then, analysis of the questionnaire responses in ORA were reported with a focus on how religious references manifested in several belief networks including Formal Values, Informal Values, and Informal Activities. Last, Newman groupings (2006) were identified and described within the Formal Values, Informal Values, and Activities networks to further understand the role of religion in the institution as a part of the overall organizational culture.

In general, the role of religion is deeply embedded and interwoven throughout the culture of SCC. Religion provides the social and ideological context through which the organization functions. The religious context of the organization shifts the organization from being a purely transactional approach to education to an ideologically-driven approach that is intended to shape culture.

Introduction to Question Two

To review, the purpose of the study is to understand the cultural manifestations of a small, private Christian college. Guiding question two asks: What cultural clusters at the targeted LAC emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs? The following process guided the answer to this question.

Process

This section describes the cluster groupings of relevant entities in the Meta-Network. Many of these groupings are discussed in the previous sections, with more specific purpose (see the Formal Values groups (Table 4.12) Informal Values Clusters (Table 4.13), and Activity groups (Table 4.14)). This section describes the additional clusters of the meta-network and the patterns that exist in each cluster. The clusters described in this section include the Discussion Network, the Values Alignment Network, The Pressures Network, the Internal Influences Network, the External Influences Network, the Knowledge Network, and the Task Network.

Discussion Network

The Discussion Network was generated with a question on the Culture Questionnaire that asked: “With whom are you most likely to discuss college affairs (needs, concerns, advice)?” Participants were asked to select all individuals that qualified. Respondents were given a list that included all 154 full-time employees at the institution. Four interaction clusters emerged, shown in Figure 4.3.

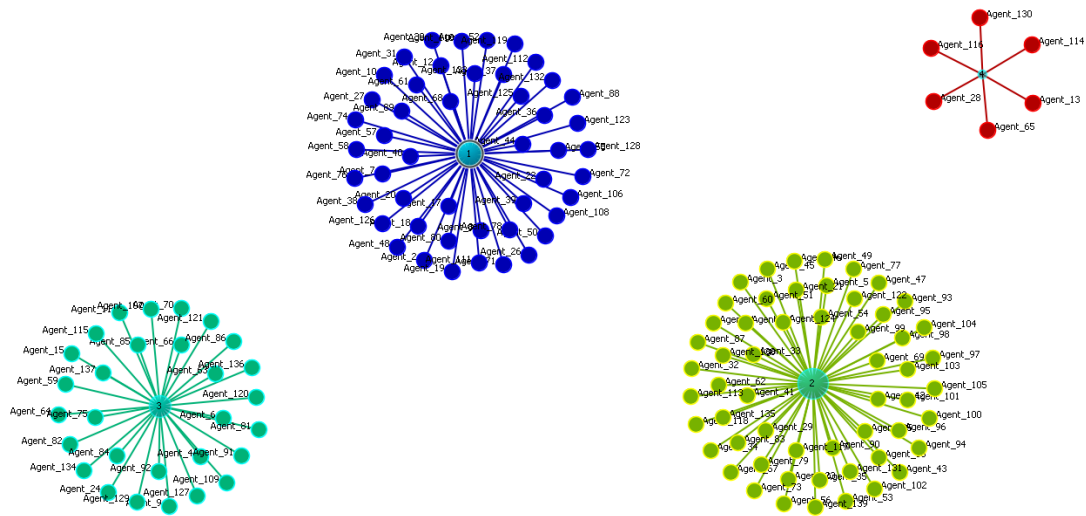


Figure 4.3
Discussion Network for CCC Meta-Network

Discussion Group 1 of the Discuss Network (the blue group in Figure 4.3) has 48 members. Of the 48 members, 34 agents or 77% of this group are age 42 or younger. Forty-one of the agents, or 85.4%, have worked at the institution for seven years or less. In addition, this group is predominantly professional support staff (40 of 48 members) and in the Adult Studies department, Athletic department, the Enrollment office, Financial Aid Office, Registrar’s office, or the Business/Finance Office. This group is united through its role in recruitment and customer service. The primary roles of these individuals included student recruitment and administrative support with a focus on serving both the Adult Studies and Traditional programs.

Discussion Group 2 (yellow-green) has 56 members. This group includes several academic departments, inclusive of Religious Studies, Natural Sciences, Social Sciences, and the Outdoor Recreation Department. There are 21 instructors in this group, which is

about half of the instructors at SCC. In addition, support services are well represented in Group 2, including employees from facilities management, student affairs, and the advancement office. The common connection between both academics and support roles represented by this group can be explained partially by location as all of these members are located on the primary Traditional campus. Related to location, group 2 shares a common focus in primarily serving students in the Traditional undergraduate program. Overall, 73% of Group 2 has served for 11 years or less at the institution. As a result of the departments represented, the locations of the departments, and the social interactions of these members, Group 2 was identified as having a primary focus on the Traditional undergraduate program at the institution's main campus.

Discussion Group 3 (turquoise) has 29 agents. Group 3 primarily includes the Business Department and the English Department along with a few miscellaneous faculty members. Group 3 also includes the library staff, the technology department, and some members of the Adult Studies professional support services. The primary work sites for this group include offices on the main campus and three other geographic locations. The Adult Studies program is focused primarily on business classes and English classes are required by business as a general education requirement, which helps explain the academic departments that are part of this group. This group was defined by its focus on serving both the Traditional and Adult Studies program through classroom instruction and academic support services.

Discussion Group 4 (red) has six agents. Most agents in this cluster have served at the institution for seven years or less. The distinctive characteristics of this group are

unclear, and there is no apparent pattern that defines the members or attributes in this group. Subsequently, this group is defined as being fragmented; the members are part of the organization but not well-connected socially to each other or to the larger clusters.

Values Alignment Network

On the Culture Questionnaire, respondents were asked “Which of the following people have values (beliefs) regarding work at SCC similar to yours?” Participants were asked to select all individuals which they felt qualified. Like the question utilized for the Discussion Network, a list of all 154 full-time employees was provided for respondents to identify all members whom they felt were appropriate. The data was collected and ORA identified the following distinct clusters.

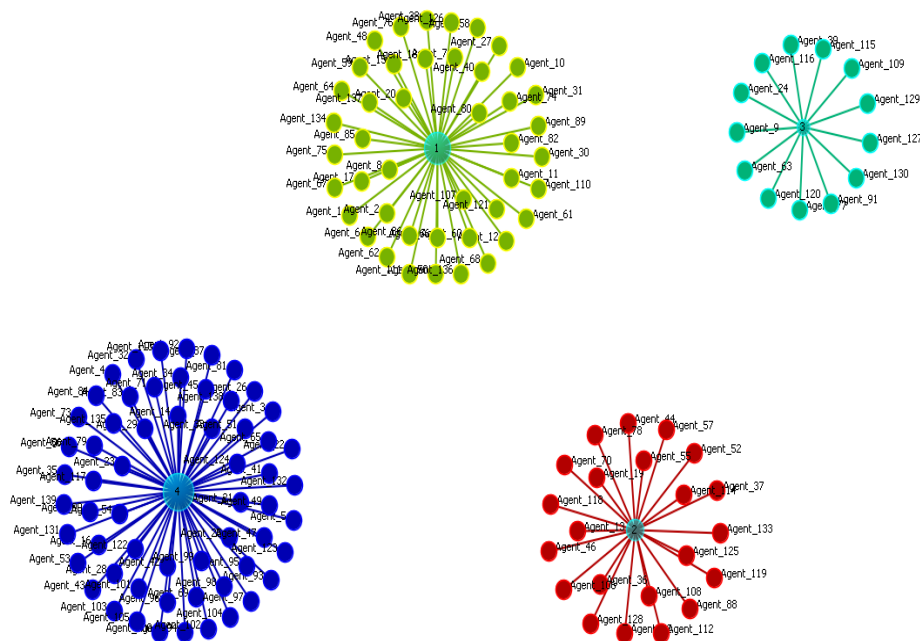


Figure 4.4
Values Alignment Network

Values Alignment Group 1 (yellow-green) has 44 agents. There are 31 employees in this group, or 70% of the respondents who had served for seven years or less at the institution. With respect to the administrative roles, Values Group 1 included nearly all of the respondents in the support services roles of Adult Studies Administration, Technology, and Financial Aid. With respect to academic roles, Values Group 1 included nearly all members of the academic departments for Business and some members from English, Natural Sciences, and Social Sciences. The primary location for most of these members includes all four distinct geographic locations for the institution. Denominational choice is diverse: 19 members attend reformed churches, nine members attend Baptist churches, seven members attend non-denominational churches, five members attend Catholic churches, and two members attend charismatic churches. Values Group 1 is defined as administrators in Adult Studies, but they exhibit a diversity of beliefs, locations, and faiths.

Values Group 2 (red) has 22 members with 19 of these agents having served at the institution for seven years or less. In addition, 17 of the members in Group 2 are 42 years of age or younger. Values Group 2 is composed primarily of professional support staff, predominantly members of the athletic department and enrollment services, and only two instructors. The type of churches attended by Group 2 includes nine members attending Baptist churches, six members attending reformed churches, and four members who are attending non-denominational churches. This finding is interesting as there are more Baptist church attendees than there are reformed church attendees or any other group. This suggests they may be grouped in part because of a common church

experience. Group 2 is located primarily on the Traditional campus of the institution. A central feature of Group 2 is its youthfulness and common focus on recruiting students.

Values Alignment Group 3 (turquoise) has a total of 13 members. The group includes nearly all of the library staff and one to two members from each of several other departments. The group has nine women and four men. All members of Group 3 work in offices located on the Traditional campus. The type of church attended by members of Group 3 include eight members attending reformed churches, two members attending Baptist churches, and three members attending non-denominational churches. The common theme for this group appears to be their support for academic programs located at the main site of the Traditional program.

Values Alignment Group 4 (blue) has 60 agents. Group 4 includes 28 women, 32 men, 22 teaching instructors, and numerous support staff. The group is comprised primarily of 34 members who attend reformed churches and 19 members who attend Baptist churches. Academic departments that are well-represented in this group include religion, fine arts, natural sciences, education, and outdoor recreation. Additional support services departments represented are facilities, housekeeping, student affairs, and advancement. This group is located at the two sites where the Traditional program is offered. This group is apparently linked by its support and engagement with the Traditional academic programs of the institution.

Pressure Network

To establish the Pressure Network, structured interviews were administered to 30 employees in the institution. Respondents were asked: “What are the greatest sources of

stress or pressure you feel in your work as an employee?” Respondents were given the opportunity to list as many items as necessary. The responses were then coded, and 30 themes, or nodes in the network analysis, were identified. These nodes were then used as the response options on a questionnaire that was issued to 154 full-time employees (Appendix K). On the questionnaire, respondents were asked to “Select the greatest sources of pressure you feel in your work experience.” Each respondent was allowed to choose up to seven sources of pressure. Once the data was collected, ORA grouped the following pressure nodes into clusters.

Table 4.15

Pressure Network Clusters

Perceived Pressures		Thematic Category
Disgruntled customers (students, parents, staff, faculty, or other)	1	Social dysfunction pressures
Employee morale	1	
Employees following through on policy-related tasks and protocol	1	
Internal communication in the organization	1	
Personnel conflict(s)	1	
Retention of students	1	
Social expectations of employees	1	
Underachieving students	1	
Compliance with internal protocol and external regulations	2	Time and management pressures
Maintaining and achieving goals	2	
Meeting deadlines	2	
Meetings	2	
Organizational crisis (a situation that presents a threat to organizational goals and requires a solution with time pressure resulting in the need to develop new behaviors to cope)	2	
Pressure of division, department, or program needing to balance budget or to be revenue generating	2	
Time management	2	
Workload	2	
Work/life balance	2	
Employee meetings	3	Anxiety pressures
External forces and requirements (Federal government, SACS, economy, etc.)	3	
Fear of layoffs	3	
Financially providing for family	3	
Recruiting mission-fit students	3	
Differences in worldview	4	Inadequacy pressures
Employee turnover	4	
Lack of system or process in place	4	
Lack of tools, skills, training, or other resources to adequately accomplish tasks	4	
Raising awareness and understanding of a program	4	
Religious expectations of employees	4	
Under resourced services, programs, and departments	4	

Pressure Group 1, respondents concerned about social dysfunction pressures, links 35 people and is distinguished by the following nodes: (a) employee morale, (b) disgruntled customers, (c) employees following through on policy-related tasks and protocol, (d) internal communication in the organization, (e) social expectations of employees, (f) retention of employees, (g) personnel conflicts, and (h) underachieving students. I labeled this cluster, “social dysfunction pressures” because it involved issues of social disruption of some form—situations involving dissatisfaction or conflict, inadequacy for the situation (e.g., ineffective communication), or disengagement (employee’s leaving). The people most pressured by these issues are primarily female—66% of the female population.

Pressure Group 2 consists of 36 people. The pressures most common to this group are (a) meetings, (b) organizational crisis, (c) work/life balance, (d) workload, (e) meeting deadlines, (f) pressure of division, department, or program needing to balance budget or to be revenue generating, (g) compliance of internal protocol and external regulations, (h) maintaining and achieving goals, and (i) time management. I labeled this cluster, “time and management pressures.” Fifty-seven percent of the people who have served at the institution for 16 to 19 years are in this group.

Pressure Group 3 has 35 people. It is characterized by pressures regarding (a) financially providing for family, (b) recruiting mission-fit students, (c) fear of layoffs, (d) external forces and requirements, and (e) employee meetings. It is labeled, “anxiety pressures.” This group is comprised of 62% of the total male population.

Pressure Group 4 consists of 31 people. The key pressures that unite this group are the perception of pressures from (a) employee turnover, (b) religious expectations of employees, (c) lack of tools, skills, training, or other resources, (d) advocacy for specific programs, (e) lack of system or process in place, and (f) differences in worldview, and (g) under resourced services, programs, and departments. Forty-nine percent of this group has been with SCC for 0-3 years and is composed of 40% of entire 0-3 year population of the institution. It is labeled, “inadequacy pressures” because it deals with issues that challenge the respondents’ personal comfort zone or that threaten the college in general.

Internal Influences

As part of a strategic planning process, SCC conducted a SWOT Analysis. The SWOT Analysis used focus groups to identify the Strengths, Weaknesses, Opportunities, and Threats, and the data was coded and themed by the Office of Institutional Research at SCC. The coded themes from the SWOT Analysis were used as responses on the Culture Questionnaire to the question: “For the following internal influences on the SCC culture, please indicate whether it is a negative influence, more negative than positive, not influential, more positive than negative, positive, or don’t know.” There are 51 nodes (from SWOT) for this question. ORA identified two distinct clusters of beliefs in this set of nodes.

Table 4.16

Internal Influences Clusters

Internal Influence		Thematic Category
Academic catalog	1	Values that Govern the Institution Content Influences
Academic programs	1	
Christian worldview and orientation	1	
Commitment and involvement of faculty and staff	1	
Faculty	1	
Faith integration in the classroom	1	
Faith integration in co-curricular activities	1	
Faith integration in administrative support services	1	
Faith statement	1	
Individual department and attitudes (who you work with)	1	
Institutional history	1	
Location: Metropolitan Campus	1	
Location: Traditional Campus	1	
Mission statement	1	
Adaptability as an organization	2	Operational Knowledge and Practice Process Influences
Assessment practices	2	
Athletic Department	2	
Board of Trustees	2	
Budget planning and resource allocation	2	
Administration	2	
Campus wide committees and task forces	2	
Chapel and Convocation program	2	
Compensation and benefits	2	
Data-driven decision making	2	
Employee Benefits	2	
Employee Handbook	2	
Employee turnover	2	
Enrollment	2	
Facilities	2	
Faculty Handbook	2	
Financial resource limitations	2	
Fundraising	2	
Hiring practices	2	
Informal/personal emails shared campus wide with staff and faculty	2	
Internal communication within organization	2	
Individual skills and training to accomplish tasks	2	
Location: Asheville Campus	2	
Marketing	2	

Internal Influences Group 1 has 94 agents. Group 1 consists of 70 members who have worked at the institution for seven years or less, and these agents represent 74% of the overall population who have worked at the institution for seven years or less. This cluster is labeled, “the content cluster” because the agents in this cluster largely (but not exclusively) identified influence from fixed features (academic catalog, academic programs, faculty, etc.) of the college. All members of the administration are part of Group 1.

Internal Influences Group 2 has 36 agents. Contrasted with Group 1, no members of the administration were part of Group 2. This cluster is labeled, “process” because its influences are largely (but again, not exclusively) dynamic processes (adaptability, assessment, budget planning) rather than contents. Group 2 includes five instructors with two from the same department, 11 agents from facilities, and 13 professional support staff. Four out of the five members of the total population with tenure of 28 or more years at the institution were in Group 2. Proportionately, Group 2 has a larger number of employees aged 55 and older with 44%, or 16 out of the 36, agents from this age demographic in the group.

External Influences

Like the Internal Influences Network, the External Influences Network was created using the coded themes from the SWOT Analysis. The question on the Culture Survey asked, “For the following external influences on the SCC culture, please indicate whether it is a negative influence, more negative than positive, not influential, more positive than negative, positive, or don’t know.” There were 16 influences (nodes)

identified in this question. ORA coded these responses as beliefs and identified three distinct clusters.

Table 4.17

External Influences Clusters

External Influence		Thematic Category
Local City and surrounding area	1	Local environment
Major Metropolitan City and surrounding area	1	
Local churches	1	
Local Town	1	
Accreditation standards (SACS, NCATE, DOE, etc.)	2	Institutionalizing influences
Alumni constituents	2	
CCCU (Coalition of Christian Colleges and Universities)	2	
Economy	2	
Federal government	2	
Higher education marketplace	2	
Local and regional competition (other colleges)	2	
Local Conference Center	2	
Presbyterian/denominational ties	2	
State Government	2	
Technological trends and advancements	2	
Regional Consortiums (North Carolina Independent Colleges, Appalachian Colleges Association, other)	3	

External Influences Group 1, the local environment cluster, had 80 agents. Group 1 is composed of 67% of all females and included 73% of all 18-30 year olds and 81% of all 31-42 year olds.

External Influences Group 2, the institutionalizing cluster, has 34 agents. Institutionalizing pressures refer to mimicry, coercive, and normative pressures that

heavily influence the organization's perceptions of who and what it is (DiMaggio & Powell, 1983). Group 2 consists predominantly of professional support staff.

External Influences Group 3 has 12 agents and viewed the Regional Consortiums (North Carolina Independent Colleges, Appalachian Colleges Association, other) as influential. Based on the attribute of role, Group 3 was comprised of 75% instructors and 25% professional support staff. Group 3 was defined by associations with related institutions.

Knowledge Network

In the structured interview, respondents were asked: "What is important to know or understand in order to effectively do your job (i.e. FRX, mission statement, etc.)?" Respondents were given the opportunity to list as many items as necessary. These responses were then coded, and 18 nodes were identified that would then inform the response options on a questionnaire that was issued to 154 full-time employees. On the questionnaire, respondents were asked, "How familiar are you with the following types of knowledge?" This question used a 4-point categorical knowledge scale, where 1 = Not at all, 2 = Somewhat, 3 = Good, and 4 = Excellent. Once the data was collected, ORA grouped the following knowledge themes into clusters, which are identified in Table 4.18.

Table 4.18

Knowledge Group Clusters

Knowledge Groups		Thematic Category
Basics of the evangelical Christian faith	1	College Heritage
History of the institution	1	
Reformed theology	1	
FRX	2	Business Procedures
How to assess your work area for accreditation purposes	2	
Institutional priorities	2	
Understanding of the Faculty Handbook	2	
Basic software literacy (Microsoft Office: Word, Excel, Powerpoint, Access, Publisher)	3	Communication skills
Communication skills	3	
Customer Service skills	3	
Fundraising software	3	
Department specific details	4	Technical Knowledge
Hobson's EMT	4	
Understanding of the Academic Catalog	4	
Understanding of the Student Handbook	4	
Expectations of supervisor	5	Support Services
Student Information System (PowerCampus)	5	
Understanding of the Employee Handbook	5	

Knowledge Group 1 has 25 agents. Key knowledge for this group includes understanding the (a) basics of the evangelical Christian faith, (b) history of the institution, and (c) reformed theology. Subsequently, this group is defined by its attention to the institution's heritage.

Knowledge Group 2 has 28 agents. Key knowledge for this group includes (a) understanding the budget management software, (b) higher education assessment practices for accreditation purposes, (c) understanding the institutional priorities, and (d)

understanding of the Faculty Handbook. This group is defined as understanding institution-specific business or operational procedures.

Knowledge Group 3 has 32 agents. Key knowledge for these agents include (a) basic software literacy (MICROSOFT OFFICE: WORD, EXCEL, POWERPOINT, ACCESS, PUBLISHER), (b) communication skills, (c) customer service skills, and (d) fundraising software. This group is defined by its combination of technical and soft skills (communication, customer service, general problem-solving).

Knowledge Group 4 has 29 agents. Key knowledge for these agents include (a) department specific details, (b) understanding of enrollment software, (c) understanding of the academic catalog, and (d) understanding of the student handbook. This group is defined by local knowledge based on the importance of understanding department specific details.

Knowledge Group 5 has 23 agents. Key themes include (a) expectations of supervisor, (b) Student Information System (PowerCampus), and (c) understanding of the employee handbook. This group is labeled, “Support Services” for the type of knowledge required in this cluster.

Tasks

On the structured interview, respondents were asked: “What are the top five work-related tasks that consume the majority of your time?” The responses were then coded, and 23 themes were identified. These themes (nodes) were then listed as the response options to a question that asked, “What work-related tasks do you do on a regular basis in your role at SCC?” Participants were allowed to choose up to seven

work-related tasks. Once the data was collected, ORA grouped the knowledge themes into clusters, which are identified in Figure 4.5 and Table 4.19.

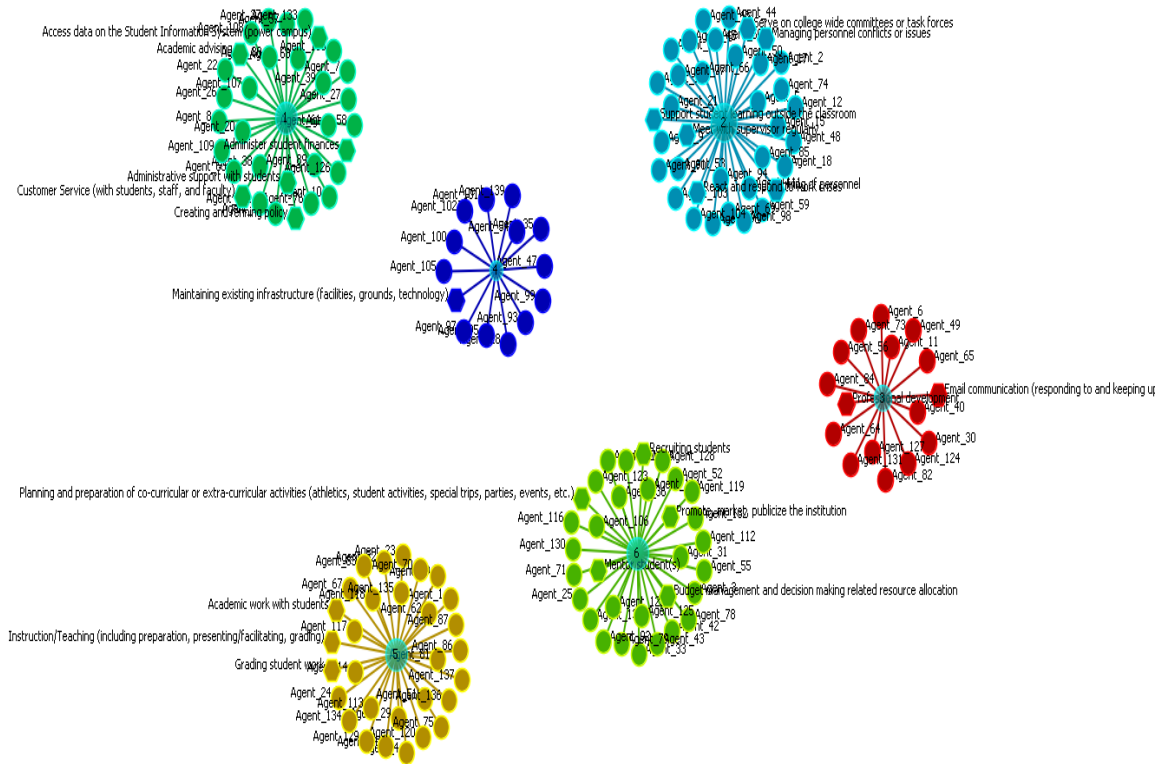


Figure 4.5
Task Network for CCC Meta Network

Table 4.20

Task Clusters Network

Task Groups		Thematic Category
Academic advising	1	Student Support Services
Access data on the Student Information System (power campus)	1	
Administer student finances	1	
Administrative support with students	1	
Creating and refining policy	1	
Customer Service (with students, staff, and faculty)	1	
Hiring of personnel	2	Administration
Managing personnel conflicts or issues	2	
Meet with supervisor regularly	2	
React and respond to work crises	2	
Serve on college wide committees or task forces	2	
Support student learning outside the classroom	2	
Email communication (responding to and keeping up with)	3	Virtual Community
Professional development	3	
Maintaining existing infrastructure (facilities, housekeeping)	4	Physical Infrastructure
Academic work with students	5	Academic Instruction
Grading student work	5	
Instruction/Teaching (including preparation, presenting/facilitating, grading)	5	
Budget management and decision making related resource allocation	6	Planning and Programming
Mentor student(s)	6	
Planning and preparation of co-curricular or extra-curricular activities (athletics, student activities, special trips, parties, events, etc.)	6	
Promote, market, publicize the institution	6	
Recruiting students	6	

Task Group 1, the student support services group, has 26 agents. The primary task of these agents include: (a) academic advising, (b) access data on the Student Information

System (PowerCampus), (c) administer student finances, (d) administrative support with students, (e) creating and refining policy, and (f) customer service (with students, staff, and faculty). Group 1 has 10 members who have been with the institution for 0-3 years; 11 members have tenures of 4-7 years, and the remaining members have various tenures. The group includes members who attended reformed churches (12), Baptist churches (7), and non-denominational churches (5). Individual members in this group are spread throughout the organization in different departments and at all four locations. The one exception is that 22 members of this cluster are serving in professional support staff roles. Task Group 1 was labeled, “student support services.”

Task Group 2 has 30 agents. Group 2’s primary tasks are: (a) hiring of personnel, (b) managing personnel conflicts or issues, (c) meet with supervisor regularly, (d) react and respond to work crises, (e) serve on college wide committees or task forces, and (f) support student learning outside the classroom. While there is only one member of this group aged 18-30, there are 13 members aged 31-42, six members aged 43-52, and ten members aged 55 and up. The tenure of service for this group is interesting with 12 members having served at the institution for three years or less. The group is dominated by a combination of 11 members attending reformed churches and 10 members attending Baptist churches. The group includes 20 women and 10 men, and it has four senior administrators and 14 professional staff members. The departments represented in this group are spread throughout the institution. Individuals work at all four sites of the institution. Based on the clusters established by ORA, Group 2 was labeled, “administration.”

Task Group 3 has 14 agents who view their primary task to be email communication (responding to and keeping up with) and professional development. The group has three clerical staff, four instructors, and six professional staff. Group 3 was united through a common perception of virtual correspondence, though not necessarily exclusively with each other. This group was defined as the virtual community. One clarification is that the term virtual community is being used differently than Bergquist and Pawlak (2008) who use the term virtual culture to describe the dimension of higher education institutions that are focused on meeting the demands of students through web-based delivery methods. For this Task Group in SCC, the Virtual community is simply a task group who has a central focus on web-based communication.

Task Group 4 has 13 agents whose primary task is maintaining existing infrastructure (facilities, grounds). The group is comprised of eight members attending Baptist churches followed by three members who attended reformed churches along with a few other church types attended by individuals. The group has six women and seven men, and six members of the group are age 55 or older. Task Group 4 was labeled, “maintaining physical infrastructure.”

Task Group 5 has 27 agents. There are nine women and 18 men in this group. Their primary tasks are (a) academic work with students, (b) grading student work, and (c) instruction/teaching (including preparation, presenting/facilitating, grading). The group is comprised of instructors from all majors offered at the institution. The primary work location for members of this task group include the two locations of the Traditional undergraduate program. Task Group 5 was defined by the role of academic instruction.

Task Group 6 has 27 agents. The primary tasks for Task Group 6 include (a) budget management and decision making related resource allocation, (b) mentoring student(s), (c) planning and preparation of co-curricular or extra-curricular activities (athletics, student activities, special trips, parties, events, etc.), (d) promoting, marketing, publicizing the institution, and (e) recruiting students. This group is relatively youthful as 20 members were 42 years of age or younger and 22 members have served at the institution for seven years or less. The group is dominated by 11 members of the Athletic department for the institution. Task Group 6 was themed, “planning and programming.”

Summary

In this section, additional clusters from the CCC Meta-Network were reviewed to provide further understanding of the cultural dynamics of the SCC culture under investigation. The clusters described focused on dynamics such as age, tenure, role, department, gender, location, and denominational choice in order to understand the dynamics influencing the individual networks and CCC Meta-Network as a whole. Special attention was given to understanding how these networks contribute to understanding the cultural dynamics of the institution.

Question Three

Process of Inquiry

The next research question asks, “How do the informal components of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?” This third of five questions is a bit more complex than the first two because it seeks to understand how cultural characteristics influence a

dynamic outcome, or process. To answer research question three, a three-part plan was developed using multiple features of ORA. Informal components were defined primarily by the pre-determined thematic category of informal values from the structured interviews and ORA questionnaire. Informal values were identified in the ORA analysis with the question, “What are the informal values and unspoken rules that most shape SCC (not officially written anywhere, but clearly considered normal practice)?” Additional information from the perceived pressures and the activities network generated earlier were also used to support understanding of the role of informal components in this question. Organizational learning, a group process, will be defined as the process of evolving attitudes over time and as the evolution of the capacity of the system to flow information.

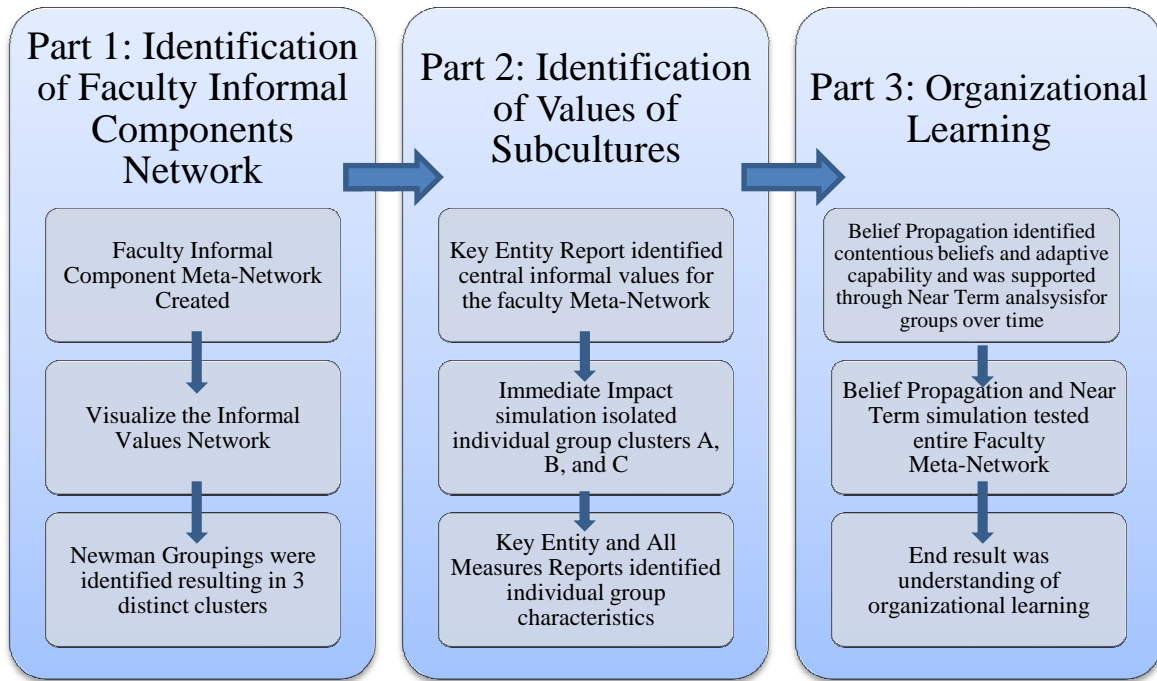


Figure 4.6

Process chart for examination of the influence of informal values on organizational learning

Process Part 1: Identification of Subcultures

The Faculty Informal Components (FIC) Meta-Network was created as a sub-network in the CCC Meta-Network. The FIC Meta-Network was chosen based on dynamics that will permit answering the guiding question for this section. The FIC Meta-Network was comprised of 12 matrices from the full dataset including: 22 activities nodes, 18 categories of knowledge nodes, 16 external influence nodes, 20 formal values nodes, 23 informal values nodes, 51 internal influences nodes, 30 pressures nodes, 21 resources nodes, and 23 task nodes. Newman's grouping (2006) of these matrices identified three distinct clusters, or subcultures, and these are the basis for the following discussion.

Process Part 2: Values of Subcultures

A Key Entity report was generated in ORA to identify the informal values/social norms most central to the faculty network *as a whole*. This process seeks to identify how the faculty population views informal values in the institutional framework. As stated above, Newman's grouping of the faculty by informal values matrix identified three clusters. The subcultures were isolated each of the three Newman Grouping clusters and ran the Key Entity Report on each of these groups. The three clusters together exhibited enough differences that they constitute what Martin (2002) called, a differentiated culture. In isolation, however, they were sufficiently similar to be identified as a unified culture. Consequently, I was able to test the core question for this section (at least for unified versus differentiated cultures) that organizational learning is influenced by cultural type. (No fragmented culture was found so that relationship to learning could not be examined).

Process Part 3: Organizational Learning

After identifying informal value/social norm centralities and faculty subcultures in the faculty population, it was necessary to observe how learning occurs within the organization with respect to these values. To study organizational learning, a Belief Propagation report (Friedkin, 1998) and a Near Term Analysis (Lin & Carley, 1997) were conducted to provide an in-depth analysis of each group. The purpose of this exercise is to understand how each group interacts, adapts their beliefs, and how these beliefs evolve over time. Belief Propagation simulations (Friedkin, 1998) and Near Term Analysis (Lin & Carley, 1997) were implemented on the entire faculty population in order to compare

and contrast subcultures with overall organizational learning of the faculty population within the FIC Meta-Network.

Findings

Findings from the overall faculty population are examined first. Faculty subcultures are then examined for differences in behavioral patterns. Last, Belief Propagation simulations (Friedkin, 1998) and Near Term Analyses (Lin & Carley, 1997) are performed to describe how the faculty within the organization learn about informal values through interaction and interdependency.

The Faculty Population

The total faculty population (less staff) is composed of 40 respondents. Their tenure of service is identified in Table 4.21, and denominational affiliations are identified in Table 4.22

Table 4.21

Years of Service at Institution

0-3 yrs.	4-7 yrs.	8-11 yrs.	12-15 yrs.	16-19 yrs.	20-23 yrs.	23-27 yrs.	28 or more
4	22	4	3	3	1	0	3

Table 4.22

Faculty Denominational Affiliation

Baptist	Non-denominational	Reformed	Other
4	2	29	5

The age distribution of the faculty respondents includes 9 respondents age 31-42, 16 respondents age 43-54, and 15 respondents aged 55 and up. With respect to denominational affiliation, given the institution's historically Presbyterian roots, it was noteworthy that 73% of the faculty identified with the Reformed tradition. The reformed tradition includes Episcopalian, Anglican, and Presbyterian.

Table 4.23 identifies the top ten informal values among the 23 that emerged from structured interview data. The centrality score indicates how central the belief is to the FIC Meta-Network. Centrality is indexed from 0 to 1, with 1 representing the highest level of centrality. The number of believers is the actual number of faculty respondents who identified that particular value as an important informal value on the questionnaire.

The top-ranking informal values in the FIC sub-group include (a) crisis mode of operation, (b) thrift—do more with less, (c) compassionate community that extends grace to both students and employees, (d) integration of faith and learning, (e) ambiguous institutional identity, (f) salary inequity, and (g) family-like atmosphere. Each of these informal values reflects beliefs that are central to the faculty population. While all of the top ranking values are important for understanding the faculty as a whole, the examination of the faculty subculture will enable further understanding of how the various informal values distribute across faculty subcultures.

Table 4.23

Faculty Informal Values/Social Norms

Rank	Faculty Informal Values	Centrality	Number of believers
1	Crisis mode of operation	0.675	27
2	Thrift, do more with less	0.65	26
3	Compassionate community that extends grace to both students and employees	0.6	24
4	Integration of faith and learning	0.6	24
5	Ambiguous institutional identity	0.525	21
6	Salary inequity	0.425	17
7	Family-like atmosphere	0.4	16
8	Acceptance of the status quo	0.375	15
9	Flexibility in the workplace	0.3	12
10	"Don't rock the boat" attitude	0.275	11

In addition, the All Measures Report generated in ORA provides metrics related to all networks within a particular meta-network. The All Measures Report is useful for describing the FIC Meta-Network; I specifically examined the agent by activities network and the agent by pressure network in the FIC group. For example, observations of the activities network found that the central faculty activities include informal conversations with students, with fellow employees, attendance at celebratory events, and catching up with people at the document center (the primary location for photocopies and campus mail). Observations of the Pressure Network found that the faculty population identified the following pressures as central: (a) employee morale; (b) under resourced services, programs, and departments; (c) financially providing for family, (d) organizational crisis; and (e) underachieving students.

Faculty Subcultures

In the ORA Visualizer three clusters based on the informal values/social norms network were identified in the FIC meta-network using Newman's Grouping algorithm (2006). Table 4.24 outlines the three distinct subcultures.

Table 4.24

Faculty Subcultures

Informal Components		Thematic Category
Compassionate community that extends grace to both students and employees	1	Embracing the traditions
College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	1	
College-wide emails to the "for sale" email list	1	
Expectation to be fully committed	1	
Family-like atmosphere	1	
Flexibility in the workplace	1	
Integration of faith and learning	1	
Laid back and informal demeanor of students, staff, and faculty	1	
Prayer or devotional is offered before event, class, meeting, etc.	1	
Acceptance of the status quo	2	Constructively critical, the 'new wave'
Ambiguous institutional identity	2	
College-wide emails discussing opposing viewpoints	2	
Conflict related to differences of opinion	2	
Conflict based on job related tasks	2	
Crisis mode of operation	2	
Don't rock the boat attitude	2	
Insufficient experience, skills, and training to accomplish job related tasks	2	
Salary inequity	2	
Thrift, do more with less	2	
Blending of professional and personal life	3	The Optimists
College-wide emails sharing prayer requests, celebrations (personal or professional)	3	
Motivation to work extra hours based on the faith-based mission of the institution	3	
Optimism for future	3	

Faculty Group 1 consists of 15 members: five women and 10 men. The age distribution of Group 1 includes 3 members aged 31-42 and 4 members aged 43-54. However, over 50% of this subculture was age 55 and up, with eight members in this category. In addition, seven of the members have served at the institution for 4-7 years and seven members have served for eight or more years. All three faculty members who have served 18 or more years at the institution were part of Group 1.

The defining informal values (those with highest degree centrality) for Group 1 include: (a) integration of faith and learning, (b) compassionate community that extends grace to both students and employees, and (c) family-like atmosphere. Based on the attributes of age and tenure, this group has longevity and experience and represents the traditional and established values of the institution. As a result of its experience, the group as a whole has knowledge of the organization that has formed over a sustained period of time as part of the establishment. Arguably, this group reflects the traditional establishment perspective within the faculty meta-network.

Table 4.25

Faculty Group 1 Informal Values/Social Norms

Rank	Group 1 (15 members)	Centrality	Number of believers
1	Integration of faith and learning	1	15
2	Compassionate community that extends grace to both students and employees	0.8	12
3	Family-like atmosphere	0.733	11
4	Crisis mode of operation	0.533	8
5	Flexibility in the workplace	0.467	7
6	Thrift, do more with less	0.467	7
7	Prayer or devotional is offered before event, class, meeting, etc.	0.4	6
8	Expectation to be fully committed	0.333	5
9	Laid back and informal demeanor of students, staff, and faculty	0.333	5
10	College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	0.267	4

In addition, the All Measures Report for Faculty Group 1 indicated that the primary activities of this group includes informal conversations with students, staff, and faculty, and attendance at celebratory events. The All Measures Report for pressures revealed the perceived pressures relate to (a) underachieving students; (b) external forces and requirements (Federal government, SACS, economy, etc.); (c) financially providing for family; (d) workload; (e) retention of students; (f) under resourced services, programs, and departments; and (g) work/life balance.

Faculty Group 2 is comprised of 18 faculty members: six women and 12 men. This group has five members aged 31-42 and has 11 members who were between the ages of 43 and 54 with only two members aged 55 and up. Group 2 has two members with tenure of 0-3 years of service and 13 members who had 4-7 years of service. When

combined (the 0-3 years of service with the 4-7 years of service), 15 out of the 18 members of this group have a tenure of seven years or less at the institution, which indicates that this group is comprised of the newer employees at the organization.

The top ten ranking informal values for this group are displayed in Table 4.26. Interestingly, there is consensus within Group 2 that is distinct from the other two groups: the central informal values are crisis mode of operation (centrality coefficient = 1.0) and ambiguous institutional identity (centrality value = 0.944). In addition, this group found the informal values of (a) thrift—do more with less, (b) salary inequity, (c) acceptance of the status quo, and (d) “don’t rock the boat” attitude to typify the organization.

Table 4.26
Faculty Group 2 Informal Values/Social Norms

Rank	Group 2 (18 members)	Centrality	Number of believers
1	Crisis mode of operation	1	18
2	Ambiguous institutional identity	0.944	17
3	Thrift, do more with less	0.833	15
4	Salary inequity	0.667	12
5	Acceptance of the status quo	0.611	11
6	"Don't rock the boat" attitude	0.444	8
7	Compassionate community that extends grace to both students and employees	0.333	6
8	Insufficient experience, skills, and training to accomplish job related tasks	0.278	5
9	Conflict related to differences of opinion	0.222	4
10	Integration of faith and learning	0.222	4

For Faculty Group 2, the Activities Network shares some common activities with Group 1. These shared activities are informal conversations with students and fellow

employees. The distinctive activities for Group 2 are the sharing of meals together with fellow employees both on and off-campus. The one distinctive pressure felt by Group 2 was the lack of system or process in place. Common pressures shared between Group 2 and Group 1 included financially providing for family and under resourced services, programs, and departments. Common pressures shared between Group 2 and Group 3 included employee morale and the sense of organizational crisis.

It appears that the perceptions of Group 2 are much different to those of Group 1. Group 2 leans toward perceiving the informal values of the institution as relatively unstable and unclear. For Group 2, there appears to be a void that needs to be filled. When considering the age and tenure in Group 2, they are the ‘New Wave’ of faculty who desire clarity and stability, which they perceive as largely absent at the college. The informal values identified by Group 2 reflect a critical perspective on ‘the way things are done around here.’

Faculty Group 3, the smallest subculture, is composed of three women and four men. While Group 3 is much smaller than the other groups, it has five members who were aged 55 and older. The tenure status of this group is diverse with the longest tenured member having served at the institution for 16-19 years; see Table 4.27.

Table 4.27

Faculty Group 3 Years of Service

0-3 yrs.	4-7 yrs.	8-11 yrs.	12-15 yrs.	16-19 yrs.	20-23 yrs.	23-27 yrs.	28 or more
1	2	1	2	1	0	0	0

While Group 3 reflects somewhat the informal values for Group 1—particularly the values of compassionate community and faith integration, there are some distinctive differences. These defining characteristics for Group 3 include motivation to work extra hours based on the faith-based mission of the institution, the blending of professional and personal life, and college-wide emails sharing celebrations and prayer requests. Group 3 appears to possess an optimism and generally positive outlook about the organization. Where Group 1 has accepted the status quo values, Group 3 appears to embrace and live these values; they want to enact these values in a manner that is not evident in Group 1. The central informal values for Faculty Group 3 are shown in table 4.28.

Table 4.28

Faculty Group 3 Informal Values/Social Norms

Rank	Group 3 (7 members)	Centrality	Number of believers
1	Compassionate community that extends grace to both students and employees	0.857	6
2	Integration of faith and learning	0.714	5
3	Motivation to work extra hours based on the faith-based mission of the institution	0.714	5
4	Blending of professional and personal life	0.571	4
5	College-wide emails sharing prayer requests, celebrations (personal or professional)	0.571	4
6	Thrift, do more with less	0.571	4
7	Family-like atmosphere	0.429	3
8	Flexibility in the workplace	0.429	3
9	Optimism for future	0.429	3
10	Salary inequity	0.429	3

Based on the Activities Network, Group 3 shares with Group 1 the attendance at celebratory events and placed an emphasis on informal conversations with students, an

informal value recognized by all three faculty groups. However, Group 3 also finds value in financially contributing to the institution and attendance at athletic events. They find value in meetings and pressure of division, department, or program needing to balance budget or to be revenue generating. They value employee morale and are concerned about under resourced services, programs, and departments. In summary, this group could be said to be more process-oriented while Group 1 seems more content-oriented.

Organizational Learning

Organizational learning will be defined for this study in two ways: (1) as a group process in which interactions and interdependencies lead to attitudinal changes over time; and (2) evolution of the network's capacity to disseminated information. To understand organizational learning as it relates to the informal values of the organization, Belief Propagation simulations (Friedkin, 1998) and Near Term Analyses (Lin & Carley, 1997) were conducted for each faculty informal values subculture to analyze changes over time. The results of the Belief Propagation simulation for each subculture are presented first in each section followed by the Near Term Analysis; this will test the effects of homogeneous grouping on learning across time. Belief Propagation and Near Term results for the faculty population as a whole are described last to identify the influence of differentiated values on organizational learning.

To support understanding of organizational learning for each faculty group, simulations were run using Belief Propagation, an application of Friedkin's (1998) social influence algorithm. Belief Propagation allows the researcher to understand beliefs that are most contentious initially, and these can be tracked at a beginning time point and at a

final time point to understand how beliefs change overtime in a network. Belief Propagation is a measure that indicates the amount of variation in responses to a particular belief. When there is a greater degree of variation, then there is a higher contention score. For this study, the Belief Propagation simulations provide a measure for understanding how group beliefs adapt over time to demonstrate organizational learning.

In addition, to support understanding of organizational learning for each faculty group, simulations were run using Near Term Analysis (Lin & Carley, 1997). Each simulation was conducted for the duration of 100 time periods and was replicated 25 times each using the Monte Carlo method to reduce error and ensure optimal accuracy. The Monte Carlo method enables a “random optimization” (ORA, 2010) for the networks being analyzed. The Near Term analysis shows the flow of informal values diffused over time that occurs within given faculty groups.

Faculty Group 1

For Group 1, the most contentious informal values were initially (a) crisis mode of operation, (b) flexibility in the workplace, (c) thrift—do more with less, and (d) prayer or devotional is offered before event, class, meeting, etc. After projecting these values across time (thus allowing faculty to interact over their differences), all potentially contentious issues dropped by 35% or more, demonstrating the group’s ability to adapt and move towards stability. The one contentious value for Group 1 that did not change over time was compassionate community that extends grace to students and staff; contentiousness actually increased slightly over time for this item. Overall, however, beliefs about key values became less contentious over time, suggesting a learning process

that brought the group closer together in its attitudes. The top 10 ranked initial contention scores and final contention scores with the percentage change are depicted in Table 4.29.

Table 4.29

Group 1 Belief Propagation Simulation Results: Changes in the Most Contentious Values

Belief Node	Initial	Final	Percent Change
Crisis mode of operation	0.498	0.326	-34.54%
Flexibility in the workplace	0.498	0.248	-50.15%
Thrift, do more with less	0.498	0.32	-35.70%
Prayer or devotional is offered before event, class, meeting, etc.	0.48	0.303	-36.97%
Expectation to be fully committed	0.444	0.276	-37.82%
Laid back and informal demeanor of students, staff, and faculty	0.444	0.254	-42.91%
College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	0.391	0.239	-38.88%
College-wide emails sharing prayer requests, celebrations (personal or professional)	0.391	0.242	-38.10%
Family-like atmosphere	0.391	0.201	-48.59%
Compassionate community that extends grace to both students and employees	0.32	0.347	8.28%

Figure 4.7 was generated by the Near-Term analysis. The figure depicts how organizational learning capacity evolved over time for Faculty Group 1. The organizational learning capacity increased from 28% capacity to 75% (this measures the network’s ability to diffuse information). The figure was created from 25 repeated simulations (using a Monte Carlo method) over 100 time-points (or generations; each generation is created by allowing all agents to interact once then plotting the outcome; changes are based on homophily, or similarities that predispose agents to interact or not interact—interaction changes the structure of the network).

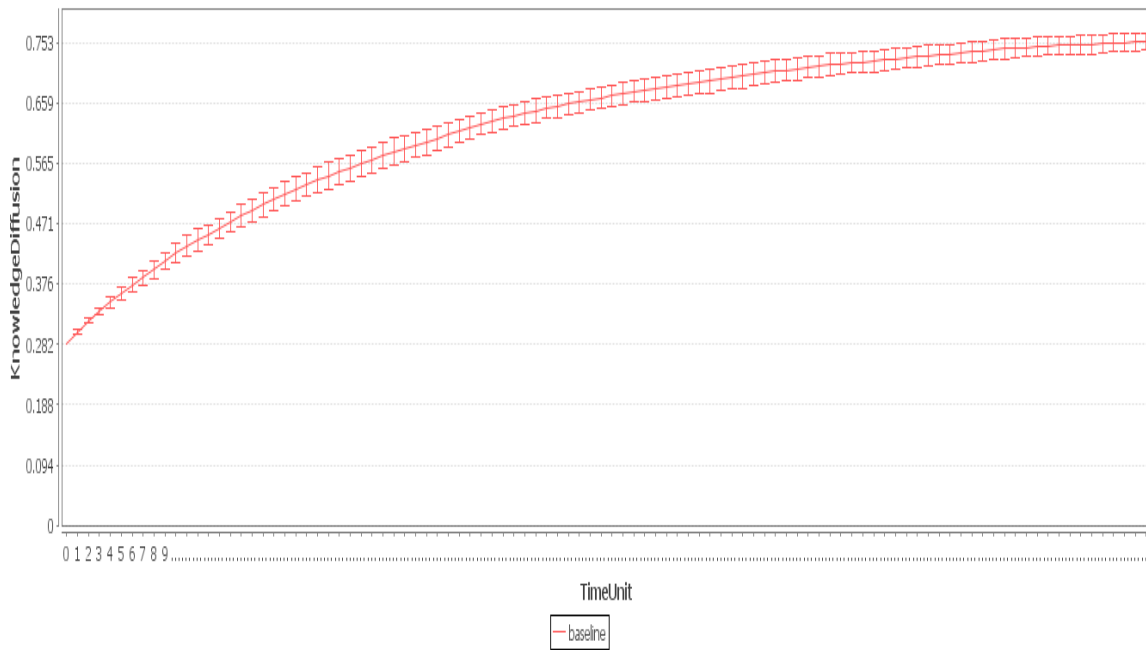


Figure 4.7

Organizational learning graphed through Near Term Analysis for Faculty group 1

Faculty Group 2

Group 2 began with distinctly different values scoring with initially higher contention scores compared to Group 1. These included: (a) “don’t rock the boat” attitude; (b) acceptance of the status quo; (c) compassionate community that extends grace to both students and employees; (d) salary inequity; and (e) insufficient experience, skills, and training to accomplish job related tasks.

Table 4.30

Group 2 Belief Propagation Simulation Results

Informal Value	Initial	Final	Percent Change
"Don't rock the boat" attitude	0.494	0.373	-24.53%
Acceptance of the status quo	0.475	0.493	3.77%
Compassionate community that extends grace to both students and employees	0.444	0.286	-35.70%
Salary inequity	0.444	0.466	4.78%
Insufficient experience, skills, and training to accomplish job related tasks	0.401	0.326	-18.79%
Conflict related to differences of opinion	0.346	0.227	-34.28%
Integration of faith and learning	0.346	0.232	-32.92%
Laid back and informal demeanor of students, staff, and faculty	0.346	0.243	-29.66%
Thrift, do more with less	0.278	0.31	11.74%
College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	0.198	0.141	-28.66%
Conflict based on job related tasks	0.198	0.122	-38.22%
Family-like atmosphere	0.198	0.144	-27.11%
Flexibility in the workplace	0.198	0.129	-34.54%
Motivation to work extra hours based on the faith-based mission of the institution	0.198	0.127	-35.50%
Ambiguous institutional identity	0.105	0.356	239.39%
Blending of professional and personal life	0.105	0.084	-19.88%
College-wide emails discussing opposing viewpoints	0.105	0.075	-28.08%
Expectation to be fully committed	0.105	0.07	-33.02%
Optimism for future	0.105	0.07	-33.02%

For this group, it is interesting to note that many of the informal values that exhibit initially high contention scores did drop, but not to the degree observed in group 1. There were four instances in which informal values actually increased in contentiousness over time. These increases include acceptance of the status quo, salary inequity, thrift—do more with less, and the ambiguous institutional identity. On these

issues, interaction caused group members to exacerbate rather than mediate their differences. At any rate, interaction over these common values fostered change, hence learning.

Figure 4.8 demonstrates organizational learning through the diffusion of informal values for Faculty Group 2. For faculty group 2, organizational learning increased from approximately 28% to 78% over 100 intervals with 25 generations per interval—almost identical to the change observed in Group 1.

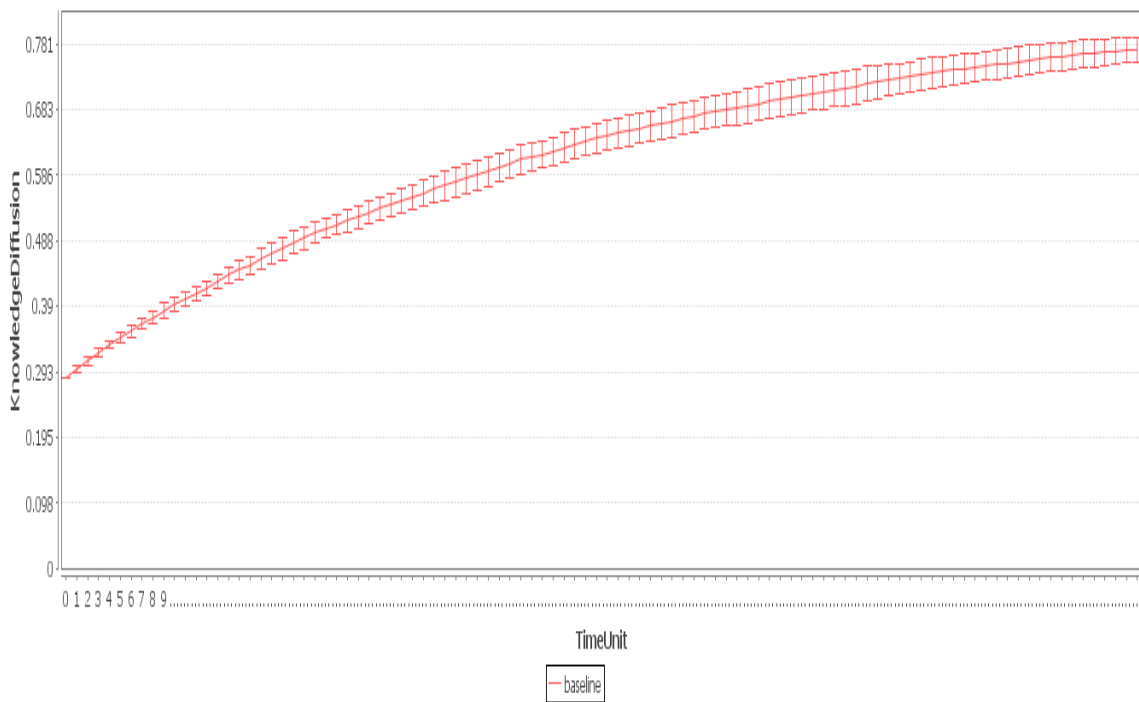


Figure 4.8
Organizational learning for Faculty group 2 using Near Term analysis

Faculty Group 3

In Group 3, like Group 1, nearly all initial contention scores reduced and leveled out. Also like Group 1, the informal value, “compassionate community” actually increased over time, as did the motivation to work extra hours based on the faith-based mission.

Figure 4.9 depicts organizational learning for Faculty Group 3. Again, the diffusion of learning does occur for Faculty group and increases from approximately 30% to 60% over 100 time intervals with 25 generations per interval.

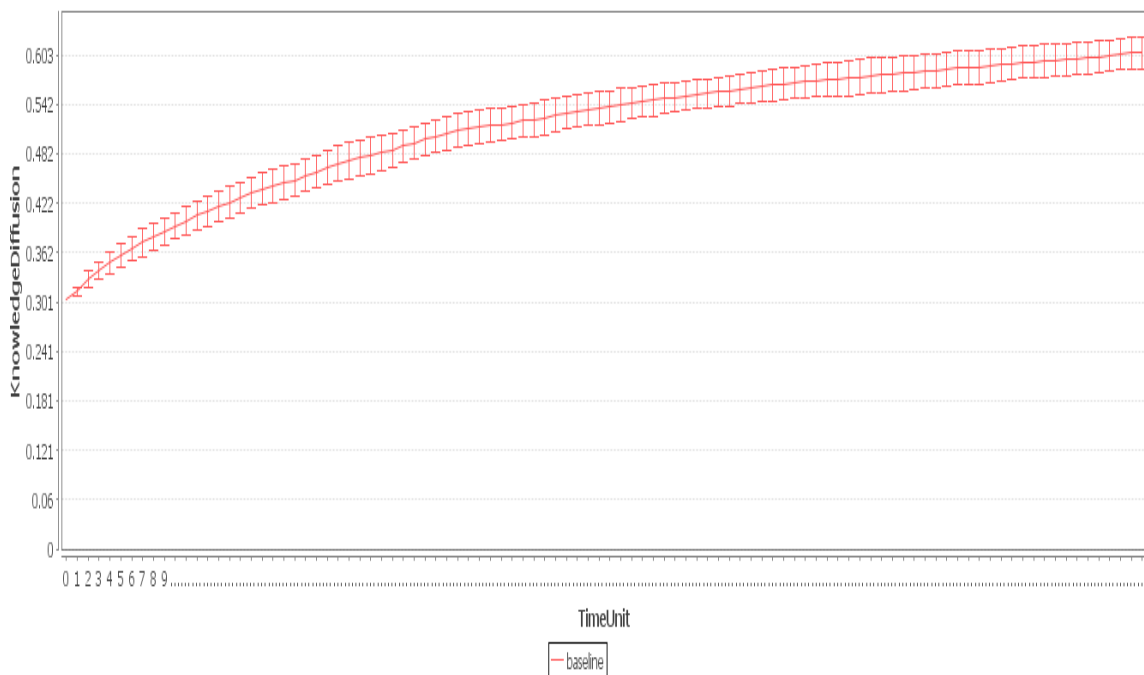


Figure 4.9

Organizational learning for Faculty group 3 using Near Term Analysis.

Combined Faculty

In the Belief Propagation simulations for the entire faculty population, the most contentious informal values were: (a) ambiguous institutional identity, (b) compassionate community that extends grace to both students and employees, (c) integration of faith and learning, (d) salary inequity, (e) family-like atmosphere, (f) thrift—do more with less, (g) acceptance of the status quo, (h) crisis mode of operation, and (i) flexibility in the workplace.

All contentious issues showed reductions in variation and converged over time for the faculty as a whole. The faculty Meta-Network as an organization was able to adapt and learn new behaviors in the same way that the individual groups learned and changed.

Table 4.31

Belief Propagation of Informal Values for Entire Faculty

Belief Node	Initial	Final	Percent Change
Ambiguous institutional identity	0.5	0.379	-24.15%
Compassionate community that extends grace to both students and employees	0.49	0.331	-32.46%
Integration of faith and learning	0.49	0.347	-29.09%
Salary inequity	0.482	0.379	-21.27%
Family-like atmosphere	0.472	0.287	-39.08%
Thrift, do more with less	0.472	0.359	-23.93%
Acceptance of the status quo	0.459	0.332	-27.69%
Crisis mode of operation	0.459	0.382	-16.81%
Flexibility in the workplace	0.408	0.248	-39.34%
"Don't rock the boat" attitude	0.387	0.276	-28.62%
Laid back and informal demeanor of students, staff, and faculty	0.387	0.247	-36.21%
Motivation to work extra hours based on the faith-based mission of the institution	0.363	0.25	-31.15%
College-wide emails sharing prayer requests, celebrations (personal or professional)	0.308	0.208	-32.64%
Blending of professional and personal life	0.278	0.199	-28.26%
College-wide emails sharing work related information (policy changes or updates, announcements, etc.)	0.245	0.159	-35.03%
Expectation to be fully committed	0.245	0.152	-37.94%
Insufficient experience, skills, and training to accomplish job related tasks	0.245	0.175	-28.71%
Prayer or devotional is offered before event, class, meeting, etc.	0.245	0.155	-36.62%
Conflict related to differences of opinion	0.172	0.118	-31.35%
Optimism for future	0.172	0.115	-33.55%
Conflict based on job related tasks	0.091	0.058	-35.84%
College-wide emails discussing opposing viewpoints	0.046	0.034	-26.85%
College-wide emails to the "for sale" email list	0.046	0.028	-39.85%

Each of the faculty subcultures increased in the diffusion of organizational learning over time. Figure 4.10 shows organizational learning through knowledge

diffusion over time for the entire faculty population. Organizational learning increased for the entire network from approximately 26% to 90%. Interestingly, while organizational learning did occur for each individual faculty subculture, greater learning occurs in terms of the flow of information when agents from the various subcultures are combined. This finding supports the research assumption suggested by the complexity theory framework that the diversity of beliefs blended together enriches organizational learning greater than any individual network.

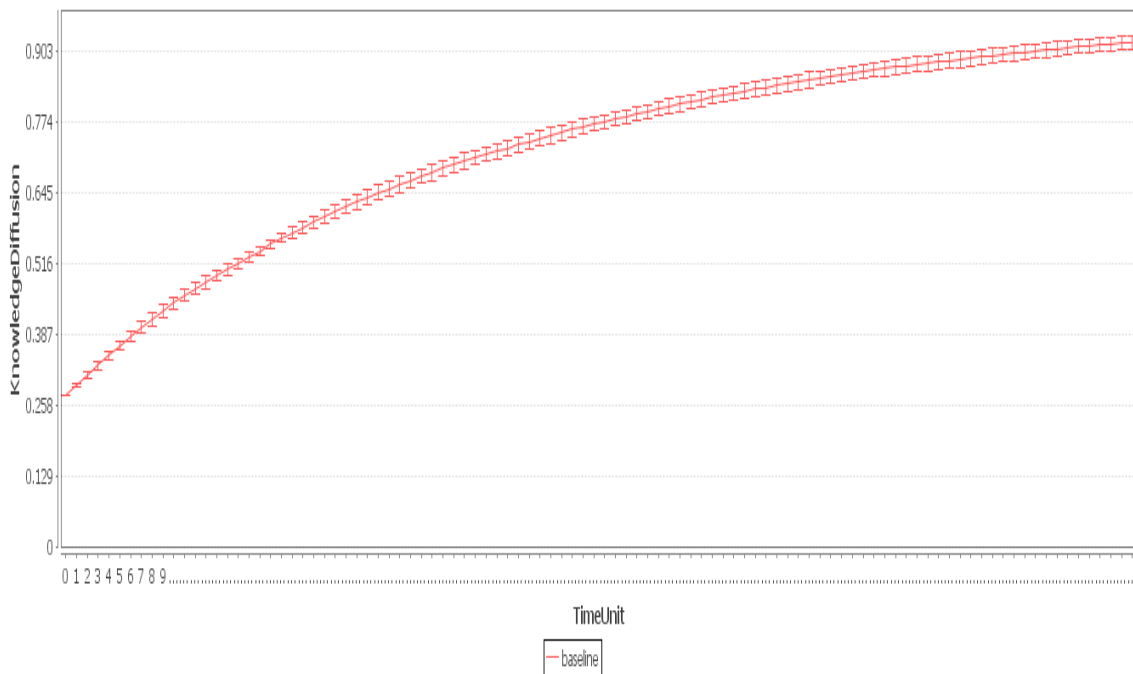


Figure 4.10

Combined faculty network depicting organizational learning

Three Perspective Theory of Culture and Informal Values

Revisiting Martin's (2002) Three Perspective Theory, faculty culture can be either integrated (common values), differentiated (group values differ across the organization); or fragmented (lack of substantive commonality of value across the organization). Each of the individual groups is integrated in that each has common values. However the combined groups are differentiated in that they exhibit heterogeneous values. In other words, the Belief Propagation simulations revealed that each differentiated subculture on its own is homogenous. When the groups are brought together, the strengths of each group is necessary for enabling the organization to adapt and merge toward an institutional value, thus learning can then occur when the groups are not isolated from each other.

This learning process was even more evident in the Near Term analyses. Through Near Term analyses, each individual faculty subculture experienced increases in learning. However, greater organizational learning occurred through the blending of all three faculty subcultures together. The Near Term analyses support the assumption that organizations benefit from having differentiated subcultures as opposed to an exclusively integrated culture as they can enable greater organizational learning. This also supports Martin's (2002) TPT as it captures the realities of differentiated subcultures and shows the benefits of an organization that embraces a diversity of beliefs.

Summary

Through the DNA process applied to this question, several key findings emerged. Three distinct and homogenous subcultures were identified that each represented a

differentiated perspective in building upon Martin's (2002) TPT of culture. When beliefs were propagated over time individually, the ability of each subculture to adapt and learn remained homogenous. When all three subcultures were blended together and informal values propagated over time, the FIC Meta-Network became heterogeneous based on the Near Term analyses greater overall organizational learning was able to occur as each group balanced and counterbalanced the others. This was further supported through the Near Term Analysis which showed that learning does occur for each individual group, but greater learning occurs through the combination of the entire faculty. The implications of these findings are explained in Chapter 5.

Question Four

Traditional culture studies have sought to measure the perceived levels of collegiality or what was commonly referred to as shared governance versus a more hierarchical approach to the leadership patterns in an organization (Adkinson, 2005; Austen & Gamson, 1983; Bergquist & Pawlak, 2008; Kuh & Whitt, 1988). A DNA enables the researcher to explore new types of questions about culture studies in higher education. For this study, leadership patterns were explored by examining the results of a series of leadership questions on the Culture Questionnaire. The following process of inquiry was used to answer the guiding question: "To what degree do the leadership patterns across cultural clusterings influence organizational learning?"

Process of Inquiry

A three-phase process of inquiry was chosen to explore this research question. The process map is outlined in Figure 4.11.

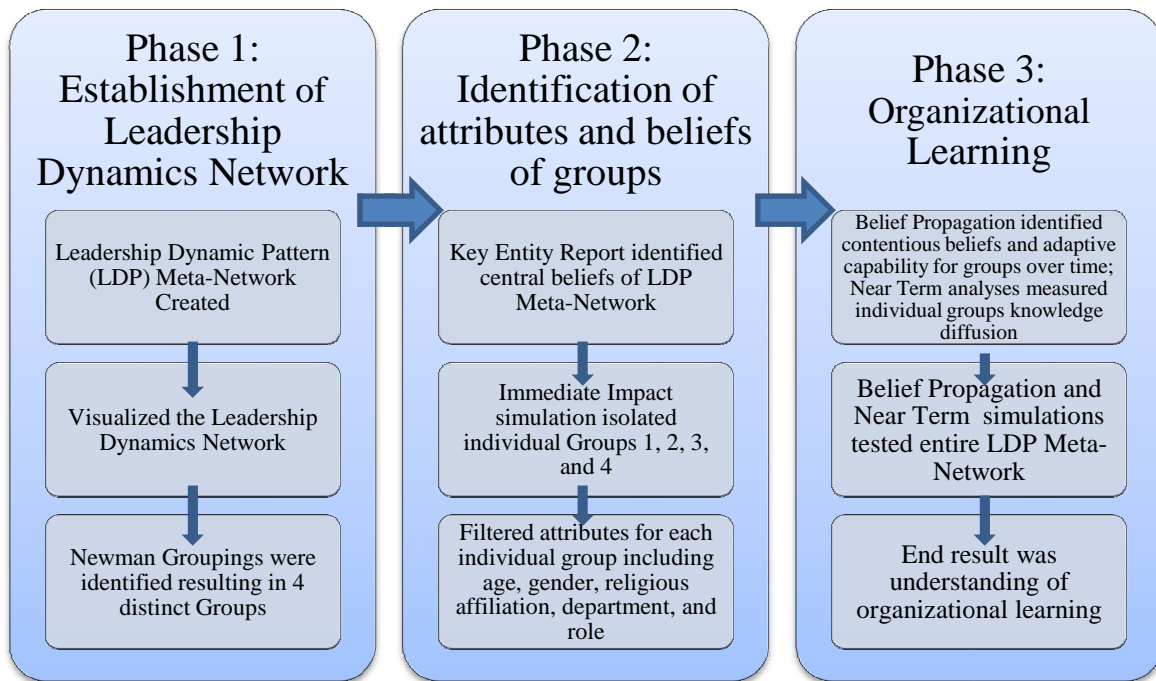


Figure 4.11

Process Chart for Leadership Dynamics Methodology

Phase 1: Identification of Subcultures

The Leadership Dynamic Pattern (LDP) Meta-Network was created as a sub-network to the CCC Meta-Network. The LDP Meta-Network was comprised of 16 matrices. Specifically, the LDP Meta-Network was composed of 135 agents who responded to the set of Leadership Dynamics questions on the Culture Questionnaire. ORA's Visualizer was used to view the network, at which point the network was clustered using Newman's grouping algorithm (2006). Four distinct groups were identified from the Newman's algorithm.

The Culture Questionnaire featured a question with 10 response items related to leadership dynamics. The response items were based on themes identified in the

structured interviews. Response options were scaled with 1 being strongly disagree and 7 being strongly agree. To understand the collective sense of collegiality at the departmental unit of analysis, respondents were asked to what extent does their “department make decisions based on input collected from everyone in the department.” A similar question was asked to understand perceptions of administration. To understand agent perceptions of proactive decision-making, agents were asked to what extent does their “department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises.” A similar question was asked related to administrative decision-making. This pattern of questions at the departmental and institutional level was used to understand perceptions of congruence with the formal values of the institution, the pursuit of excellence in the workplace, and perceptions of servant leadership.

Phase 2: Values of Subcultures

Next, a Key Entity report was generated in ORA to identify the leadership values that most influence the LDP network *as a whole*. Leadership values were identified by a question on the survey that asked the respondents’ opinions about various claims regarding leadership at SCC (these claims are summarized in the Figure 4.12 scatterplot below). Following this, the Immediate Impact simulation was run to isolate each of the four identified Newman Groups, at which point a Key Entity Report was run again on each of these groups. The Immediate Impact simulation produces the network that would exist if the interactive effects of select agents or groups were removed; it answers such questions as, “what would the network look like if the effects of the top management team were removed?” From this, the centrality coefficients for the leadership values in

the total LDP network along with centrality coefficients for each of four clusters (from the earlier Newman grouping) were generated, after isolating the effects of the other three clusters.

Phase 3: Organizational Learning

After identifying leadership dynamic centralities in the entire population and within sub-group networks, I observed how learning occurs in the organization with respect to the leadership values described above. To study organizational learning, a Belief Propagation report was conducted to provide an in depth analysis of each group. The purpose of this exercise was to understand how each group interacted, adapted their beliefs, and how these beliefs evolved over time. Near Term (Lin and Carley, 1997) simulations were then implemented on the employee population in order to compare and contrast individual groups with overall organizational learning of the entire population within the LDP Meta-Network.

LDP Demographics

The LDP Meta-Network demographics focused on age of employee, tenure at the institution, and the type of church attended. The demographic information for the LDP Meta-Network was reflected in the following tables:

Table 4.32

Age of LDP Meta-Network

18-30 yrs	31-42 yrs.	43-54 yrs.	55 and up
20	45	34	36

Table 4.33

Tenure of Service at Institution

0-3 yrs.	4-7 yrs.	8-11 yrs.	12-15 yrs.	16-19 yrs.	20-23 yrs.	24-27 yrs.	28 or more
44	49	15	9	7	2	2	5

Table 4.34

Denominational Affiliation of LDP Meta-Network

Reformed	Baptists	Non-Denominational	Methodist	Catholic	Charismatic	Other
64	37	16	4	5	4	5

A few observations about the LDP Meta-Network based on the tables above are pertinent to understanding the scope of the dynamics occurring relative to leadership. First, the number of agents who identify with the reformed denomination is 47% of the total population. Baptists and non-denominational churches account for another 39% of the total population. Also, as alluded to earlier, there were a large number of newer employees in the LDP Meta-Network, and they account for 68% of the work force.

The centrality coefficients for the leadership values in the total LDP network were calculated. As indicated by the scatterplot of the centrality coefficients in Figure 4.12, the top leadership value (the top “informal leader” among values, so to speak) is the pursuit of excellence at the departmental level of the institution. This is followed by the departmental practice of a servant leadership style. The third highest ranked value is the

sense of departmental congruence with the mission, vision, and values of the institution. The fourth highest involves a general sense of departmental collegiality or sense of voice for individuals to be heard at the departmental level. The fifth highest value that emerged for leadership dynamics is the servant leadership style perceived by individual employees as being a practice throughout the institution. Several observations about these leadership dynamics become evident when they are plotted on a scatterplot (Figure 4.12). First, four out of five of the values involve positive perceptions of one's own department. However, with exception to the servant leadership style value, scores for the administration and institution values declined. And, the scores for the administration and institution as a whole are consistently lower than the other leadership dynamics measured. As alluded to earlier, servant leadership emerged as a value that employees felt was espoused and practiced both within individual departments and institutionally.

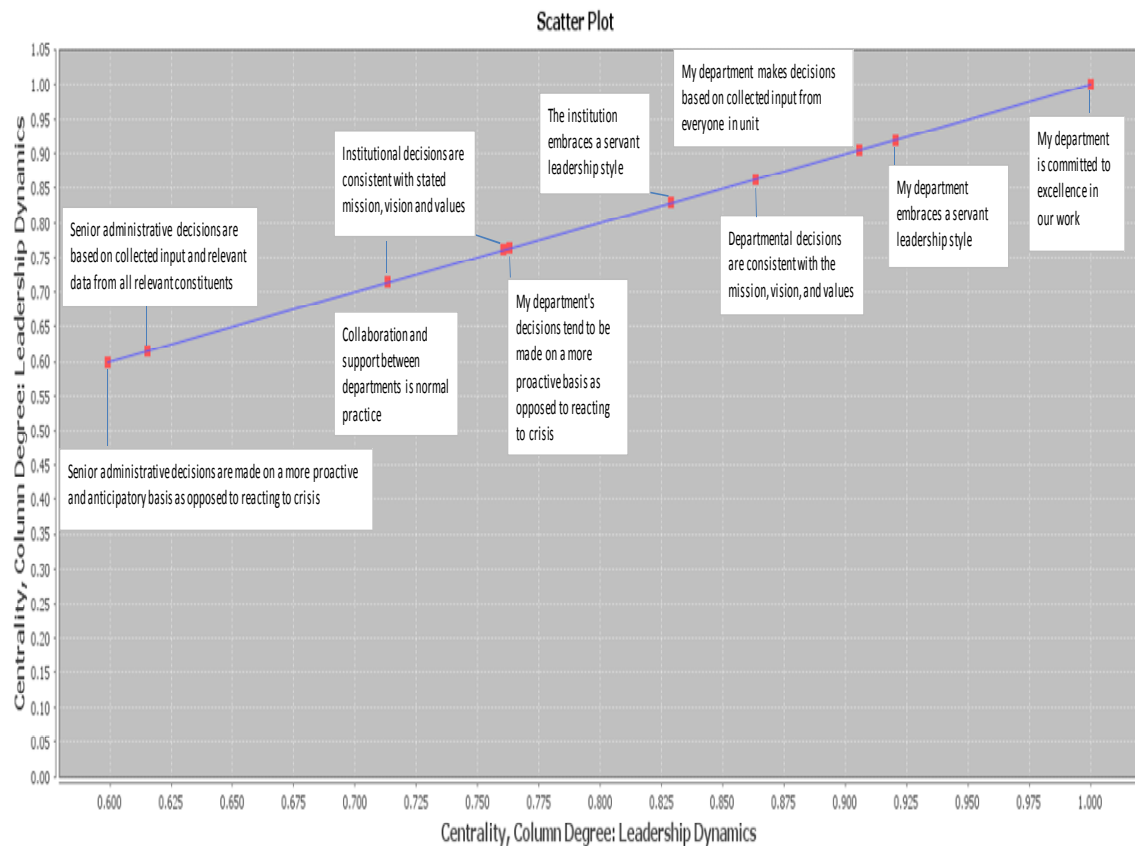


Figure 4.12
Scatter Plot of Overall Leadership Dynamics

The five leadership dynamics for the bottom half of the scatterplot are: (a) my department's decisions tend to be made on a proactive and anticipatory basis as opposed to reacting to crisis, (b) institutional decisions are consistent with the institutional mission, vision, and values, (c) collaboration and support between departments is normal practice, (d) senior administration decisions are made proactively based on collected input and relevant data from all relevant constituents, and (e) senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crisis. In general, individual departments scored higher than the institution-wide values or

perceptions of senior level decisions. There appeared to be greater congruence in general between individuals and their departments with a greater gap existing between individuals and the institution as a whole as shown in the scatterplot in Figure 4.12.

Leadership Belief Groups

Agent by leadership belief clusters were identified in the LDP meta-network using Newman's grouping algorithm (2006). These beliefs are called nodes in network analysis; the servant leadership belief in Figure 4.12 [the plot above] is a node, for example. Individuals were linked into clusters by similarity of responses to the leadership beliefs questions on the Culture Questionnaire. For the LDP Meta-Network, Newman's algorithm identified four distinct groups. Table 4.35 lists the nodes associated with these distinct subcultures.

Table 4.35

Newman's Clustered Groupings Based on Leadership Dynamics

Leadership Dynamic	Cluster	Thematic Description
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	1	Confidence in Shared Governance
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	1	
Institutional decisions are consistent with the stated institutional mission, vision, and values	1	
My department makes decisions based on input collected from everyone in the department	2	Departmental Leadership
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	2	
Departmental decisions are consistent with the stated institutional mission, vision, and values	2	
Institutionally, SCC embraces a servant leadership style	3	Servant Leadership
Collaboration and support between departments is normal practice	3	
My department embraces a servant leadership style	3	
My department is committed to the pursuit of excellence in our work	4	Departmental Excellence

LDP Group 1 links 38 agents. The key beliefs for this group are (a) senior administrative decisions are made based on collected input and relevant data from all relevant constituents; (b) senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises; and (c) institutional decisions are consistent with the stated institutional mission, vision, and values. This group has the smallest percent of the overall 18-30 year-old age population while having the highest percentage of members aged 55 and up, with nearly 42% of this population of the overall LDP Meta-Network. The dominant religious affiliation for Group 1 is Baptist with 15 agents followed by reformed with 13 agents. This group was defined as having

confidence in the hierarchy. This was based on the identified shared governance value that was perceived to be evident and congruent with the values of the institution.

LDP Group 2 has 40 agents. One of the key themes to emerge for Group 2 was agreement on the collegial approach to departmental decision making. This group is 60% male and has 28% of the 0-3 years and 43% of 4-7 years population. In terms of religious affiliation, Group 2 is predominantly affiliated with reformed religious traditions with 27 agents. Group 2 has the largest concentration of faculty members with 17 agents; faculty constitutes nearly 43% of the overall makeup of this group and of the total faculty respondents for the questionnaire. This group is defined by their shared perception of departmental congruence and collegiality.

LDP Group 3 has 41 agents. The key themes for this group were: (a) the belief that the institution embraces a servant leadership style, (b) collaboration between departments is normative, and (c) that individual departments embrace a servant leadership style. This group has 40% of all 18-30 year olds and has 76% female of the overall female population and Group 3 was 63% female as a group. This group is defined by its focus on servant leadership as a relational approach for collaborating and working with other departments.

LDP Group 4 has 16 agents and is centered around a singular belief that each member's department was committed to the pursuit of excellence. This group is comprised of 12 staff members and four faculty members. Given the ratio of staff to faculty, the focus on departmental excellence made sense as the vast majority of agents in

this group played a support role at the institution. The group is characterized by its focus on completing tasks with excellence within their department.

Organizational Learning

As outlined prior to this chapter, organizational learning is defined for this study in part as a group process in which interactions and interdependencies lead to attitudinal changes over time. It is also defined as the capacity of a system to diffuse information. To explore learning as it relates to group processes in the organization, Belief Propagation simulations (Friedkin, 1998) were conducted; to evaluate learning as diffusion of information, Near Term simulations (Lin & Carley, 1997) were conducted.

The Belief Propagations were conducted to see which leadership dynamics would remain central for each group and which leadership dynamics would change. The results of each group's Belief Propagation simulation is described first and then followed by description of the Near Term simulation for each group. Near Term Analysis (Lin & Carley, 1997) graphed changes in leadership perceptions over time for each group and for the entire population. Each Near Term simulation was conducted for 100 time periods and was replicated 25 times using the Monte Carlo method. The Monte Carlo method enables a "random optimization" (ORA, 2010) for the networks being analyzed. The Near Term analysis calculates the capacity of the system to diffuse informal values diffused over time.

Last, the results of the Belief Propagation and Near Term simulations are described for the entire population. This enables comparisons of the differences in organizational learning between the homogenous groups (Martin's, 2002, integrated

culture) and the heterogeneous meta-network (or Martin's differentiated culture) as a whole. The tables depicting the Belief Propagation scores are listed in rank order beginning with the initially most contentious belief for that particular group.

Group 1

Recall that Group 1 was described as having faith in the hierarchy or the organization. The most contentious belief for Group 1 has to do with senior administrative decisions gathering of all relevant information; this issue decreased in variation when agent beliefs were simulated over time. This is followed by departmental decisions being made proactively as opposed to reactively. There are 38 people in this group. With both the top two contentious beliefs and all other beliefs for the departmental decision scores in Group 1, the level of contention declined from the initial to the final contention level. The Belief Propagation projects changes in perceptions about a given believe after agents have interacted for a given length of time (in this case, the changes were iterated for seven time periods, defined as instances of interaction). Table 4.36 shows the initial and projected (final) attitude scores for each of the leadership beliefs that define Group 1. It shows that, for every leadership node, the intensity of attitudinal differences decreases. However, the initial contentiousness scores were not intense to start with, so the overall change is not dramatic.

Table 4.36

Group 1 Belief Propagation Scores

Leadership Dynamics	Initial	Final	Percent Change
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	1.496	1.066	-28.75%
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	1.467	1.001	-31.74%
My department makes decisions based on input collected from everyone in the department	1.381	0.98	-29.02%
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	1.325	0.889	-32.93%
My department is committed to the pursuit of excellence in our work	1.204	1.046	-13.12%
Departmental decisions are consistent with the stated institutional mission, vision, and values	1.18	0.877	-25.65%
Institutional decisions are consistent with the stated institutional mission, vision, and values	1.163	0.822	-29.37%
My department embraces a servant leadership style	1.162	0.892	-23.24%
Institutionally, [Christian College] embraces a servant leadership style	1.151	0.781	-32.15%
Collaboration and support between departments is normal practice	1.087	0.744	-31.61%

Figure 4.13 graphs the projected perceptions over time of the ten agents with the most dynamic change in belief about proactive departmental decision-making. The attitudes of two of the agents decreased rather dramatically from an initial high value of 3.0. One person's attitudes increase from 1.0 to about 1.6. In all cases, attitudes merged to a group average of between 1.25 and 2.0. This pattern of change has the appearance of groupthink.

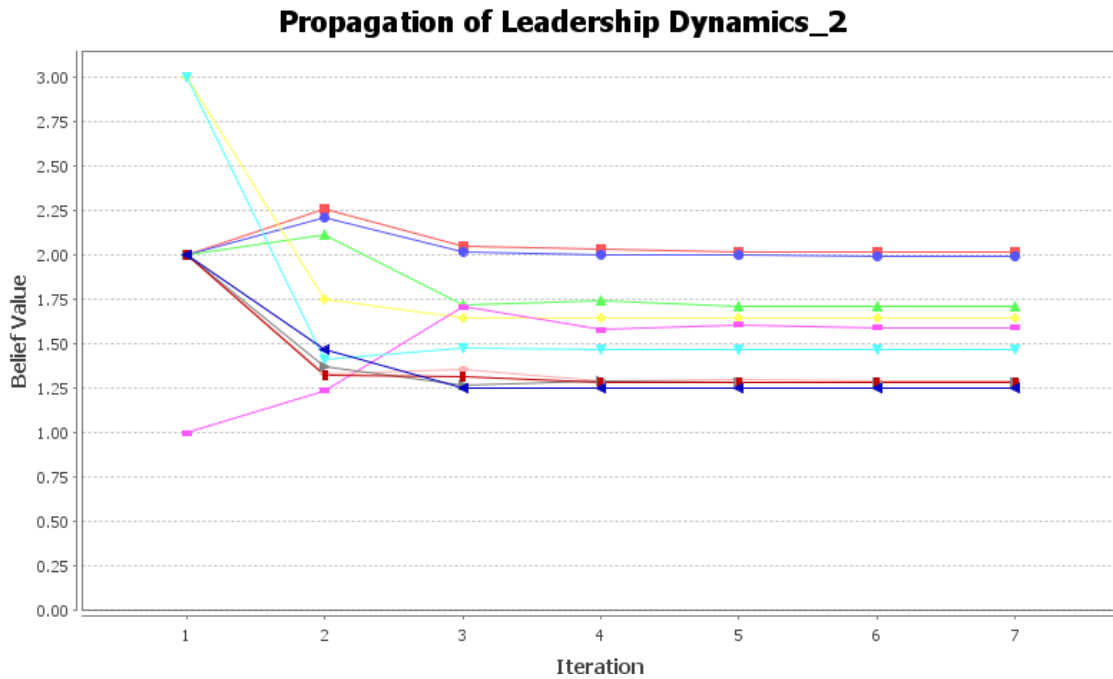


Figure 4.13

Change in contention levels for the perception of proactive departmental decision making. The lines represent the projected attitudes of 10 people in the group

Figure 4.14 depicts how perceptions of leadership knowledge diffuses over time for Group 1 after accounting for the interactive effects of groups 2, 3, and 4. Over time, reflecting organizational learning for group 1 increased approximately from 53% to 96% for an increase of 53%. Figure 4.14 reflects change through knowledge diffusion of informal components over 100 time intervals with 25 generations per interval.

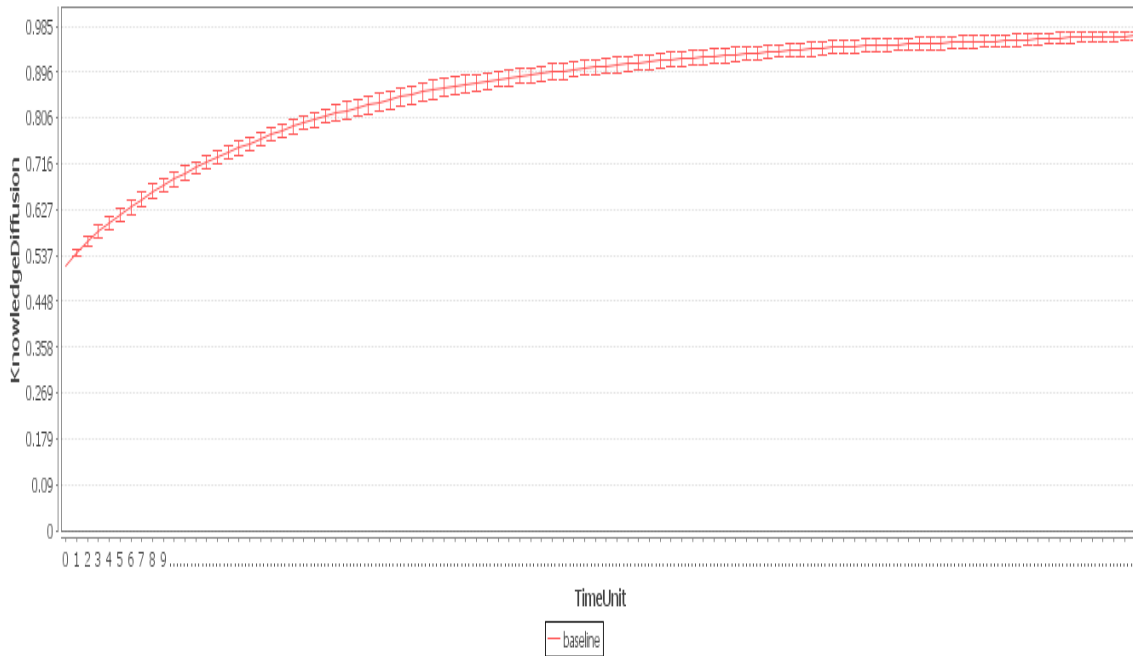


Figure 4.14
Evolutionary Trajectory—Knowledge Diffusion of Leadership Dynamics for Group 1

Group 2

Group 2 is focused on departmental collaboration in terms of leadership values. The initial most contentious belief for Group 2 was the sense of collaboration with other departments. Additional findings in this analysis involved increases in contention variation scores over time in (a) proactive decision making by senior administration, (b) shared governance within the department, and (c) departmental decision making congruence with institutional values. Table 4.37 shows how the beliefs of Group 2 changed over time.

Table 4.37

Group 2 Belief Propagation Scores

Leadership Dynamic	Initial	Final	Percent Change
Collaboration and support between departments is normal practice	1.821	1.101	-39.53%
Institutionally,[Christian College] embraces a servant leadership style	1.595	0.948	-40.59%
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	1.331	1.079	-18.97%
Institutional decisions are consistent with the stated institutional mission, vision, and values	1.174	1.011	-13.83%
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	1.107	1.086	-1.90%
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	1.011	1.156	14.34%
My department makes decisions based on input collected from everyone in the department	1.005	1.14	13.47%
My department embraces a servant leadership style	0.949	0.722	-23.91%
My department is committed to the pursuit of excellence in our work	0.811	0.939	15.76%
Departmental decisions are consistent with the stated institutional mission, vision, and values	0.793	0.91	14.88%

Figure 4.15 graphs the attitudes about leadership values for the 10 agents who experienced the greatest changes in their attitudes. The intensity of opinions for all 10 agents increased, and interestingly, they diverged rather than converged. One score increased significantly from an initial low value and leveled off as the highest final value in the set.

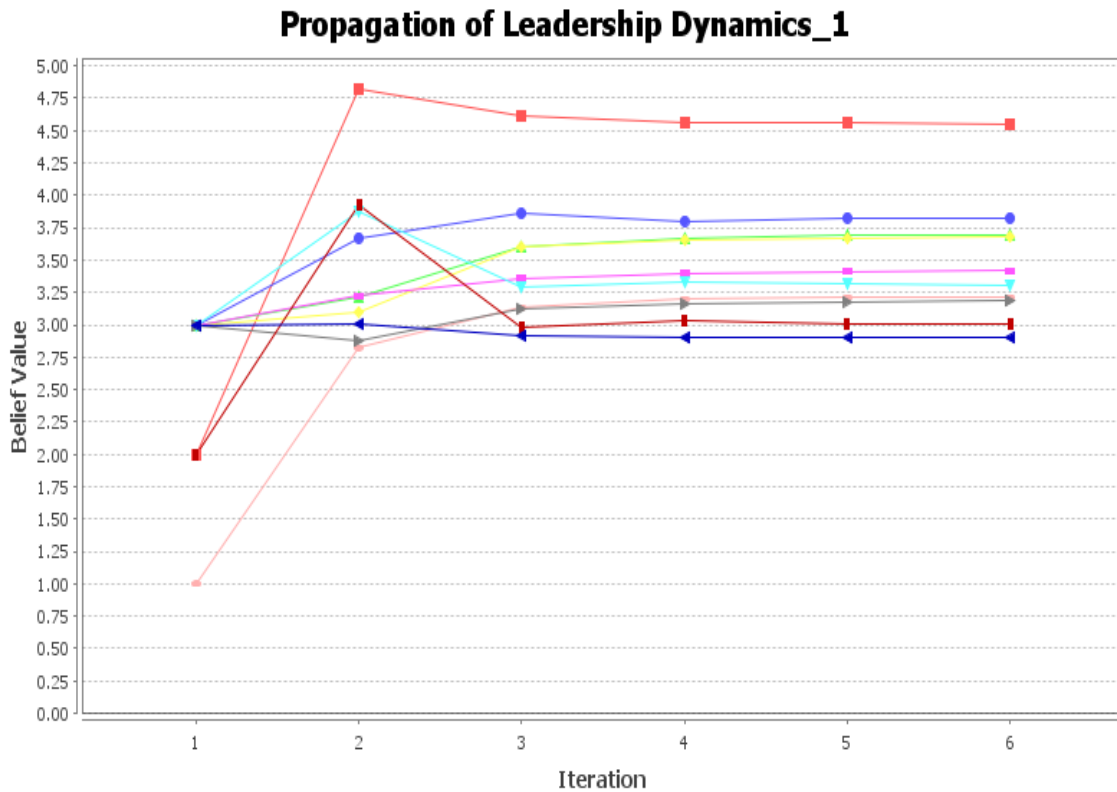


Figure 4.15

Example of increased contention levels for Group 2 on the belief that departmental decisions were made more proactively than reactively

Figure 4.16 depicts how perceptions of leadership knowledge diffuse over time for Group 2 in isolation from groups 1, 3, and 4. Over time, that organizational learning increases from approximately 48% to 89% for an overall increase of 41% for Group 2. Figure 4.16 reflects change through knowledge diffusion of informal components over 100 time intervals with 25 generations per interval.

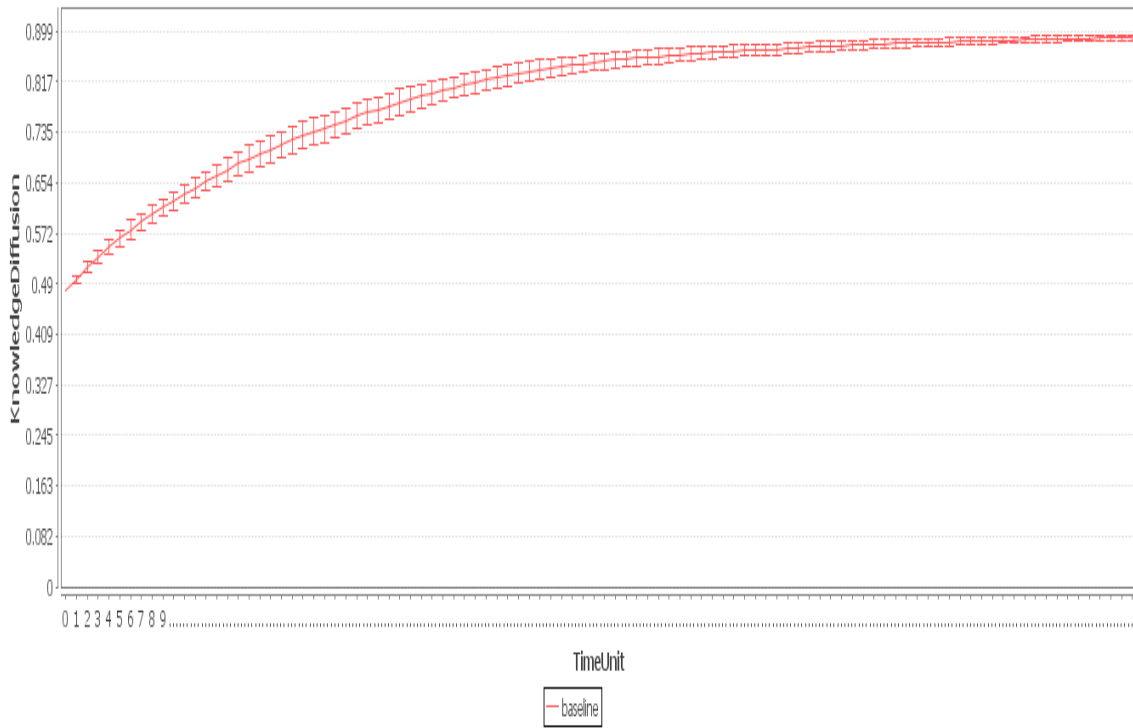


Figure 4.16
Evolutionary Trajectory—Knowledge Diffusion of Leadership Dynamics for Group 2.

Group 3

Group 3 agents are linked by the theme, servant leadership. Table 4.38 shows that differences involving the top three most contentious initial beliefs in this group decreased by 33% or more over time. All contention scores, except for the two nodes with the lowest initial scores, decreased over time.

Table 4.39

Group 3 Belief Propagation Scores

Leadership Dynamic	Initial	Final	Percent Change
My department makes decisions based on input collected from everyone in the department	1.659	1.079	-34.92%
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	1.563	1.041	-33.38%
Institutionally, [Christian College] embraces a servant leadership style	1.385	0.87	-37.15%
My department is committed to the pursuit of excellence in our work	1.271	1.02	-19.69%
Collaboration and support between departments is normal practice	1.242	0.83	-33.20%
My department embraces a servant leadership style	1.195	0.923	-22.77%
Departmental decisions are consistent with the stated institutional mission, vision, and values	1.171	0.911	-22.19%
Institutional decisions are consistent with the stated institutional mission, vision, and values	0.861	0.697	-19.05%
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	0.745	0.857	15.11%
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	0.459	0.92	100.40%

Figure 4.17 depicts how knowledge diffusion changes over time for Group 3 in isolation from groups 2, 3, and 4. Over time, organizational learning capacity increased from 33% to 88% for a 55% increase in knowledge diffusion for Group 3. Figure 4.17 reflects change through knowledge diffusion of informal components over 100 time intervals with 25 generations per interval.

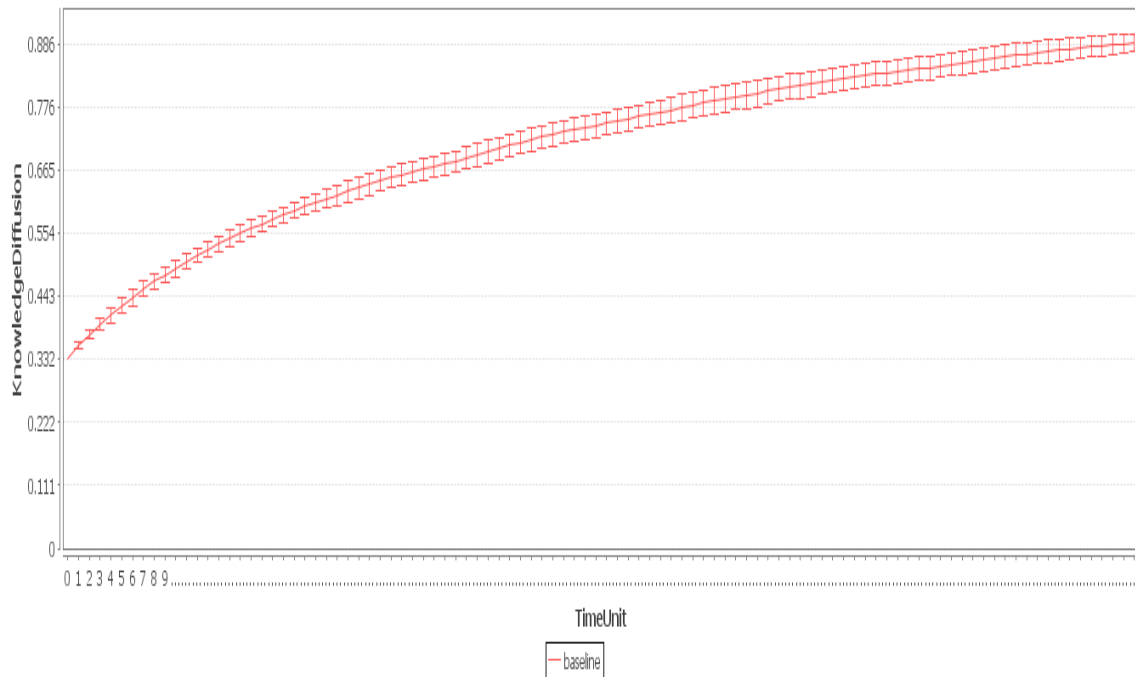


Figure 4.17
Evolutionary Trajectory—Knowledge Diffusion of Leadership Dynamics for Group 3

Group 4

Group 4 is defined by the theme, perceptions of departmental excellence. The most contentious initial score was departmental servant leadership dynamic, which decreased in variation over time (approached consensus). The changes were not particularly dramatic, however.

Table 4.40

Group 4 Belief Propagation Scores

Leadership Dynamic	Initial	Final	Percent Change
My department embraces a servant leadership style	1.625	1.205	-25.82%
Departmental decisions are consistent with the stated institutional mission, vision, and values	1.234	0.978	-20.75%
Institutionally, [Christian College] embraces a servant leadership style	1.172	1.032	-11.90%
My department makes decisions based on input collected from everyone in the department	1.133	0.805	-28.96%
My department is committed to the pursuit of excellence in our work	1.008	1.207	19.73%
Collaboration and support between departments is normal practice	0.906	0.922	1.75%
Institutional decisions are consistent with the stated institutional mission, vision, and values	0.883	0.808	-8.43%
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	0.75	1	33.38%
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	0.047	0.01	-77.80%
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	-0.297	-0.004	-98.71%

When the beliefs of Group 3 were propagated over time, there were modest increases in the dispersion (average values) placed on the beliefs: (a) departmental decisions are consistent with organizational values, (b) the institution embraces a servant leadership style, and (c) institutional decisions are congruent with the explicit values.

This can be understood as an increase in the uniformity of beliefs between agents as they influence one another. Also, contention levels increased over time for the beliefs related

to the following: departmental commitment to excellence, intradepartmental collaboration, and proactive departmental decision making. For the increases this means that the variation between individual opinions on these contentious beliefs actually increased as agents did not settle into uniformity as would be expected.

Figure 4.18 depicts how perceptions of leadership knowledge diffuse over time for Group 4 in isolation from groups 1, 2, and 3. Organizational learning capacity increased from 24% to 57%, an increase of 33% in knowledge diffusion for Group 4. Figure 4.18 reflects change through knowledge diffusion of informal components over 100 time intervals with 25 generations per interval.

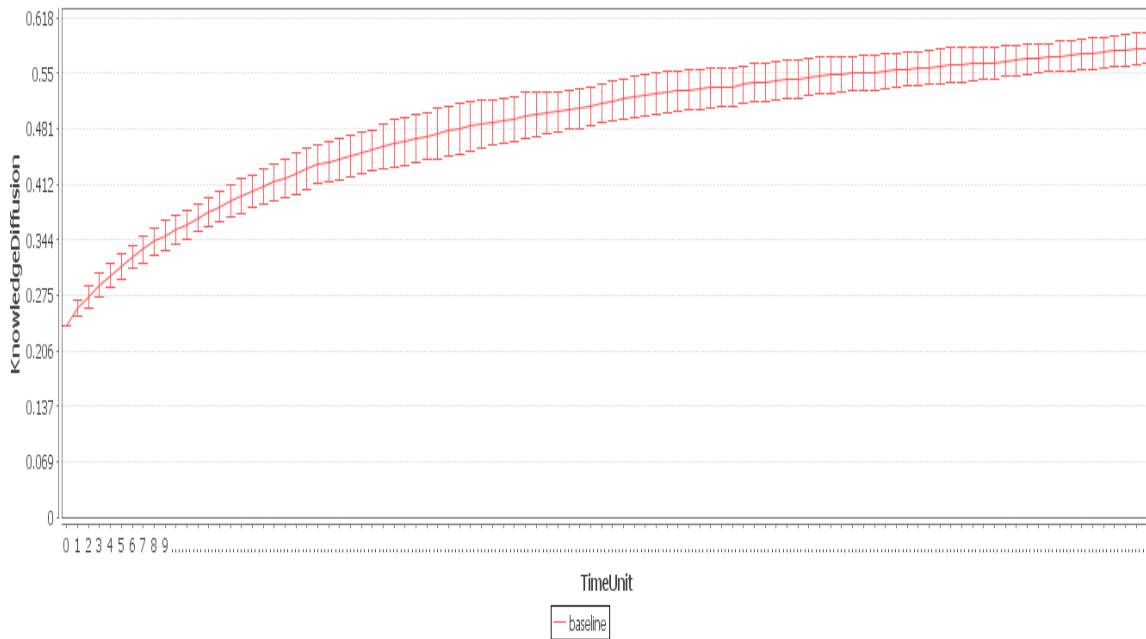


Figure 4.18
Evolutionary Trajectory—Knowledge Diffusion of Leadership Dynamics for Group 4

LDP Meta-Network Contention Levels

Collectively, when all four groups were combined, the general trend was towards decreases in contention levels for perceptions of senior administrative decisions. This means that the differences in opinion over time become more similar and point to the power of relationships to change and influence the overall cultural dynamic.

Table 4.41

LDP Meta-Network Belief Propagation Scores

Leadership Dynamic	Initial	Final	Percent Change
My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises	1.64	1.133	-30.90%
My department makes decisions based on input collected from everyone in the department	1.632	1.18	-27.68%
Institutionally, SCC embraces a servant leadership style	1.451	0.9	-37.98%
Collaboration and support between departments is normal practice	1.439	0.92	-36.06%
Departmental decisions are consistent with the stated institutional mission, vision, and values	1.287	1.083	-15.85%
Institutional decisions are consistent with the stated institutional mission, vision, and values	1.256	0.868	-30.88%
Senior administrative decisions are made based on collected input and relevant data from all relevant constituents	1.253	1.039	-17.06%
My department embraces a servant leadership style	1.251	0.969	-22.54%
My department is committed to the pursuit of excellence in our work	1.128	1.113	-1.35%
Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises	1.06	1.052	-0.81%

For the entire LDP Meta-Network, contention levels dropped for all belief nodes. Essentially, over time, the entire network adapted and adjusted with the contention levels

lowering. However, the overall contention level changes were minor which indicated that there was not a lot of change in beliefs between individuals within the groups.

Figure 4.19 depicts how knowledge diffuses over time for the entire LDP Meta-Network. Organizational learning increased from 40% to 97%. Figure 4.19 reflects change through knowledge diffusion of informal components over 100 time intervals with 25 generations per interval. The overall increase for the LDP Meta-Network reflects a 57% increase in knowledge diffusion of leadership dynamics.

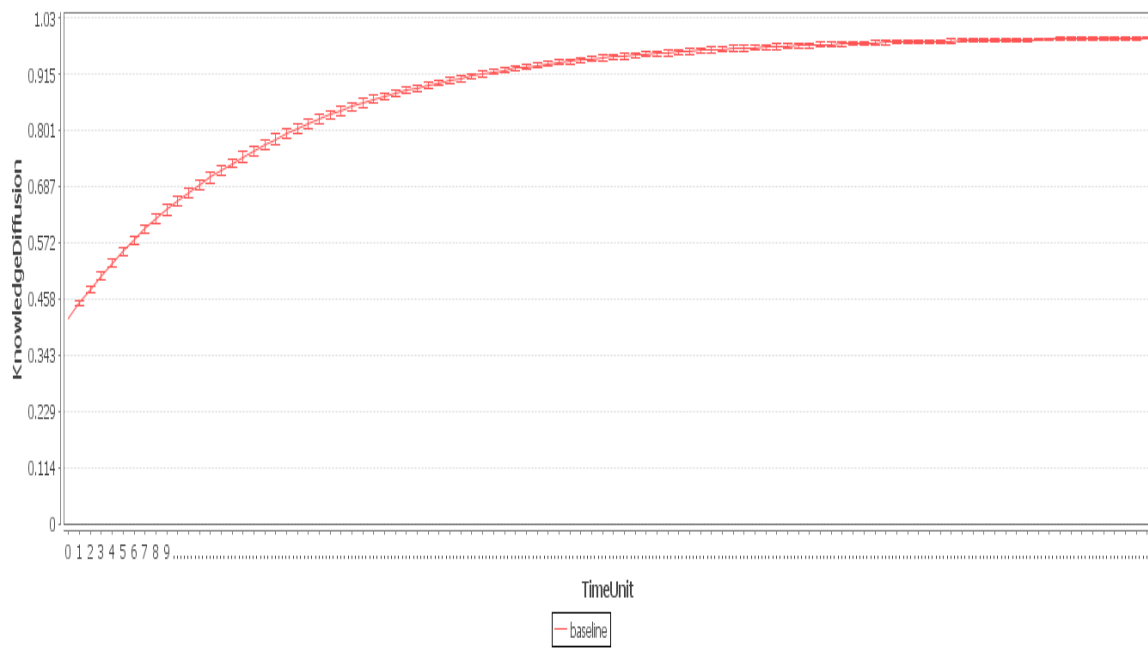


Figure 4.19
Evolutionary Trajectory—Knowledge Diffusion of Leadership Dynamics for LDP Meta-Network

Summary

Using Newman Groupings, four distinct groups were identified based on the series of leadership dynamics from the questionnaire. The four distinct groupings were defined as follows: (1) confidence in shared Governance, (2) departmental congruence, (3) servant leadership, and (4) departmental excellence. Belief Propagation simulations were run for each individual group and the results were mixed. Group 1 favored the senior administration in both initial and final contention scores. However, for Group 2, the contention level for perceptions of senior administration either maintained steady or increased, and for Group 3 which was signified by servant leadership, the contention levels for the perception of both questions related to the senior administration increased. For Group 4, the contention levels for senior administration decreased and for the entire LDP Meta-Network, the levels decreased slightly for senior decisions being made proactively. Contention scores decreased by 17% related to the perception that senior administrators do collect input from all relevant constituents.

Through the Near Term analysis, the capacity of each group plus the combined group to diffuse knowledge increased. In particular, LDP Group 3 increased in the diffusion of leadership knowledge by 55% which surpassed the other individual groups. When all four individual groups are combined, the diffusion of leadership knowledge throughout the LDP Meta-Network increases by 57%. The capacity of Group 1 increased by 53%; for Group 2, 41%; and for Group 4, 33%. Findings for the proposal from complexity theory that greater heterogeneity fosters greater learning, then, are mixed. The

combined groups saw the biggest growth in learning capacity but the capacities for Groups 1 and 3 were close behind.

Overall, the results of the data varied in explaining the perceptions of the leadership dynamics within the LDP Meta-Network. When the beliefs are propagated over time, the beliefs of particular groups tended to decrease and then level off. This shows that people's beliefs about the leadership dynamics of the institution may not change much over time if their social network remains constant. Subsequently the agents adapted over time to general beliefs held by the group.

Question Five

To answer the last of the research questions regarding the interactions of resources and other entities within the network and their influence on cultural dynamic, a four-phase approach focused on the role of resources within the CCC Meta-Network. First, within the Resource network, clusters were identified using the Newman's grouping algorithm (2006). The question asked of each respondent was: "What types of resources do you regularly use as part of your job?" Second, these clusters were interpreted to explain how agents were grouped based on existing resources in the SCC. Third, resources and other related entities, including the Knowledge network, Internal Influences network, and the Pressure network, were examined to understand how resources influenced the overall culture. Finally, in order to view how perceptions of Internal Influences and Pressures changed over time, a Belief Propagation analysis was utilized (Friedkin, 1998). The Belief Propagation analysis was conducted on both the

Internal Influences and Pressure networks and the results are described with a focus on the role of resources in those networks over time.

Resource Network

Impact of resources on network

Table 4.42 identifies the resources most central to the entire CCC Meta-Network.

The data for this table was generated in ORA based on the resources with the greatest number of link connections by combining the row and column links.

Table 4.42

Resources Most Central to Network based on row and column degree centrality

Rank	Resource	Value	Unscaled
1	Computer	0.68	123
2	Basic computer software (Microsoft Word, Excel, Outlook, Access, Powerpoint)	0.652	118
3	Internet	0.569	103
4	Fellow co-worker(s)	0.486	88
5	Telephone (landline)	0.326	59
6	Automobile (car, van, or bus for carrying out work-related tasks)	0.32	58
7	Bible	0.32	58
8	Cell phone	0.304	55
9	Student workers	0.293	53
10	Vice President or senior supervisor of your division	0.177	32

Table 4.42 highlights several cultural manifestations related to resources. Physical arrangements (Martin, 2002) include the computer, landline telephone, automobile, and cell phone. Human resources are evidenced in fellow co-workers, student workers, and senior supervisor. Interestingly, the Bible emerges as a top resource which reflects the religious influence of this resource at the institution.

Both human resources and infrastructure supporting technology resources are perceived as essentials in the network. In Table 4.43, human resources were identified as the 1st, 4th, and 6th ranked nodes. Technology resources were identified in the 2nd, 3rd, 5th, 7th, and 9th ranked positions. Clearly, human resources and technology-related resources played an important role for the SCC culture. The data for Table 4.43 was generated in ORA by calculating the centrality of resources by row.

Table 4.43

Most Needed Resources based on row-degree centrality

Rank	Resource	Value	Unscaled
1	Fellow co-worker(s)	0.609	14
2	Computer	0.348	8
3	Basic computer software (MICROSOFT WORD, EXCEL, OUTLOOK, ACCESS, POWERPOINT)	0.304	7
4	Vice President or senior supervisor of your division	0.261	6
5	Internet	0.261	6
6	Legal and risk management consultants	0.217	5
7	Telephone (landline)	0.217	5
8	Context-specific books	0.13	3
9	Student Information System software (PowerCampus)	0.13	3
10	Automobile (car, van, or bus for carrying out work-related tasks)	0.087	2

Agent x Resource

Within the Resource network, five distinct groups of agents cluster around particular resources. These groups were depicted in Figure 4.20.

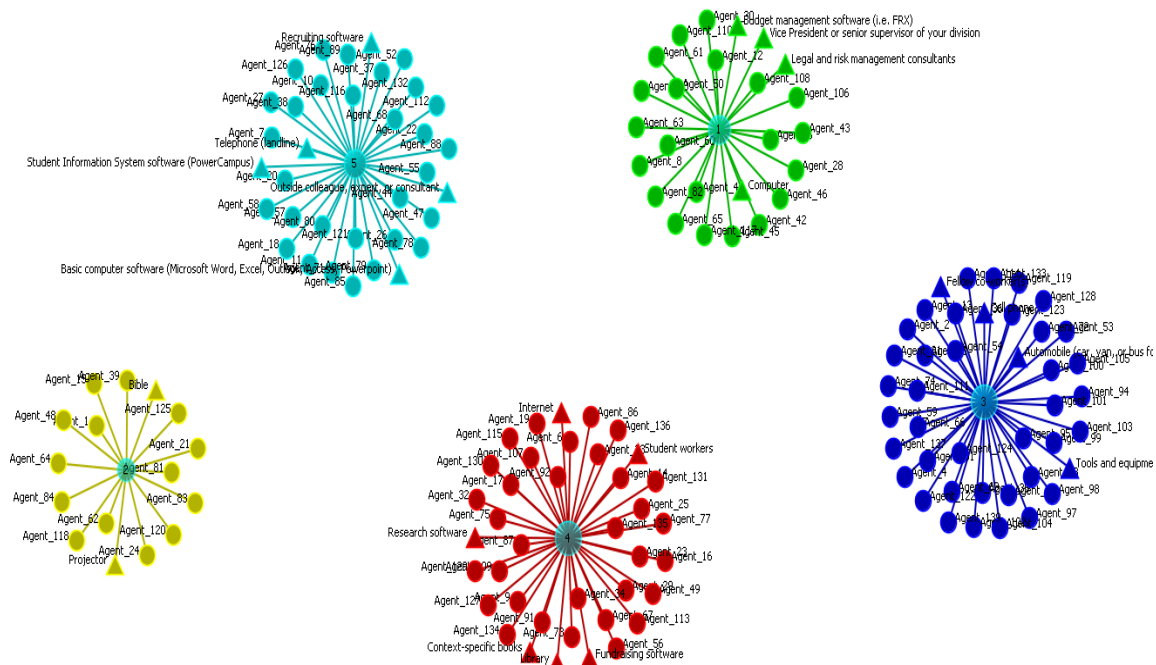


Figure 4.20
Resource Network

Resource Group 1 (green) has 21 agents and includes the following resources: (a) personal computer, (b) Vice President or division supervisor, (c) budget management software, and (d) legal and risk management consultants. This group consists of nearly half (48%) of all employees with 0-3 years of tenure at the institution. Additionally, 38% of this group are in the 4-7 year range at the institution (eight employees), 43% are in the 31-42 age attribute populations (nine employees). This group is the most likely to directly report to a Vice President or Senior Supervisor of a division. This group includes nine professional support staff who primarily serve the Traditional program (all who have served at the institutions for seven years or less), three members of the administration, three members who serve as administrative assistants, two instructors, and four managers. This group consists predominantly of agents who are located at the Traditional location.

Most of the agents in this group serve the traditional program exclusively and some of the agents serve both the Traditional and Adult Studies program.

Resource Group 2 (yellow) consists of 14 agents and includes two resources: (a) a projector and (b) a Bible. This group is composed of 53% of the 43-54 year olds, while 53% of the people in this group have worked for the institution for 4-7 years. The age of the agents utilizing these two resources include eight agents who are aged 43-54 and four agents who are 55 and up. This group includes 10 instructors, composed of faculty and four professional support staff who used a projector for communication with students and other constituents and who serve at multiple site locations.

Resource Group 3 (royal blue) has 38 agents and includes the resources (a) fellow co-worker, (b) cell phone, (c) tools and equipment, and (d) automobile. This group is comprised of 37% of the employees who have served from 0-3 years (approximately 14 out of the 38 employees in this group) and 32% of the employees who have 4-7 years of experience at the institution (12 employees out of the 38 in this group) respectively for a combined 70% of the population. This group is composed of agents who play a support role in the institution and notably include the majority of athletic coaches, several members of the advancement staff, maintenance and housekeeping staff, and other administrative staff who work at either multiple campuses or satellite campuses.

Resource Group 4 (red) has 33 agents and utilizes the resources (a) context specific books, (b) student workers, (c) library, (d) fundraising software, and (e) internet research software. Almost half (46%) of the agents are between ages 31-42. This group is

primarily faculty (17 agents), librarians (five agents), technology staff (two agents), and advancement staff (five agents).

Resource Group 5 (light blue) has 30 agents and utilizes the resources (a) recruiting software, (b) basic computer software, (c) an outside colleague/expert/consultant, (d) telephone, landline, and (e) the student information system. This group contains 45% of all 18-30 (16 employees) age group, while 70% of this group is female. Additionally, 50% of all employees with 12-15 years of service at the institution (six employees) belong in this group. This group includes staff who serve in Enrollment Services for the traditional undergraduate program and Adult studies program as well as members of the Admissions, Financial Aid, Registrar, and other related support services personnel.

Knowledge Network

Table 4.44 shows the knowledge most central to the CCC Meta-Network and included the top ten ranking knowledge sets based on network centrality.

Table 4.44

Top Ranking Knowledge for CCC Meta-Network based on centrality to the network

Rank	Knowledge	Value	Unscaled
1	Communication skills	0.996	493
2	Customer Service skills	0.96	475
3	Basics of the evangelical Christian faith	0.954	472
4	Expectations of supervisor	0.931	461
5	Department specific details	0.927	459
6	Basic software literacy (MICROSOFT OFFICE: WORD, EXCEL, POWERPOINT, ACCESS, PUBLISHER)	0.879	435
7	Understanding of the Academic Catalog	0.762	377
8	History of the institution	0.717	355
9	Institutional priorities	0.713	353
10	Reformed theology	0.711	352

Table 4.44 reflects the top ranked knowledge sets that employees perceived essential to performing job-related tasks. Within the Knowledge network, several cultural manifestations emerged as important for understanding basics of a job at this institution. Technical language as a cultural manifestation (Martin, 2002) emerged with the number 1st and 2nd ranked nodes. Formal and informal values emerged as a cultural manifestation with the 3rd, 4th, 5th, 7th, 8th, 9th, and 10th ranked nodes.

Table 4.45 indicates some of the more technical knowledge that is required of work at SCC. These knowledge-related resources include computer literacy, the Academic Catalog, the Employee Handbook, and the budget software. Like Table 4.44, Table 4.45 provides additional elements of the formal and informal values of the SCC culture in the knowledge network. These include the Employee Handbook along with the jargon and other formal and informal values already alluded to in Table 4.44.

Table 4.45

Top Ranking Knowledge Required based on row degree centrality

Rank	Knowledge	Value	Unscaled
1	Communication skills	0.913	21
2	Expectations of supervisor	0.739	17
3	Department specific details	0.696	16
4	Basics of the evangelical Christian faith	0.565	13
5	Customer Service skills	0.565	13
6	Basic software literacy (MICROSOFT OFFICE: WORD, EXCEL, POWERPOINT, ACCESS, PUBLISHER)	0.522	12
7	Institutional priorities	0.478	11
8	Understanding of the Academic Catalog	0.348	8
9	Understanding of the Employee Handbook	0.174	4
10	Budget Software	0.13	3

Internal Influences Network

Another area that aids in answering research question one is the summary reports for both the Internal Influences at the institution.

Table 4.46 identifies the lowest scoring internal influences in the institution. These lowest scoring internal influences relate to several cultural manifestations. The lowest scoring internal influences are those perceived to be more negative than positive. The facilities node shows that this physical arrangements cultural element is perceived to be more negative than positive based on its rank as well as its centrality coefficient (-.538). All other internal influences on this list suggest cultural elements of operational practices (Martin, 2002), like hiring practices and retention of employees. For example, employee turnover scored more negative than positive at SCC with a centrality value of -.70. Compensation and benefits also ranked low with centrality value of -.314. In addition, the resources that scored the lowest of 51 internal influences are facilities,

technology, and several nodes that were financially related. While not all internal influences listed are resource related, resources played a major role in shaping the culture and a number have a somewhat negative influence in the institution.

Table 4.46

Lowest Scoring Internal Influences

Rank	Internal Influence
42	Employee benefits
43	Technology
44	Hiring practices
45	Budget planning and resource allocation
46	Retention of employees
47	Enrollment
48	Compensation and benefits
49	Facilities
50	Employee turnover
51	Financial resource limitations

Table 4.47, by contrast, lists the highest scoring internal influences in the culture. Among these, human resources score high, as do the religious components. These positively perceived nodes reflect formal values (mission statement, faith statement, Chapel and Convocation program), combinations of the formal and informal values (prayer, faith integration in the classroom, Christian worldview and orientation), physical arrangements (main campus), and human resources (commitment of faculty and staff, students).

Table 4.47

Top 10 Recurring Internal Influences

Rank	Internal Influence
1	Prayer (individual and corporate)
2	Christian worldview and orientation
3	Commitment and involvement of faculty and staff
4	Chapel and Convocation program
5	Students
6	Faith integration in the classroom
7	Faith statement
8	Mission statement
9	Main Campus
10	Staff

Finance Related Resources

One facet of the dynamics at SCC is the financial resource limitations and perceived pressure related to this resource constraint. In reviewing the data, it was important to identify how financial resources influenced the cultural dynamic.

Figure 4.21 identifies the top ranking informal values. It is important to note that finance-related values emerge in at least two of the top 10 informal values of the institution. These included: (a) thrift—do more with less and (b) salary inequity.

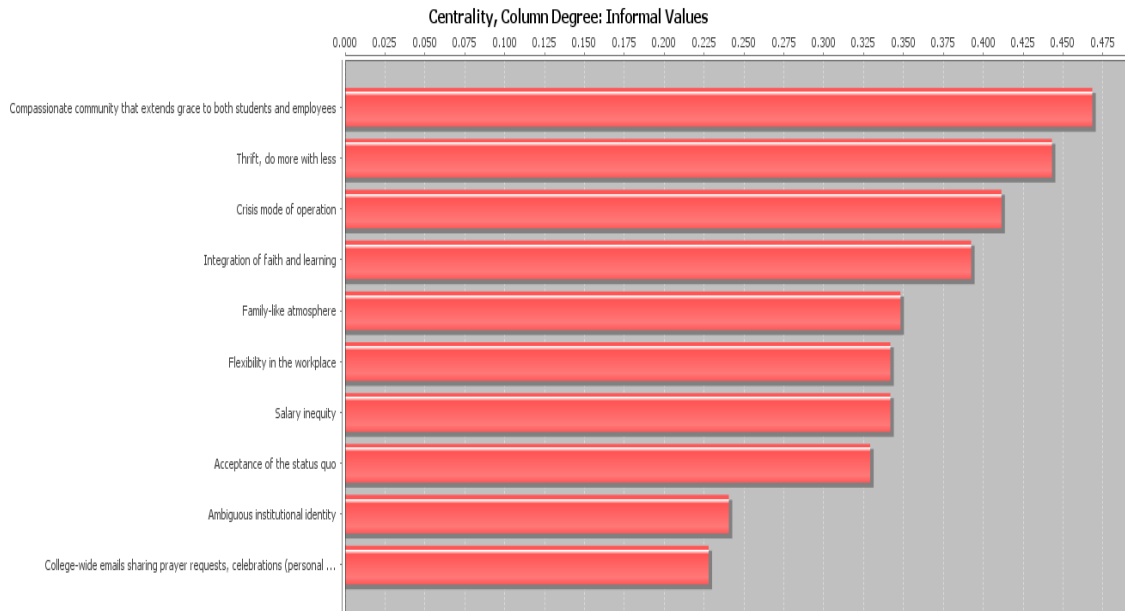


Figure 4.21
Top Ranking Informal Values

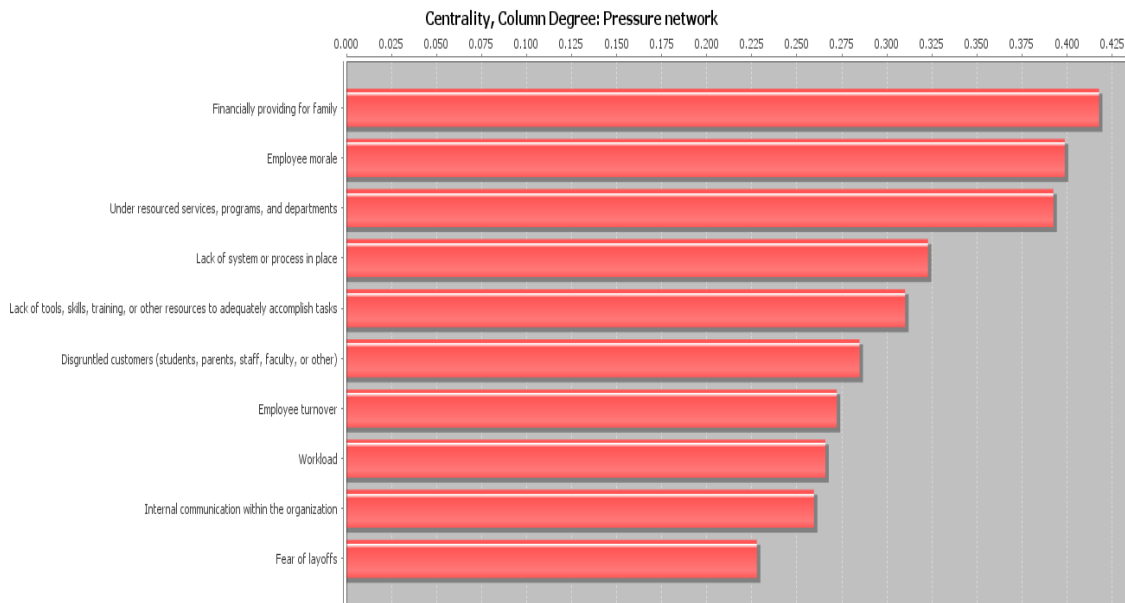


Figure 4.22
Top Ranking Perceived Pressures

Clearly, finances play a role in influencing the culture of a small, private Christian college. Given the framework of this research methodology, finances emerge in the top-10 categories of the Informal Values network and the Pressures network. Beyond the Informal Values and Pressures networks, it is difficult to gauge the extent of the financial influence on the culture of SCC.

Belief Propagation of Resources

The last procedure used to answer the research question on resources and other entities is the Belief Propagation report utilizing Friedkin's social influence algorithm (Friedkin, 1998). Belief Propagation allows the researcher to see how a particular belief changes over time depending on its level of contention or dispersion and how the belief spreads through social networks (Carley, 2010). In this section, resources related to cultural influences are identified to further understand the role of resources and related entities. As a reminder, this study has defined resources as the people, tools, and materials necessary for carrying out work-related tasks (see Table 3.1).

Table 4.48 is based on a question in the CCC Questionnaire that scaled responses on a five-point scale ranging from -2 to +2 on questions related to employee perceptions of internal influences in the institution. The most contentious beliefs identified are those that have the greatest variation in total network belief value. This yields helpful findings related to the role of resources. For example, of the top ten initially most contentious internal influences within the organization, eight were resource related. Also, over time, the level of contention decreased for most of these resource-related themes with the exception of facilities, which reported a mild increase in contention.

Table 4.48

Internal Influences Top 10 Contention Scores

Internal Influence	Initial	Final	Percent Change
Retention of students	1.207	0.82	-32.04%
Workplace satisfaction	1.137	0.814	-28.45%
Technology	1.075	0.802	-25.38%
Retention of employees	1.014	0.838	-17.33%
Employee Benefits	1	0.803	-19.67%
Facilities	0.993	1.011	1.75%
Individual department and attitudes (who you work with)	0.986	0.763	-22.62%
Athletic Department	0.98	0.742	-24.28%
Organizational size	0.96	0.644	-32.95%
Individual skills and training to accomplish tasks	0.946	0.686	-27.45%

Based on Table 4.49, six out of the ten most contentious beliefs in the Pressure network are resource related. The network's Belief Propagation final scores indicates that these beliefs converge over time. The graph in Figure 4.23 illustrates how the contention scores of under resourced services, programs, and departments increased initially and then leveled out over time, maintaining a steady overall perception of the impact of a lack of resources. Figure 4.23 illustrates how the perception of this belief changed over five iterations based on 10 agents within the network whose behavior patterns are charted.

Table 4.49

Top Ten Perceived Pressure Contention Scores

Perceived Pressure	Initial	Final	Percent Change
Financially providing for family	0.499	0.372	-25.42%
Employee morale	0.496	0.404	-18.47%
Under resourced services, programs, and departments	0.494	0.35	-29.12%
Lack of system or process in place	0.465	0.335	-27.78%
Lack of tools, skills, training, or other resources to adequately accomplish tasks	0.456	0.316	-30.67%
Disgruntled customers (students, parents, staff, faculty, or other)	0.438	0.312	-28.63%
Employee turnover	0.427	0.303	-29.06%
Workload	0.422	0.301	-28.59%
Internal communication within the organization	0.416	0.282	-32.18%
Fear of layoffs	0.384	0.269	-29.81%

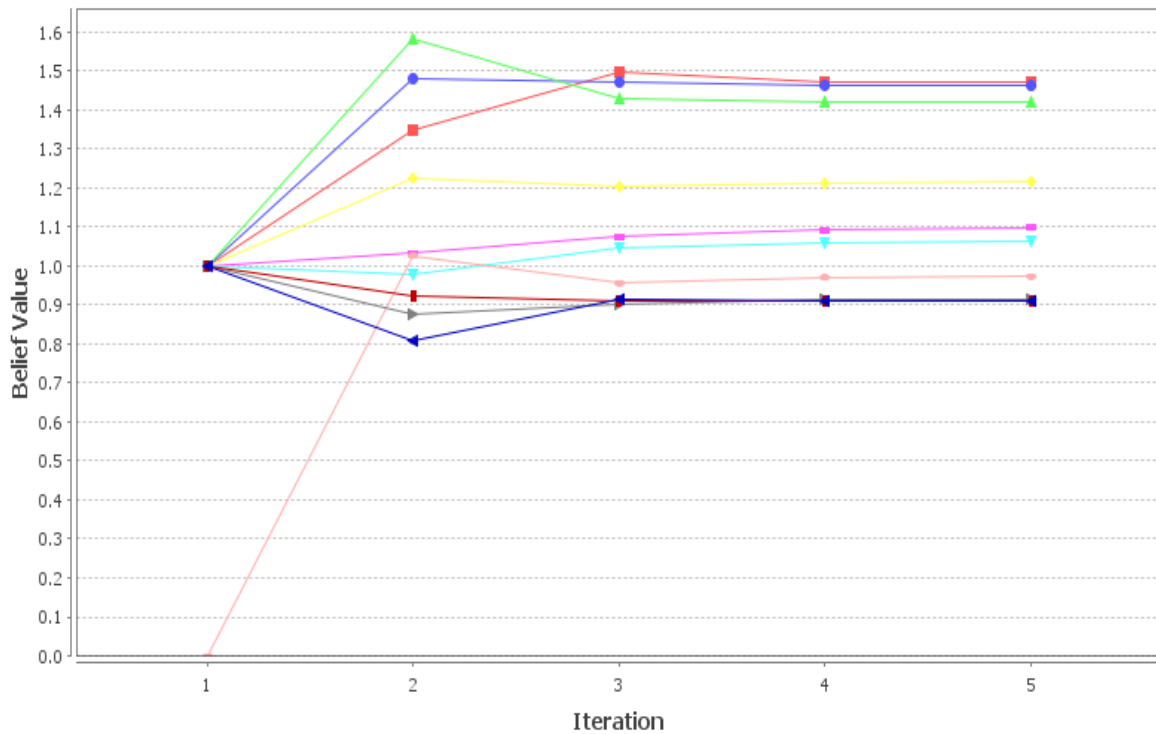


Figure 4.23

Contention levels of under resourced services, programs, and resources over time

Summary

Overall, resources played a major role in shaping the culture of the CCC Meta-Network. Emergent resource-related dynamics were examined within the Informal Values network, the Pressure network, and the Internal Influences network. In each of the various measurements and reports reviewed, both resources in general and finance-related resources in particular greatly influenced the overall cultural dynamic.

Overall Summary of Findings

This chapter answered five questions in support of the guiding question: How do the interactions and interdependencies among constituent agents and other entities at a

small, private, faith-based, LAC influence the cultural dynamics of the school? This question was answered by examining the role of religion in the culture. I found evidence that religious values are deeply embedded in the Formal Values, Informal Values, and Activities networks of the school. In addition, there was a diversity of beliefs identified dependent on influences like location and role in SCC. Then, clusters of values and activities were identified in order to more fully explain the nature of the culture at SCC.

To understand the structure of the informal components of the organization, an analysis was conducted on the Faculty Informal Components network. This analysis yielded three distinct faculty subcultures that were first tested in isolation from each other and then combined together to understand the capacity for organizational learning within subcultures and for the faculty culture as a whole. In support of Martin's (2002) Three Perspective Theory of Culture, the FIC Meta-Network revealed differentiated values within the system. In addition, Belief Propagation and Near Term analyses found that organizational learning occurs within individual, homogeneous subcultures, but that greater organizational learning occurs when the subcultures were brought together into a single, differentiated subculture. This finding supports the premise of Complexity Leadership theory, which suggests that a diversity of perspectives fosters enhanced organizational learning.

To understand the leadership dynamics of the organization, four distinct groups were identified based on perceptions of leadership as measured by the Culture Questionnaire. Through Belief Propagation and Near Term simulations, the capacity for organizational learning for each group was tested and then an evaluation of meta-network

was conducted. The results of the simulations were mixed, indicating that some learning does occur in sub-groups and with the meta-network.

Last, the role of resources was examined to understand how resources interact with other nodes in the CCC Meta-Network. The role of financial resources emerged as a critical element influencing multiple nodes in the Informal Values, Pressures, and Internal Influences networks. In particular, it was found to significantly influence human resources, facilities, and technology related to the institutional infrastructure.

Multiple steps were taken to ensure trustworthiness and validity of the data. The structured interview was validated through the Culture Questionnaire. The trustworthiness of the data was maintained through two member checks. The scheme was validated through sharing the analysis with interviewees following the structured interviews and again following the DNA of the data derived from the Culture Questionnaire. In addition, I shared Figure 5.1, the conceptual framework that emerged from this data, with interviewees to ensure that the emergent themes identified are an accurate depiction of the SCC culture.

CHAPTER FIVE

DISCUSSION

The following question guided this study: How do the interactions and interdependencies of a small, private, faith-based, LAC with work-related agents and other entities in the institution influence cultural dynamic? Supporting questions included:

1. What role does religion play in the beliefs and behaviors of the culture of a faith-based institution?
2. What cultural clusters at the targeted LAC emerge from the interactions of agent level attributes (personal characteristics), artifacts (tasks, location, physical arrangements, jargon, formal and informal practices), and beliefs?
3. How do the informal components of a faith-based cultural dynamic (whether integrated, differentiated, fragmented, or other) influence organizational learning?
4. To what degree do the leadership patterns across cultural clusterings influence organizational learning?
5. How do the interactions of resources and other entities in the network influence the cultural dynamic?

Guiding Inquiry Process

The answers to these guiding questions were addressed using a DNA. DNA explores the structure and dynamics of networks comprised not just of people, but of such things as tasks, knowledge, resources, location, and beliefs. These tasks, knowledge, resources and key beliefs were identified with structured interviews of 30 employees at

SCC, with representation from every department and level of leadership in the institution. The responses from the structured interviews were coded to identify themes. These themes comprised the response options, or nodes, to the follow-up Culture Questionnaire. This culture questionnaire identified the interactions among people and between people and the various other nodes (tasks, etc.) The data from the Culture Questionnaire was prepared and imported into the DNA program for analysis. The DNA tools utilized in this study were Visualizer, Key Entity Reports, All Measures Reports, Immediate Impact, Belief Propagation (Friedkin, 1998), and Near Term Analysis (Lin & Carley, 1997).

To answer research question one—the role of religion in culture beliefs and behaviors—demographic data was reviewed relative to the role of religion. This data came from a variety of places, including official documents and official statements about the institution. Additionally, religious themes from structured interview responses were analyzed. Last, clusters of beliefs were grouped by Formal Values, Informal Values, and Activities. These clusters were examined to identify the role of religion in each of these groups.

To answer research question two about cultural groups, the Newman's grouping algorithm was applied and clusters groups were identified in the Discussion network and the Values Alignment network. Then, the same grouping process was applied to the Pressure network, Internal Influences network, External Influences network, Knowledge network, and Task network. Key themes and clusters were identified in chapter four.

To answer research questions three and four about the effects of cluster patterns on organizational learning, two new networks were created from the original, full

network: the FIC network and the LDP Meta-Network (explanation of these can be found in chapter four). For both the FIC and LDP Meta-Networks, Newman's grouping algorithm was utilized to identify subcultures in each. A Key Entity Report was run on each respective meta-network to identify the central beliefs of each population. Then, Immediate Impact isolations were run to identify the subculture networks. A Key Entity Report was then conducted on each sub-network to provide a description of each individual subculture.

To understand organizational learning in the FIC and LDP network, Belief Propagation simulations (Friedkin, 1998) were run on each of the identified subcultures and on the entire population. The Belief Propagation simulations provided analysis of the most contentious, initial beliefs and projected belief contention changes over time. Near term analyses were then performed to explore the potential changes in learning capacity for each group.

To answer research question five, clusters were identified using the Newman's grouping algorithm on the Resource network in the CCC Meta-Network. Then, these clusters were described with a focus on the role of resources utilized in the SCC. Resources and other related entities (Knowledge network, Internal Influences network, and the Pressure network) were examined to understand how resources influence the overall culture. Finally, a Belief Propagation simulation was run to understand how the perceptions of Internal Influences and Pressures with respect to resources changed over time.

Thematic Findings

Religion

The role of religion is interwoven throughout the culture and subcultures of SCC and is most clearly evidenced in the formal and informal values of the institution. The theme of integration of faith and learning emerged in both the informal and formal values networks, and the informal value that best described the culture is compassionate community. The DNA enabled the researcher to see how religion permeates individual networks, including the Formal Values network, Informal Values network, Activities network, Pressures, Internal Influences, External Influences, Knowledge, Leadership Dynamics, and Resource networks. In each of these networks, religion served as a cultural core that influenced both the individual subcultures and the organizational culture as a whole.

Eighty-three percent of the faculty who serve the undergraduate students in the Traditional program on the original campus attend a church in one of the mainline reformed denominations. This trend reflects the strong Presbyterian heritage of the research setting. Among the staff serving at the original campus, there is also a strong Baptist (36%) and non-denominational church representation (14%). Overall, the denominational themes of the Traditional program suggested a mixture of denominations and theological orientations in the general evangelical faith tradition.

This diversity of religion is replicated in the SCC Adult Studies program. In examining the faith traditions in this program, however, it is apparent that the institution is not dominated by Presbyterian, as it is in the Traditional program. The question arises

as to whether the historical roots of the institution are in decline. In the Adult Studies program, there are nearly as many Baptists (24%) as there are reformed (28%) church attendees. The reformed tradition is certainly far from dominant in this subculture. Interestingly, the Adult Studies program was developed with a primary emphasis on revenue generation through an outsourced third party for-profit entity, which may help explain the increased diversity in this subculture. Presbyterian historical roots still exist, but greater denominational diversity has developed over time. This reality is reflected in the church type of the staff and faculty of SCC and supports the trend identified by Andringa (2009) who observed that denominations are playing a “decreasing role in the lives of people of faith” (p. 173) in general and in the higher education context specifically.

To further understand the role of religion in the SCC culture, clusters in various sub-networks were identified. Religion is influential in all five clusters within the Formal Values network, in three out of four clusters in the Informal Values network, and two out of five clusters in the Activities network. Additionally, implicit religious themes emerged in some of clusters that were not overtly religious. Clearly, religion plays a foundational role in shaping the culture of SCC.

Diversity of Beliefs

There is a diversity of beliefs about the institution itself, as evidenced in the (a) five distinct subcultures identified in the Formal Values network, (b) the four distinct subcultures Informal Values network, (c) the five distinct groups in the Activities network, (d) the three distinct faculty subcultures, and (e) the four clusters in the

Leadership Dynamic Patterns network. Perhaps for some of the newly employed faculty and staff, they value their relationship with the school because it is a good institutional mission fit for them; for others, the position may be a stepping stone to a “better” job; and for others, SCC may be just a job in an aesthetically attractive geographical region. The combination of old and new staff on the Traditional campus contributes to the blended theme that is evident in the areas of church type, views of leadership dynamics, informal values, formal values, and activities.

Newly Employed Workers

While the age distribution of employees at the institution is relatively evenly distributed, the SCC organization reflects a newly employed dynamic with respect to years of service at the institution. As referenced in Table 4.2, nearly 70% of the full-time employees have served the institution for seven years or less. In the Adult Studies program, 76% of the full-time staff and faculty have served at the institution for seven years or less. The new employees of the Adult Studies program combined with the strong diversity of Christian traditions represented in the staff and faculty suggests that the newly employed group is a distinct subculture in the organization

In addition, there is a sense of vagueness, or perceived lack of clarity and lack of transparency in the perception of institutional decision making among the newly employed. This perception is evidenced by a large number of faculty in the FIC network who are labeled, constructively critical, the “new wave” of employees. This perception of ambiguity also describes the largest group identified in the Informal network (here it is labeled the critical framework). The newly employed dynamic is visibly evident in the

LDP network in Group 2, which focuses on the strength of departmental leadership. I refer here to the general trends toward greater congruence of values in departments and less congruence of values institutionally based on the scatter plot in figure 4.12. Seventy-one percent of the agents in this cluster have served at SCC for seven years or less, and this group has the largest concentration of faculty members.

The Influence of Informal Values

The SCC culture is shaped by strong informal values influences. This theme shows up in multiple networks. For example, the top two Activity network themes focus on informal conversations with students, faculty, and staff. In the Leadership Dynamic Patterns network, departmental influence is most central for the institution, which indicates the importance of the daily departmental interactions.

Internal Influences

Internal influences grouped linked respondents into two distinct subgroups. A common theme unifying Group 1 is the focus on values that influence the institutional culture. Interestingly, this group includes agents who resonate more with the ideological dimensions of the institution. Group 2 focuses on day-to-day knowledge and practice of the organization, which suggests an operational perspective. This provides a good example of a network in which the ideologists and operations-focused agents are interacting together.

Ideological Internal Influences

The ideologically based elements of the culture emerged numerous times among the top ten internal influences. These include the religious themes of (a) prayer

(individual and corporate), (b) Christian worldview and orientation, (c) chapel and convocation program, (d) faith integration in the classroom, (e) faith statement, and (f) mission statement. This reflects the ideological foundations of the SCC culture and reveals the ideological preferences of the collective network.

Operational Internal Influences

Operational influences scored as the ten most negative internal influences in the SCC culture (scaled as having a more negative influence than positive influence on the culture). These involve the resource issues of technology, facilities, human resources, and financial issues. None of the ideological principles scored among these ten negative internal influences; this suggested the commitment of agents to the institutional core values even when mission-critical resources are absent or deficient.

Tasks

Six tasks groups emerged from the Newman's grouping. These groups are defined as: student support services, managers, virtual culture, physical infrastructure, academic instruction, and planning and programming. These task groups are cross-divisional and include a variety of employees and roles. The traditional organization tends to determine committees based on departmental roles or hierarchical placement, but SCC may benefit from composing committees based on employees who work on shared tasks. With four sites supporting SCC, the data suggests there are individual agents spanning all four locations who share common tasks and processes. Regardless of the location of individuals, meeting to improve processes and shared tasks may be of great benefit in the support of creativity, innovation, and task efficiency. This approach is supported in the

data by the two simulations in which the cross-pollination of isolated groups led to greater overall organizational learning.

Faculty Culture and Subcultures

The faculty culture as a whole identified a combination of operational and ideational themes that shaped the culture. Operationally, the following themes emerged as central informal elements of the data: organizational crisis, salary injustices, workplace flexibility, and the value of thrift. The role of financial resource shortages manifested operationally in several of the informal components identified by faculty. With respect to the ideational values, a mixture of Christian virtues merged with organizational strife—much of which may be influenced by financial resource limitations. For example, the organization as a whole agreed that an atmosphere of compassionate community existed at SCC. However, the question arose: Does this compassionate community become a mask that enables attitudes of mediocrity and ambivalence in the absence of the financial resources needed for the organization to reach its intended identity and goals? In other words, does the grace that the faculty values sometimes get abused or misused in the lowering of standards?

These would be the types of questions raised by a counterculture movement. Martin and Siehl (1983) argued that three distinctive stereotypical subcultures may exist in an organization: enhancing, orthogonal, and countercultural (defined in chapter two). The analysis found these three distinct subcultures in the FIC Meta-Network.

Using Newman's grouping algorithm, three distinct faculty groups were identified. Group 1 is defined as embracing the traditions of the organization. It clustered

around several informal values including beliefs in (a) a compassionate community, (b) college-wide emails, (c) the family metaphor, (d) faith integration, (e) prayer, (f) laid back atmosphere, and (g) the institution epitomized many of the positive values of the institution. Group 1 represents “the way things are done around here” and is consistent with the orthogonal description of “simultaneously accept the core values of the dominant culture and a separate, unconflicting set of values particular to themselves” (Martin & Siehl, 1983, p. 54). The informal components defining Group 1 represents many of the espoused values of SCC. In a sense, Group 1 represents the establishment. Group 1 is older and has the largest number of faculty with the longest tenure of service at the institution.

Faculty Group 2 contrasts with Group 1 in many ways. Faculty Group 2 is defined as Constructively Critical, or the “New Wave.” This thematic label is based on the youthfulness of Group 2 (16 agents out of 18 were age 54 or younger) and tenure of service at the institution (15 agents out of 18 have served at the institution for seven years or less). In addition, the central informal beliefs for Group 2 include a perception that mediocrity is the norm and ambiguities in the institutional identity abound. In many ways Group 2 critically counters the values identified by Group 1. Where Group 1 is the establishment, Group 2 critically objects to the way things are with their beliefs that there is a lack of institutional clarity of identity; there is conflict; and there is injustice related to salary structure. While Group 2 is not against the values that were identified by Group 1, Group 2 hungered for something more. Because Group 2 is relatively younger and reflects less longevity at the institution, Group 2 identifies common pressures and

tensions regarding financially providing for family. This tension is clearly stronger for those faculty members who are younger and are seeking to establish themselves than it is among those who fit the traditional establishment profile described by Group 1. Group 2 also described experience with pressures related to employee morale and the ongoing theme of organizational crisis. For Group 2, these themes all add up to a sense of ambiguity or vagueness about the mission of the school and their position in the school's culture. Group 2 is not opposed to the religious values of the institution, but they would like to see these values clarified. They also desired excellence to be pursued collectively as opposed to the acceptance of the status quo and "don't rock the boat" mentalities that they perceived at the school. Faculty Group 2 exemplifies Martin & Siehl's (1983) counterculture group, which exists "in an uneasy symbiosis, taking opposite positions on value issues that are critically important" (p. 54).

Faculty Group 3 is defined as the optimists because of their generally positive outlook. Faculty Group 3 reflects the stereotypical enhancement culture, as illustrated by its adherence to the dominant culture in a manner that is "more fervent than in the rest of the organization" (Martin & Siehl, 1983, p. 54). Group 3 shared some common values and beliefs with both Group 1 and Group 2. However, Group 3 is not simply content to accept the espoused values of the institution, but rather desires to fervently live these values as a lifestyle. This is evidenced by their tendency to blend personal and professional life. Group 3 did not identify organizational crisis, ambiguity, or conflict as informal themes like Group 2. Subsequently, Group 3 values commitment to the faith-

based mission, compassionate community, and the integration of faith and learning inside and outside the classroom.

Organizational Learning

The second goal of the focus on the faculty culture and subcultures is to understand organizational learning. Three distinct, relatively homogenous faculty groups were identified using the Newman's Grouping algorithm. When combined, the different perspectives constitute a more heterogeneous, or diverse group (Martin & Siehl, 1983). The assumption of my study, which is grounded in complexity theory, is that organizational learning functions best when differing viewpoints struggle over ideas to generate solutions to problems. The implications of the hypothesis are that faculty and administrators should embrace conflict over differences of opinion rather than dismissing it as negative or counterproductive. I tested this hypothesis by comparing the learning capacities of the three homogeneous groups individually against the learning capacity of the group as a whole.

Leadership Dynamics

A series of questions were examined to understand the leadership dynamics in the SCC culture. The answers I found can be interpreted in terms of collegiality versus hierarchical perceptions in the institutional culture. Individuals reflect favorable perceptions of their own department (high centrality scores for departmental leadership patterns), and lower centrality scores for the perception about the administration or institution. In other words, there appears to be greater congruence and collegiality among individuals and their departments than between the individuals and the institution as a

whole. The one exception to this is in the area of servant leadership. While the term “servant leadership” may have multiple meanings for individuals, collectively, servant leadership is a central value to the SCC Meta-Network. Additional clusters center around favoring senior administration, departmental leadership, and the pursuit of departmental excellence.

To assess organizational learning, Belief Propagations and Near Term simulations were run for each of the four groups and in the LDP Meta-Network. The Belief Propagation for the entire network found that contention levels decreased over time, which means that the level of variation among agents diminished as they interacted over ideas. The Near Term analysis demonstrated in both the FIC and LDP networks that knowledge diffusion over time is increased when the homogenous subcultures are brought together into a heterogeneous whole. Both the Belief Propagation and Near Term simulations support complexity leadership theory in that the capacity for diffusion of knowledge is optimized by bringing the subgroups together.

Resources

Human resources and technological resources emerged as essential elements of the networked culture. For SCC, many of the programs, services, and operations of the institution depend on various types of technology. At a small institution, the importance of having adequate technological resources cannot be over emphasized, based on the findings in this study. Furthermore, there are clear groups of agents utilizing certain resources more than others. As seen in the assessment of Task groups, resources used by various agents overlapped; for example, there are advancement personnel, technology

employees, librarians, and academic instructors who are all members of Resource Group 4 which depended heavily on (a) context specific books, (b) student workers, (c) fundraising software, and (d) internet research software. In Resource Group 5, there were agents in different locations and performing different roles who are united by their common dependence on (a) recruiting software, (b) basic computer software, (c) an outside colleague/expert/consultant, (d) telephone, landline, and (e) the student information system. Complexity leadership theory suggests that organizations may function better through bottom-up approaches as opposed to top-down approaches to organizational learning (Marion, 2008). Similar to the Task network, SCC may foster learning, creativity, and innovation from a bottom-up approach that connects agents based on shared resources and knowledge. In this case, the linking of shared Knowledge and Resource networks could strengthen organizational knowledge. One practical implication for SCC would be to encourage interactions between agents who utilize common knowledge and resources for improved problem solving.

Financial Resources

The influence of financial resources on the overall cultural dynamic is prominent. Two of the top seven informal values reflected the shortage of financial resources in the culture: thrift—do more with less, and salary inequity. The top ranking pressure is financially providing for family and the third greatest pressure is under resourced services, programs, and departments. Themes highlighting the realities of a financially stressed institution were evidenced in the Resource network, Pressure network, Informal Values network, Internal Influences network, and External Influences network. The data

from these networks suggest that financial resource limitations influenced the culture particularly in the area of deferred maintenance with facilities and compensation inequity amongst staff and faculty.

Martin's Three Perspectives Theory and Christian College Culture

A key contribution of this study is the usage of dynamic network analysis to investigate the context of Martin's (2002) Three Perspective Theory of Culture (TPT). In answering research question three, it is argued that the primary element of the faculty subcultures most closely resemble Martin's differentiation perspective. The finding of differentiation in the faculty subcultures was the result of clear consensus in each distinct group based on the informal values of the FIC Meta-Network. In addition, Martin's TPT concept is used as a framework for capturing the realities of cultural values embedded in an organization.

For this section, the integrationist perspective is demonstrated with centrality scores that were high for all five groups. The differentiationist perspective is defined by variations in values and perspectives between groups with moderate centrality scores for at least two or more of the groups. The fragmentation perspective is defined by values that were isolated and had a high centrality score for one or none of the five groups being compared. The five groups compared for this analysis were the Administration, the staff and faculty of the Adult Studies program, the staff of the Traditional program, the faculty of the Traditional program, and everyone in the entire CCC Meta-Network.

One of the claims of Martin's TPT involves the ability to see the realities of a culture from various perspectives (i.e., unified, diversified, and fragmented). This

diversification is observable in the belief structures of an organization. Table 5.1 illustrates how Martin's (2002) TPT of Culture provides a framework for analyzing the belief structures at SCC. This was derived from the All Measures report in ORA, which generates centrality scores for the belief nodes in the network. The groups that are reported in these tables are the total population (to show overall beliefs), the administration (top of the hierarchy), the Adult Studies program (distinct program function combining staff and faculty), the Traditional program staff (non-management perspective), and the Traditional program faculty (distinct group of instructors). These five groups were extracted from the total CCC population using Immediate Impact isolations, and their centrality scores were compared. Based on the centrality scores, the belief was applied to the TPT framework to explore how beliefs in each of the five categories revealed integrated, differentiated, or fragmented structure.

For example, in Table 5.1, the Formal Values network includes belief in the integration of faith and learning; among the 20 Formal Value nodes, the integration of faith and learning belief has a high centrality score for all five groups. This belief, then, supports an integrative perspective of the college. The formal value, integration of faith and learning, is a consensus cultural value that is shared throughout the organization and across all five groups in this analysis. The pursuit of excellence value, on the other hand, has a high centrality score for the Administration and the Adult Studies program, but not the other units being analyzed. Therefore, the pursuit of excellence supports a differentiated perspective of the college. Training and professional development, which came out of the structured interviews, does not show up as a central value in any of the

groups used for this analysis. Similarly, the Values Pyramid is highly central for the Administration; however, for all the other groups of staff and faculty, it is not a central value. The Values Pyramid and the training/professional development beliefs, then, support a fragmentation perspective of the school because each is found in no more than one subculture.

Table 5.1

Example of Formal Values and Three Perspective Theory of Culture

Perspective	Total Population	Administration	Adult Studies	Traditional Program staff	Traditional Program Faculty
Integrative					
Integration of faith and learning	0.6906	0.857	0.8077	0.6250	0.7442
Mission statement	0.475	1.0000	0.462	0.512	0.372
Differentiation					
Faith statement	0.46	0.571	0.423	0.538	0.326
Pursuit of Excellence in Serving Students	0.324	0.429	0.5	0.262	0.372
Fragmentation					
Values Pyramid (Academic Excellence, Community, Honesty and Integrity, Truth, Biblical Worldview)	0.259	0.714	0.192	0.262	0.256
Training and ongoing professional development	0.05	0	0	0.075	0.047
Professionalism is practiced	0.086	0.143	0.115	0.087	0.047

In the Informal Values network, Table 5.2 provides another example of the TPT framework. For the group including all employees in both the Traditional and Adult Studies programs the informal value of compassionate community scored the highest level of centrality. This centrality score reflects the organization-wide consensus for this

value. Similarly, the value of thrift—do more with less is shared throughout the organization.

From the differentiationist perspective, the theme of ambiguous institutional identity has a fairly high centrality score for the Administration and the Faculty in the Traditional program. However, this is not as central an issue for those working in the Adult Studies program, for the staff working in the Traditional program, or for the organization as a whole. The theme, “crisis mode of operation,” is the highest scoring value for the faculty in the Traditional program; however, this is not a salient issue for the Administration or the Adult Studies program. It is moderately high for the Traditional program staff; this too reflects a differentiationist perspective.

Three examples of fragmentation exist in that these values do not show organization-wide consensus. These fragments included (a) motivation to work extra hours based on the faith-based mission of the institution; (b) optimism for future; and prayer or devotional is offered before event, class, meeting, etc. None of these values were shared values in any given subculture or in the organization as a whole.

Table 5.2

Example of Informal Values and Three Perspective Theory of Culture

Perspective	Total Population	Administration	Adult Studies	Traditional Program staff	Traditional Program Faculty
Integration					
Compassionate community that extends grace to both students and employees	0.5324	0.429	0.423	0.5750	0.581
Thrift, do more with less	0.504	0.7143	0.538	0.425	0.581
Differentiation					
Ambiguous institutional identity	0.273	0.429	0.192	0.175	0.465
Crisis mode of operation	0.468	0.286	0.308	0.438	0.6279
Fragmentation					
Motivation to work extra hours based on the faith-based mission of the institution	0.158	0.286	0.231	0.138	0.233
Optimism for future	0.115	0.286	0.115	0.125	0.093
Prayer or devotional is offered before event, class, meeting, etc.	0.23	0.286	0.538	0.2	0.163

Table 5.3 provided the strongest evidence of the TPT framework helping to clearly identify cultural manifestations in the informal activities of the organization. The integrationist perspective is seen in that informal conversations were central values for all agents of the organization. Similarly, celebrations in subgroups and organization-wide were highly valued.

The differentiationist perspective is particularly intriguing in the Activities network. For the administration, attending sports events is highly valued where it is barely a value for members of the Adult Studies program. Attending sports is somewhat valued by faculty of the Traditional program and moderately valued by staff of the

Traditional program. The other cultural manifestation that evidences differentiation is gathering at the document center on the traditional campus. The gathering at the document center activity is popular among faculty and staff in the Traditional program, but it is not a central value for the Administration or Adult Studies program. This value for the document center reveals an important element of the physical arrangement that described the culture as a whole.

The fragmentation perspective applied to the Activities network helped to capture two key elements of fragmentation. At SCC, institution-wide emails were frequent and clearly valued by the faculty of the Traditional program, the Adult Studies program, and some of the Administration. However, the Traditional staff score for this value revealed that this is not a central value for the Traditional staff.

Table 5.3

Example of Activities and Three Perspective Theory of Culture

Perspective	Total Population	Administration	Adult Studies	Traditional Program staff	Traditional Program Faculty
Integration					
Informal conversations with staff and faculty while walking through campus	0.77	0.8571	0.6923	0.775	0.767
Informal conversations with students	0.7842	0.8571	0.654	0.8000	0.7907
Celebratory events (Christmas party, birthday party, etc.)	0.576	0.8571	0.654	0.525	0.581
Differentiation					
Attend athletic events	0.396	0.714	0.115	0.488	0.326
Catch up with people at the document center	0.367	0.143	0.154	0.375	0.512
Fragmentation					
Email college-wide words of encouragement, affirmation, or personal thoughts	0.245	0.286	0.385	0.15	0.372
Church events with fellow employees	0.223	0.143	0.154	0.2	0.302

In observing emergent themes from the Pressure network in the TPT model, several insights were clarified. The themes, “employee morale” and “under resourced services, programs, and departments,” show consensus throughout the organization. From a differentiationist perspective, the pressures related to financially providing for family and employee turnover were only clearly pressures for some of the units under analysis. The pressure of “division, department, or program needing to balance budget or to be revenue generating” along with the “perception of organizational crisis” were themes that were also clearly felt by some employees. However, these were fragmented and did not

have a consensus throughout the organization, though they were clearly felt by several individuals.

Table 5.4

Example of Pressure Network applied to Three Perspective Theory of Culture

Cultural Perspective	Total Population	Administration	Adult Studies	Traditional Program staff	Traditional Program Faculty
Integration					
Employee morale	0.453	0.429	0.423	0.45	0.4651
Under resourced services, programs, and departments	0.446	0.7143	0.385	0.425	0.4651
Differentiation					
Financially providing for family	0.4748	0	0.423	0.5125	0.442
Employee turnover	0.309	0.286	0.538	0.338	0.163
Fragmentation					
Pressure of division, department, or program needing to balance budget or to be revenue generating	0.201	0.429	0.231	0.175	0.186
Organizational crisis	0.18	0.143	0.077	0.125	0.372

Conceptualization of SCC Culture

Van Maanen and Barley (1985) have indicated that “subcultures can be pictorially represented as Venn diagrams that cluster and overlap as the collective understandings of one group approximate those of another” (p. 38). Figure 5.1 has identified the key concepts of the SCC culture.

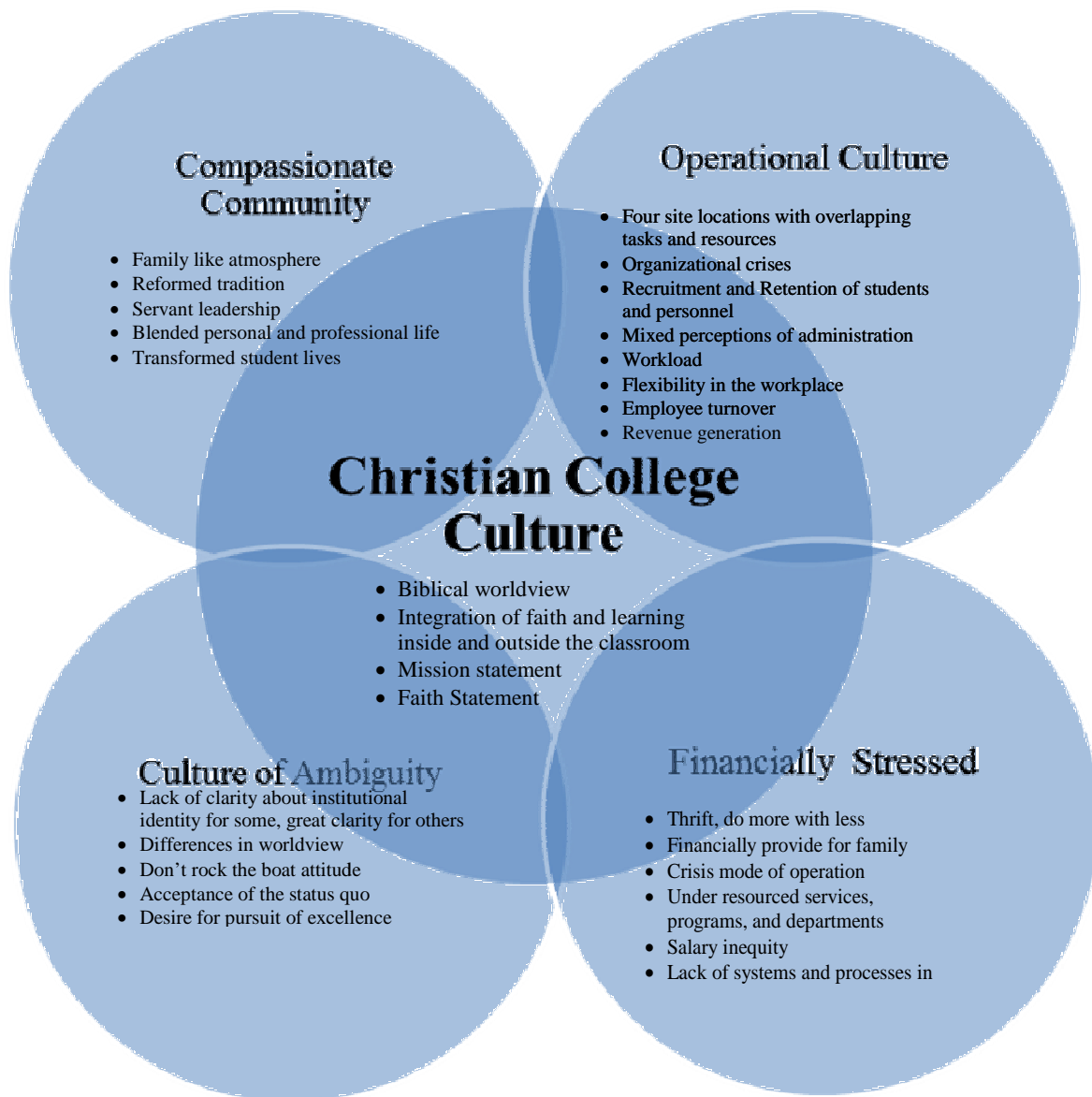


Figure 5.1

The Christian College Culture Conceptualization

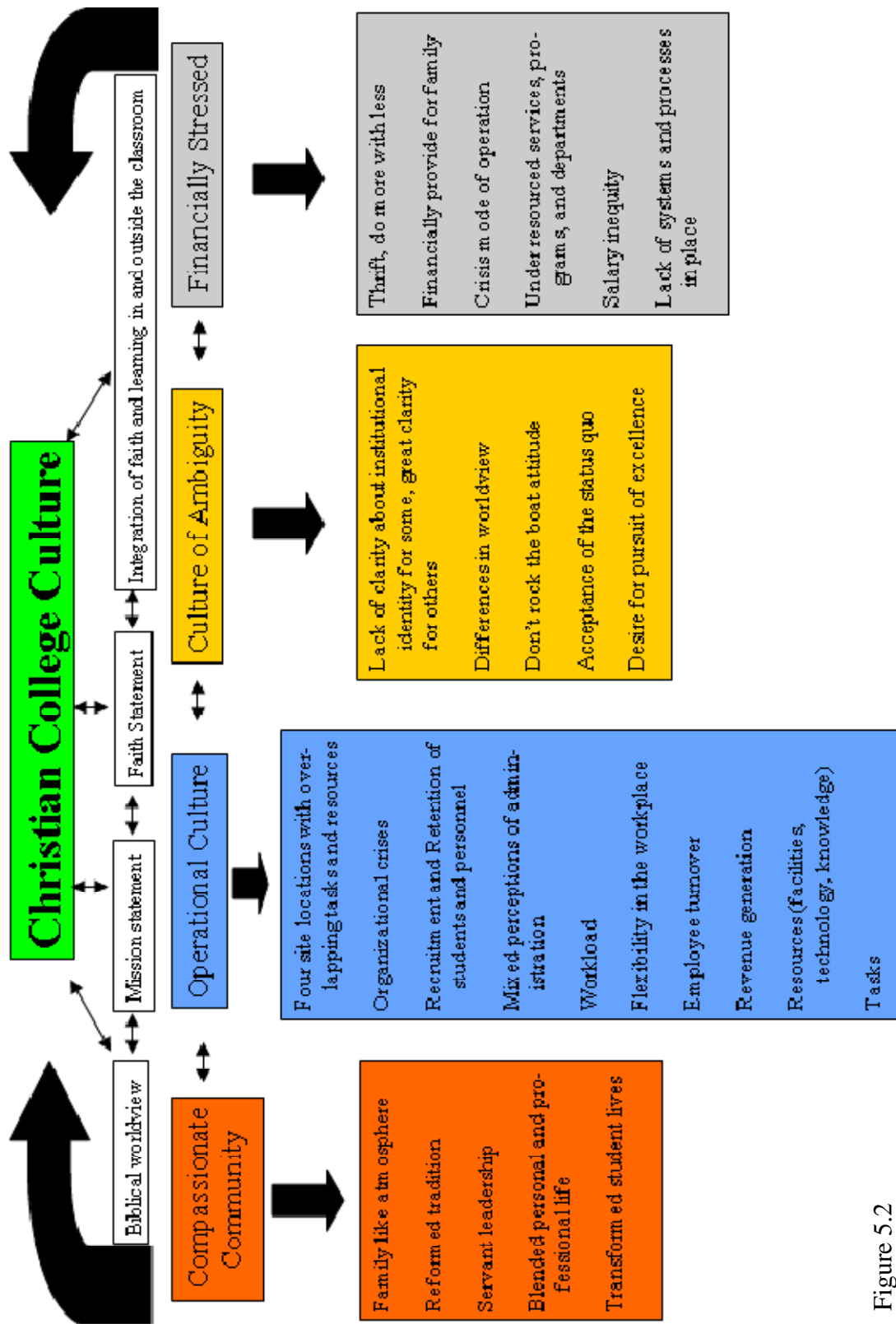


Figure 5.2
Conceptual Model of SCC

Christian College Culture

SCC is firmly set in a Christian college cultural context. This overarching Christian culture is informed by a combination of ideologically based formal and informal values that included a Biblical worldview, the integration of faith and learning in and outside of the classroom, the mission statement, and the faith statement of the institution. Regardless of an individual's role at the institution, the Christian college culture is part of the individual and collective group experience at SCC.

Compassionate Community Culture

A compassionate community value appears to be the core of the college's religious culture. The compassionate community culture is experienced by all employees to greater and lesser degrees and is captured by a combination of religious values and lifestyle themes.

One of the religious values includes an appreciation for the reformed tradition as part of the institution's Presbyterian heritage. While there are members of the organization from other Judeo-Christian faith denominations, the reformed tradition is represented in agent networks in the organization. For those who work on the Traditional campus, there is a strong faculty culture emphasis on the reformed tradition. Among the staff on the Traditional campus and the staff and faculty serving at the other locations in the Adult Studies Program, there is less emphasis on the reformed tradition and greater diversity of faiths.

Another important religious theme that is part of the compassionate community culture is the value of Servant Leadership. This theme can mean many things in a

Christian college cultural but has its roots in the New Testament of the Bible through the example of Jesus. While there were multiple interpretations of what servant leadership means at SCC, the language is an element of the compassionate community culture that manifested itself throughout the organization.

The family-like atmosphere is a component of the compassionate community culture. Like other dynamics, individuals experience this to greater or lesser degrees depending on what department they worked in, their role, and their inter-institutional relationship dynamics.

The family like atmosphere channels into the blending of personal and professional life. The blending of personal and professional life is likely much stronger for those who served in the Traditional program, given its liberal arts and residential focus. However, this blending exists at the other locations too.

The students were recognized as one of the top ranking internal influences, and they are one of the primary reasons for serving at SCC. The institutional mission statements referenced the concept of transforming students, and this accurately captures the heart of the employees at SCC as a compassionate community that extended grace to students.

Operational Culture

The complexity of the organization is evidenced through the operational culture. Depending on the individual role, program, work location, and department, the operational dimensions of work at SCC look very different. For some employees, the focus is on administratively supporting both Adult Studies program and the Traditional

program, while others focus primarily on the operation of either the Adult Studies program or the Traditional program.

While SCC has four separate site locations and two separate programs, the tasks and resources required of these operations overlap as evidenced by the Task network, Resource network, and Capabilities network. The operations of both programs share common goals in the recruitment and retention of students. Related to this common goal is the common burden to generate revenue. The revenue generation emphasis—to greater and lesser degrees depending on the program (both academic and nonacademic) and department—manifests itself throughout the operations of the organization as new programs were considered on the merits of their ability to generate revenue and meet current market demands.

The Adult Studies program was created with an emphasis on generating revenue for the Traditional program. The Adult Studies program was originally an outsourced program that constitutes an importation subculture which Van Maanen & Barley (1985) define as “acquisitions and mergers [in which] the creation of subcultures is sudden and swift” (p. 41). Subsequently, the Adult Studies program was and continues to be a distinct subculture of the institution. Evidence of this importation culture is manifested in the location and diversity of church type in that program in addition to Groups 1 and 3 in the network where some agents had dual focus on the Adult Studies and the Traditional program or was exclusively focused on the Adult Studies program. Tensions exist between the two programs over which operation financially supports the other. Depending on the particular economic realities, each program has experienced downturns

and windfalls. The reality at the present for SCC is that both the Adult Studies program and the Traditional program need one another and must share the financial burden to be revenue generating and to collaborate more in the areas of shared tasks and resources. Ultimately, the diversity of the two programs must be embraced and valued for the complementary and symbiotic benefits.

For both the Adult Studies program and the Traditional program, employee turnover is perceived to be a major issue. Nearly 70% of the full-time employees have served for seven years or less. For the overall operations of the organization, this places a hardship on training, knowledge, and resources.

Operationally, the perceptions of the administration are mixed. In general, the trends point toward individuals having greater confidence in the strength of the relationship with their manager and department than of senior level administrators. Individual departments were found to be generally collegial and people felt included in their departments. The clusters identified through the LDP network were labeled confidence in shared governance, departmental leadership, servant leadership, and departmental excellence, and these four categories captured the realities of individual perceptions of leadership in the organization at multiple levels.

Financially Stressed Culture

Financial stress permeates the SCC culture at nearly every level of the organization and impacts the cultures identified in Figure 5.1 and Figure 5.2. Financial stress impacts SCC's ability to carry out its mission as a private, not-for-profit organization. In its efforts to remain committed to its Biblical worldview, SCC has had to

adapt and adjust financially to state and federal finance related compliance issues. This adaptive characteristic is identified in the broader literature as both a strength and weakness for faith-based institutions (Obenchain, Johnson, & Dion, 2004; Andringa, 2009; Martin & Samels, 2009). As a strength, these institutions often are able to make adjustments to market demands in their efforts to be competitive and financially viable (Obenchain et al, 2004). The drawback is that these institutions can have greater challenges in remaining steadfast to their mission because of the market-driven dynamics related to tuition dependence and funding.

Financial stress has strained the compassionate community culture with cuts to programs, under-resourced services, salary inequity and the pressure to financially provide for family on a SCC salary. Financial strain also shows up as one of the lowest scoring internal influences related to benefits of employment at SCC; employees have frequently experienced decreased benefits and the elimination of positions. The reduction in benefits meant the loss of retirement funding which was, in effect, also a salary reduction. The elimination of positions that have not been filled has increased workload for some employees. These dynamics have contributed to the overall financial stress for employees at SCC, and to the diminished trust in administrative decision-making, as reflected in the LDP network.

Operationally, every area in the organization has been affected by financial stress as evidenced by the third highest informal value, thrift—doing more with less. This value is a common theme throughout the organization. In addition, financial stress on the institution has resulted in under-resourced services, programs, and departments that

influence the perception of a crisis mode of operation being standard practice. While there is a desire to pursue excellence by many in SCC, this desire is challenged by the lack of financial resources needed to accomplish these goals. This state of existence may be made tolerable by an acceptance of the status quo attitude or “don’t rock the boat” mentality.

The financial shortages impact the facilities, technology, and the people in every area of the organization. It increases the pressure for revenue generating programs and potentially undermines programs, processes, and ultimately how the mission of the institution is carried out. At one level, the Christian college culture is one in which many of the employees are committed to working extra hours for less pay as a result of the mission-fit with the institution. This is evidenced by the fact that “extra hours” is the third highest scoring value in the Internal Influences network. However, at another level, the financial stress depresses employee morale and commitment.

Lastly, the financial stress contributes to a sense of uncertainty about the future of SCC as an institution and for individual employees. This uncertainty is influenced by the pressure to deliver quality programs and services on reduced budgets, with fewer human resources, and for less compensation. The impact of this uncertainty influences employee morale and contributes to employee uncertainty as employees wonder, “will the college remain open?” or, “will there be more layoffs?” or, “will my budget be cut again?” Institutionally, the financial stress incurred by the demand to remain competitive and financially viable results in decisions that focus on the financial pressures while challenging the institution’s fidelity to its ideological foundation. The sense of

uncertainty that exists at SCC is influenced by the financial strain endured by the institution.

Culture of Ambiguity

Tension exists in the intergenerational perceptions of institutional clarity. For individuals who are part of the established tradition at the institution, the values are considered clear. However, for individuals with less tenure (seven years or less at SCC), the values lack clarity in terms of the stated formal values of the institution and the actual operational practices. This is most evident through the largest faculty subculture, which is labeled the Constructively Critical, or the “new wave” group, for its concerns related to (a) acceptance of the status quo, (b) ambiguous institutional identity, (c) “don’t rock the boat” attitude, (d) observation of inadequate resources, (e) crisis mode of operation, and (f) conflict based on tasks and differences of opinion. The largest group identified in the Informal Values network is the critical framework subculture; this group is similar to the group identified in the faculty network above.

An additional discussion is merited at this juncture as to whether the above subcultures reflect what Van Maanen and Barley (1985) have labeled as a contracultural movement. One of the descriptions offered by Van Maanen and Barley suggest that this movement includes “blocked ambitions, poor training, inadequate rewards, impersonal management, inadequate resources or equipment, and unrealistic performance standards” (p. 46). Van Maanen and Barley (1985) go on to explain that members of contracultural movements may have felt “thwarted in their desire to achieve higher status” and subsequently “stuck,” in “negativism, malicious behavior, and nonutilitarian values” (p.

46). While several of these criteria were true of the Constructively Critical and Critical Framework subcultures described in the CCC Meta-Network and FIC Meta-Network respectively, there were some differences. Two differences in the CCC Meta-Network include the reality that these agents are not necessarily blocked from higher ambitions or witnesses of impersonal management; the findings on departmental congruence suggest the opposite. While those operating in a critical framework in the CCC Meta-Network may exhibit signs that could be interpreted as negativism, there is no evidence of malicious behavior.

However, Van Maanen and Barley's description of contracultural movements is helpful for comparing and contrasting the findings of this study. Perhaps, the term "counterculture" (Martin & Siehl, 1983) more aptly describes the largest subculture of the CCC network: those who desire to see growth from ambiguity to clarity in the institution's pursuit of academic and organizational excellence by connecting beliefs to practices. It is important that this ambiguity not be denied or ignored, and that it be used to positively support creativity and innovation (Martin & Meyerson, 1986; Martin & Siehl, 1983).

At one level, the lack of clarity reflects the realities of a complex organization and is consistent with existing literature on ambiguity (Martin & Meyerson, 1986). At another level, it speaks to a desire by many for more integration between beliefs and practices in a context that currently rests in Martin's (2002) fragmentation perspective. These sentiments also suggested Martin's (2002) TPT fragmentation perspective.

Three Perspective Theory and Southern Christian College

Arguably, each of the major cultures identified in this model reflect the realities of Martin's (2002) TPT of Culture. The integrated values throughout the organization were captured through the CCC perspective. The differentiated perspective is validated through the compassionate community culture, the financially stressed culture, and the operational culture. Cultural values embedded in each of these subcultures in the organization vary to greater and lesser degrees and were explained by roles, locations, and relationships in the network. The Culture of Ambiguity describes the sentiments of the fragmentation perspective. Clearly, the TPT of culture applied to a Dynamic Network Analysis enables the researcher to capture the realities of culture of SCC.

Limitations of Study

This study used a DNA in a qualitative framework from an emic perspective to understand the network dynamics of a particular culture. Some culture researchers would argue that culture research should be approached quantitatively from an etic perspective in the quest for finding significance. Through DNA, this study applied a nontraditional exploratory methodology that was guided by principles from grounded theory (Corbin & Strauss, 2008) to better understand a particular culture. This approach yielded a description of what is going on in a network in a manner that traditional quantitative analysis is not capable of. However, with this snapshot, there is a limitation in not being able to further understand the meaning behind the responses for individuals in the way that an ethnographer might find after several years of inquiry. Even so, this approach did provide in-depth analysis that would otherwise not be possible.

Another limitation of this study is with respect to generalizability. The study was conducted in a particular institution with its own unique value system and operational processes. The data derived from this institution is not generalizable, but at the conceptual level the concepts derived from the data may be generalizable.

Similar to the issue of generalizability, another limitation of this study is that it focused on one particular faith-based institution. This particular institution is one member of a larger association of 111 Christian colleges in the United States. These 111 Christian colleges and universities are part of 900 religiously affiliated institutions (Andringa, 2009). The dynamics that interact together to shape the culture of each of these religiously affiliated institutions is unique when attributes like location (urban/rural), religion (denominational affiliation), history, founders, and financial support are considered.

Implications

This research has contributed to the scholarship of higher education as a comprehensive study on the culture of an institution that included both the staff and faculty by utilizing a DNA approach. This study also adapted Martin's (2002) TPT of Culture and adapted all three perspectives to DNA to provide a realistic, rich, and in-depth analysis of the organizational culture.

Schein (2004) stated that "when we examine culture and leadership closely, we see that they are two sides of the same coin; neither can be understood by itself" (p. 10). It is critical for leaders and followers at every level in an organization to understand the culture. Understanding the organizational culture is foundational to all other leadership

activity in which people are interacting with each other and their environment. Driskill and Brenton (2005) stated that “knowledge of culture is essential for significant organizational change” (p. 16). Martin (2002) helpfully suggested that understanding the culture of an organization is more than understanding the leadership. By focusing on leadership only, the researcher is limited to the integration/consensus perspective of TPT while neglecting the realities of the other two approaches. In order to transform a culture, the practitioner must be an astute observer and pay attention to the interactive dynamics that shape the culture (Driskill & Brenton, 2005; Heifetz, 1994; Kezar & Eckel, 2002; Martin, 2002; Schein, 2004). Only then, can the culture begin to be transformed and redeemed through understanding the relational dynamics and how they interact with the multiple layers of cultural manifestations.

The Faculty Belief Propagation simulations showed that in order to change the particular subcultures, the social dynamics must change; otherwise, the dynamics will remain the same as demonstrated by the simulations over time. This has far reaching implications for both senior leaders and all employees in general. If the desire is to bring change, then the social dynamics agentic influence must change. In addition, the organizational learning simulations demonstrates that those who operated from either a critical, optimistic, or moderate traditional framework brought homogenous views that were needed to interact with opposing views as the diversity of perspectives ultimately fosters organizational learning.

Diversity of denominations were represented in the evangelical tradition with a primary representations from the reformed, Baptist, and non-denominational traditions.

This diversity of perspectives in a Christian college culture and the subcultures contribute to a diversity of perspectives and enrich the ideologically based organization. Diversity of perspectives also supports the notion of ideological differentiation (Van Maanen & Barley, 1985), which is evidenced by the comparisons of the CCC Meta-Network and the FIC Meta-Network.

Another major implication for this study is represented in the Newly Employed dynamic which happened to parallel the counterculture group in the organization. The counterculture has as many agents as the dominant culture who more fully embrace the traditional formal values of the organization. With nearly 70% of the full-time employees being new to the organization, the opportunity and capacity for strategically aligning task, resources, and knowledge groups in ways that enable creativity and innovation are limitless. This strategy would have long-range implications for breaking down the silos that result from centralized hierarchical approaches while also giving the Newly Employed opportunities to influence a healthy, collaborative work environment. This approach would likely help to diffuse the disconnect between the administration and all other departments by positively changing the social dynamics of both entities. Last, this approach would likely lead to the collective understanding of how the organizational values and beliefs were connected to practice in the pursuit of excellence.

Implications for Policy

Kezar and Eckel (2002) emphasized the importance of culture studies for researchers and practitioners by viewing “change as a cultural process” (p. 458). The

following implications for policy are specific to SCC, though they may have applicability to other cases.

First, given the high percentage of employees who are relatively new at SCC, a training program is needed that introduces new employees to ongoing conversations about the values of SCC. The training program may clarify institutional values for new employees by the content that is shared and through the structural processes by which the content is presented. In addition, Gibbons (2004) states that changing friendship networks may be more challenging than changing advice networks and that advice networks can change the group dynamics (Zagenczyk, Gibney, Murrell, & Boss, 2008), SCC may consider a new employee mentoring program that establishes mentors from other departments in the development of new advice networks in the organization. An ongoing training program for staff and faculty is needed; a program that is department specific to the needs of individuals to help bridge the gap identified in the data from this study. Ultimately, new employee training and professional development may enhance perceived organizational support for new and continuing employees of SCC (Zagenczyk, Scott, Gibney, Murrell, & Thatcher, 2010).

Due to the relatively small size of SCC and the informal values like compassionate community and family-like atmosphere, changes in the organization such as the strategic planning process need to constructively engage the faculty and staff at all levels of the organization. This type of collaborative approach is needed to communicate to the newly employed of the organization that senior leadership decisions are not foreclosed and that there is a genuine openness and need for innovation and creativity

from employees at all levels. Kezar and Eckel (2002) cited from a case study example the changing of official documents that came from senior leadership having the word “draft” in the title to signify its openness to feedback before being finalized. Kezar and Eckel’s example points to a general policy change in the type of language that is used by leadership intentionally being inclusive and then backing this up with visible demonstrations of how ideas from the various subcultures and groups in the organization are being enacted.

The data in this study also supports an important principal suggested by Complexity Leadership Theory as the existing hierarchical structures in the organization need to be supported by bottom-up strategies. This principal was most clearly evidenced through the Task, Resource, and Knowledge networks, and the diversity of agents from different departments share common functions. Policies are needed at SCC to enable employees to interact inside and outside their departments with other members who share common tasks, resources, and knowledge. Subsequently, structures are also needed that enable both top-down and bottom-up approaches to interact with one another, so that SCC can adapt and foster organizational learning.

Lastly, the counterculture movement at SCC desires to see SCC grow and improve as an institution in its pursuit of excellence and not remain content with the status quo. This counterculture movement is unique in that it appears to be in the majority in the organization and yet, it is clearly not a contraculture. These dynamics point to an institutional culture that is ripe for change by engaging in the ideas of the newly employed, outsourcing with consultants where applicable, changing how resources are

allocated, and the development of cross-departmental teams. Heifetz (1994) emphasizes the importance of preserving a sense of purpose in the organization and Kezar and Eckel (2002) cite an example in which individuals with differing viewpoints were brought together by a common passion for students. These two concepts apply to this study as several beliefs that share a wide organizational consensus were identified and provide language that brings together individuals and their perspectives who share a common passion and purpose.

Implications for Future Research

This study focused on the development of a substantive theory grounded in the data (Corbin and Strauss, 2008) based on two gaps identified in the literature: (a) no applications of DNA and culture research had been conducted in a higher education context, and (b) the majority of culture studies in Christian higher education were from an integration (consensus) perspective while failing to address the cultural realities of the organizations. Future research is needed for the development of a formalized theory that builds on the concepts identified through this model and story. Future studies are needed that examine the role of financial resources at small financially stressed institutions. Additional empirical studies are needed to understand the common themes among small, financially stressed institutions. Comparative studies are also needed to understand the cultural differences between financially stressed and financially healthy institutions. Similarly, additional research is needed to understand the role of religion at ideologically based institutions. Are these organizations healthier in their connection between beliefs and actions, or is every case different?

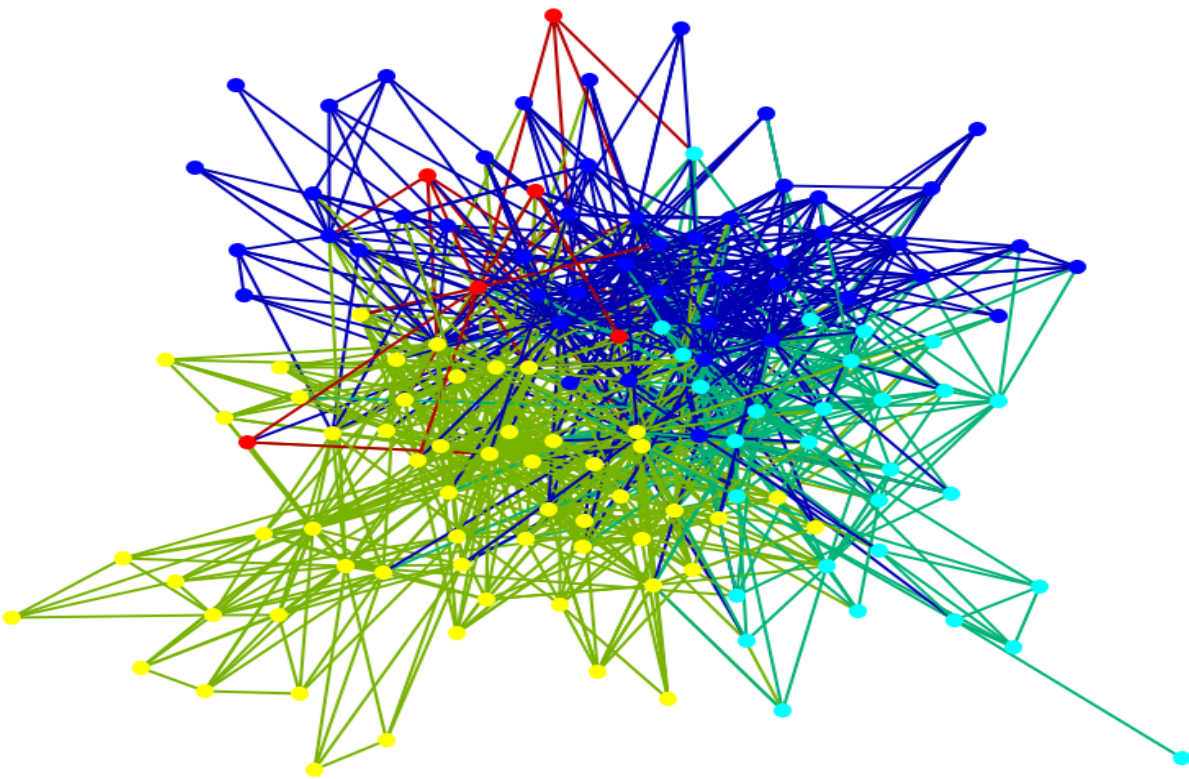
This study tested a model that applied Martin's (2002) TPT of Culture to a DNA in a higher education context. Future research might focus on examining how the TPT of Culture using a dynamic network analysis may yield new insights about other types of organizations and relationships in organizations.

In this study, one of the overarching themes is compassionate community and servant leadership. A future study is needed to understand the multiplicity of meanings implied by religious references like the term "servant leadership." Similarly, the theme of compassionate community has many meanings for the multiple constituents in the culture and subcultures of the organization. However, this term appears not to show up for any of the members of the counterculture clusters. This may be due to the sense of the counterculture that the compassionate community value stifles the pursuit of excellence and clarity of intended goals and objectives. A future study is needed to examine how religious values shape the operations of the organizations. In other words, how do religious organizations reconcile their core religious values with the need to survive financially and operationally?

APPENDICES

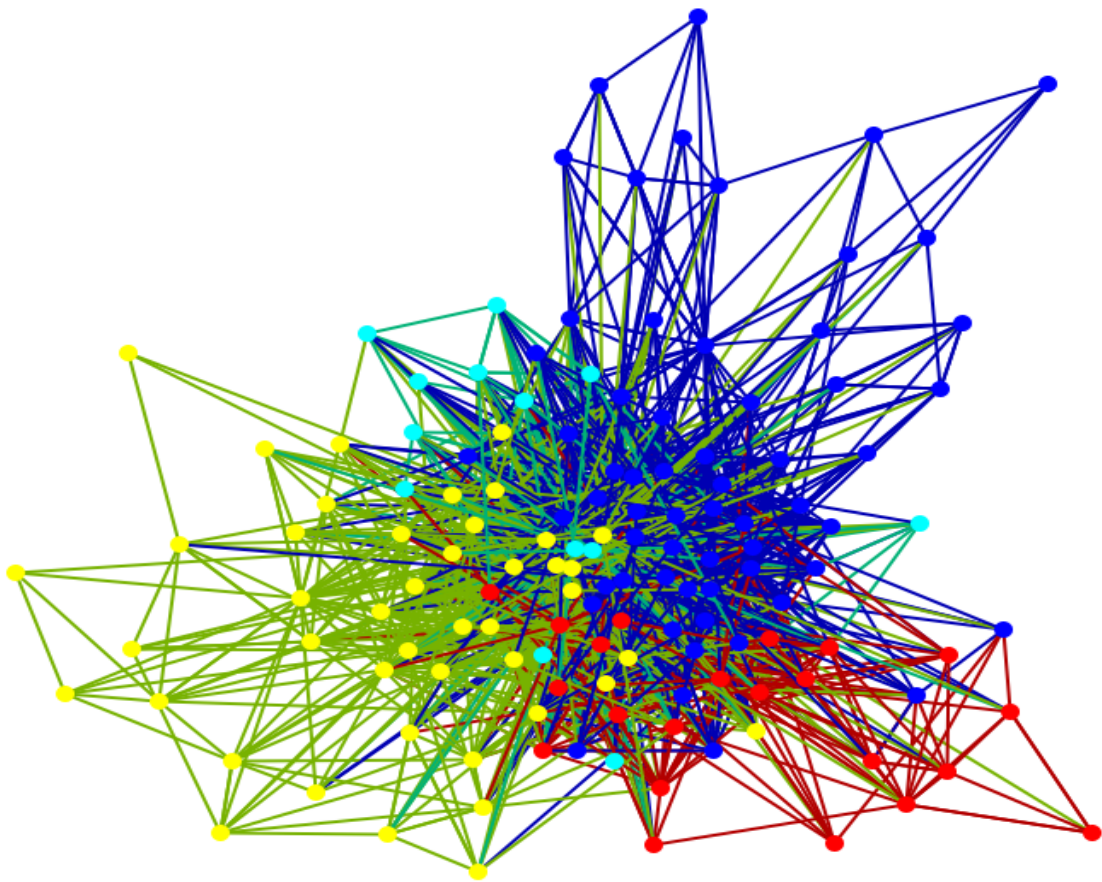
Appendix A

Discussion Network of the CCC Meta-Network



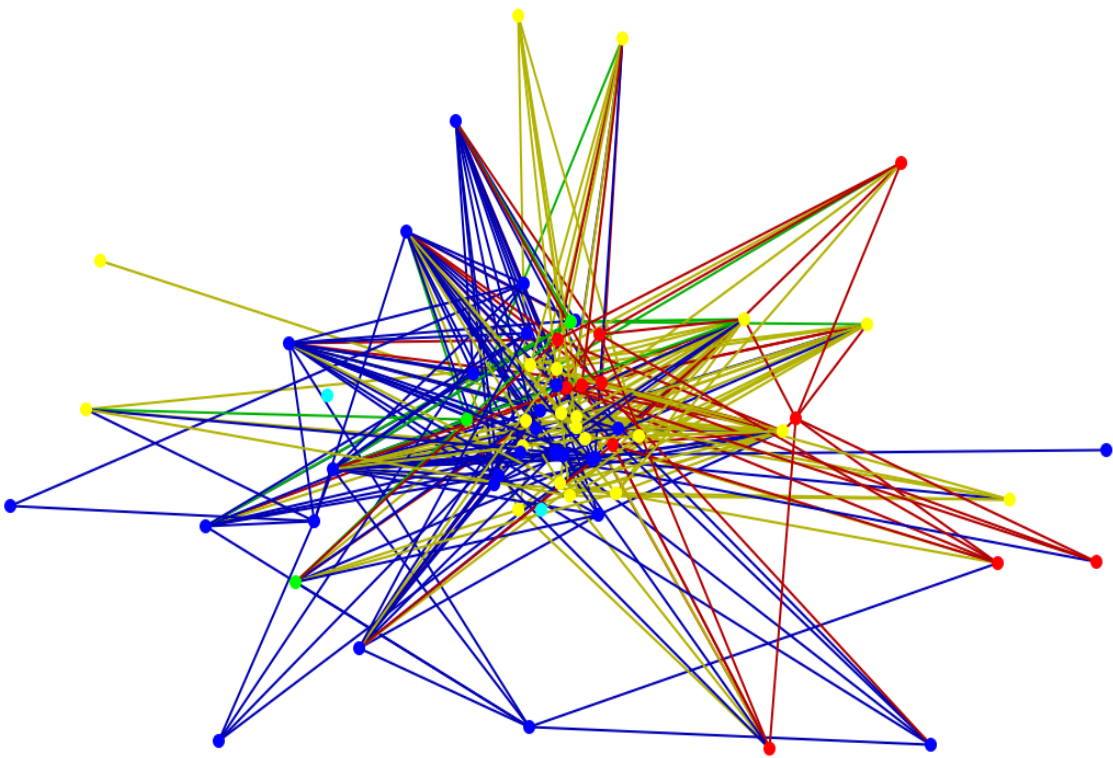
Appendix B

CCC Values Network for the CCC Meta-Network



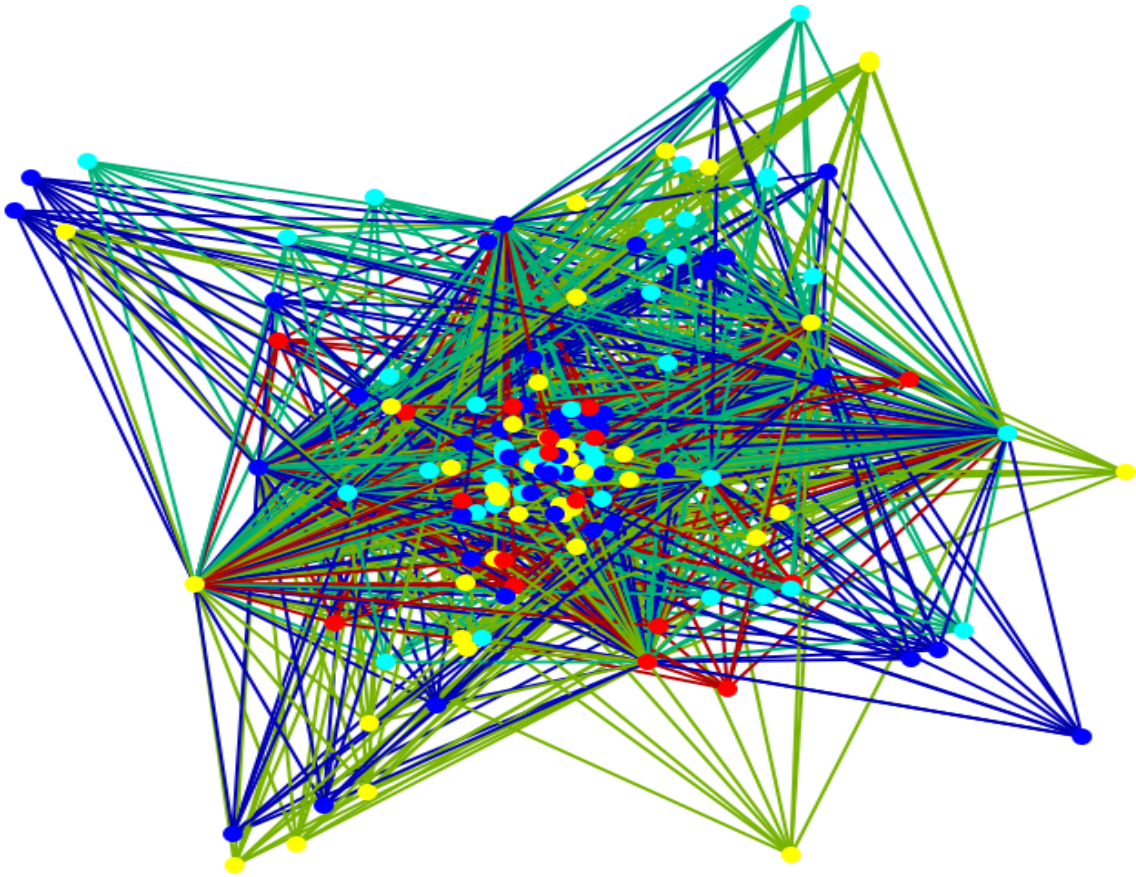
Appendix C

Faculty Informal Components Meta-Network



Appendix D

Leadership Dynamic Patterns Network



Appendix E

Educational Objectives of Southern Christian College (2010-11 Academic Catalog)

EDUCATIONAL OBJECTIVES

Approaching the integration of faith and learning from an informed, biblical perspective, faculty, staff, and students form a Christian community of learners that seeks to pursue the premise that all truth is God's truth and explores the significance of this in the various academic disciplines. We are committed to a thorough exploration of and complementary relationship between biblical truth and academic inquiry. We openly embrace students of all cultures, races, and faiths in an atmosphere of academic excellence, intellectual inquiry, and Christian love.

The College provides a broad, rigorous liberal arts curriculum with an emphasis on traditional and selected undergraduate and graduate professional degree programs. The educational goals of the college are that students will become reflective and responsible citizens, effective leaders, and committed laity as *they*

- Develop an informed, biblical world view including the following:
 - The sovereignty of God over all creation and knowledge.
 - A lifestyle of Christian service to others and the community.
 - The recognition of the intrinsic worth of self and all persons.
 - A genuine critical openness to the ideas and beliefs of others.
 - The formation of values and ethical reasoning.
 - An appreciation for what is beautiful, true and good in the arts and literature.
 - A respect for and attitude of stewardship toward the whole of creation.
 - An understanding of the past and its interconnectedness with the present and future.
- Develop effective written and oral communication skills.
- Develop critical thinking and problem-solving skills.
- Develop essential computer information systems skills.
- Develop competency in their academic majors.
- Develop interpersonal and team skills and an understanding and appreciation of their personal strengths and weaknesses.

Appendix F

Institutional Letter Granting Permission to Study

February 1, 2011

Dear Clemson University Institutional Review Board,

Daniel Bennett, a graduate student at Clemson University [REDACTED], has approached me with a request for formal consent for conducting a Dynamic Network Analysis (DNA) at [REDACTED] in partnership with Dr. Russ Marion of Clemson University. Dr. Marion will serve as the Principal Investigator since the research is being approved by the Clemson IRB, and the Ethics Board requires that a Clemson employee is held accountable by the university for ethical behavior.

The type of DNA methodology being carried out by the research team led by Dr. Marion is intended to produce practical results and may provide information that may assist [REDACTED] in making decisions for achieving its mission and goals. I understand that the intent of this research is to identify broad networks of beliefs about the culture of a private Christian college. In addition, I am aware that the analysis is part of Daniel's dissertation research.

My understanding is that the research team led by Dr. Marion will be taking a genuine concern for the well-being and ethical treatment of research subjects and the institution as guided by Clemson's IRB. As a small private college, [REDACTED] does not have an Institutional Review Board; therefore, on behalf of [REDACTED] I give my permission and support of this research.

Sincerely,

[REDACTED]
Provost and Senior Vice President

[REDACTED]
Ph. [REDACTED] ext. [REDACTED]

Email: [REDACTED]

Appendix G

Structured Interview

Structured Interview: Manifestations of Culture at a Small College

This questionnaire has been developed to assist in a dissertation study at Clemson University intended to understand the network dynamics of a small Christian college culture. This interview is a component of Part 1 of the study which is intended to gather data to inform the development of a survey that will be administered in Part 2 of the study in the spring.

The purpose of this study is to examine the network dynamics of an institution's organizational culture and its relationship to attributes, tasks, values, and beliefs. Ultimately, the results of this study will be summarized in aggregate form in appropriate reports, scholarly publications, and scholarly presentations. Your participation in Part 1 of this study will involve completion of an interview that will take approximately 30 minutes.

The overall intent of this study is to examine collective structures and processes relevant to a college setting and not to investigate individual behavior. The responses of this interview will be coded into thematic categories that will guide the development of a survey that will be issued to all full-time employees of the institution later. This knowledge will help us to examine the interactive dynamics of various cultural constructs found at a college.

Upon completion of the interview, I may follow-up with you either during the current time or at a future time. Thank you for your help in completing Part 1 of this study.

A. What personal goals or accomplishments do you most want to achieve while working for [REDACTED]? (Please list up to 5)

1. _____
2. _____
3. _____
4. _____
5. _____

B. What location(s) do you spend the majority of your time while working? Please list all that apply.

1. _____
2. _____
3. _____
4. _____
5. _____

C. What are the greatest sources of stress or pressure you feel in your work as an employee?

1. _____
2. _____
3. _____
4. _____
5. _____

D. What are the top-five work-related tasks that consume the majority of your time?

1. _____
2. _____
3. _____
4. _____
5. _____

E. What person(s) or resources do you use to do your job (i.e. outside consultant, fellow employee, tools, type of technology, software, etc)?

1. _____
2. _____
3. _____
4. _____
5. _____

F. What kind of informal activities related to work are you most likely to engage in (i.e. sharing a meal with fellow employees, attending music or sports events, etc.)?

1. _____
2. _____
3. _____
4. _____
5. _____

G. Within _____, what most influences the culture (department, program, team, committee, policy, etc.)?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

H. Outside of [REDACTED], please list up to 10 elements that most influence [REDACTED] (i.e. federal government, national economy, constituents, etc.)?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

I. What is important to know or understand in order to effectively do your job (i.e. FRX, mission statement, etc.)?

1. _____
2. _____
3. _____
4. _____
5. _____

J. What are the formal values that most shape [REDACTED] (i.e. religious beliefs, official written statements, etc.)?

1. _____
2. _____
3. _____
4. _____
5. _____

K. What are the informal values and unspoken rules that most shape [REDACTED] [REDACTED] (not officially written anywhere, but clearly considered normal practice)?

1. _____
2. _____
3. _____
4. _____
5. _____

Appendix H
IRB Approval Letter



March 9, 2011

Dr. Russell A. Marion
Clemson University
Department of Educational Leadership
102 Tillman Hall
Clemson, SC 29634

OFFICE OF
RESEARCH COMPLIANCE

Clemson University
321 Calhoun Drive
Room 223 Brackett Hall
Clemson, SC
29634-5704

P 864-656-1525
F 864-656-4475

SUBJECT: IRB Protocol # **IRB2011-070**, entitled "**Dynamic Network Analysis of Culture at a Small College**"

Dear Dr. Marion:

The Institutional Review Board (IRB) of Clemson University reviewed the above-mentioned study using Expedited review procedures and has recommended approval. Approval for this study has been granted as of **March 8, 2011** for all research sites with a support letter on file with IRB. Please find enclosed with this letter your original, stamped consent document to be used with this protocol.

Your approval period is **March 8, 2011 to March 7, 2012**. Your continuing review is scheduled for February 2012. Please refer to the IRB number and title in communication regarding this study. Attached are handouts regarding the Principal and Co-Investigators' responsibilities in the conduct of human research. The Co-Investigator responsibilities handout should be distributed to all members of the research team. The Principal Investigator is also responsible for maintaining all signed consent forms (if applicable) for at least three (3) years after completion of the study.

No change in this approved research protocol can be initiated without the IRB's approval. This includes any proposed revisions or amendments to the protocol or consent form. Any unanticipated problems involving risk to subjects, any complications, and/or any adverse events must be reported to the Office of Research Compliance immediately. Please contact the office if your study has terminated or been completed before the identified review date.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact the Office of Research Compliance at 656-6460 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Laura A. Moll". The signature is written in a cursive, flowing style.

Laura A. Moll, M.A., CIP
IRB Administrator

Enclosures

www.clemson.edu/research/compliance

Appendix I

Informed Consent

Information Concerning Participation in a Research Study

Clemson University

Dynamic Network Analysis of Culture at a Small College

Description of the Research and Your Participation

Clemson University professor Russ Marion and I are conducting a research study of the dynamic structure of culture at [REDACTED], and we would greatly appreciate your participation. A dynamic culture varies depending on things like ones' responsibilities, preferences, relationships, and demographic characteristics; but there are certain cultural features that define [REDACTED] as a whole. Our goal is to understand these cultural features, to understand the potential for improvement in our institution, to evaluate [REDACTED] ability to respond to environmental pressures, and to explore ways that our college can enhance its ability to learn, adapt, and create.

The methodology being used is called dynamic network analysis (DNA); this procedure explores the dynamic nature of interactions among people, tasks, resources, knowledge, and beliefs. Dr. Marion and his students have used DNA to examine networks at hospitals, high schools, a university football program, and a sister faith-based college. This type of analysis does not reveal any information that would identify individuals, and we will scrupulously maintain your anonymity.

This is not a traditional opinion survey—the analysis examines processes more than variables. The accuracy and usefulness of this analysis is dependent upon a high response rate. The estimated 30 minutes you devote to this will help us understand [REDACTED] college in ways we have never before explored, and the results can be used to benefit the college and its faculty, staff and students.

Risks and Discomforts

There are minimal risks associated with this research. One potential risk is for a breach in confidentiality which could present a threat or impact on an individual's employment. To protect and minimize this risk, several precautionary measures will be taken. These preventative measures will include:

- A) The focus of the research is on the collective responses, not on individuals
- B) Confidentiality (replacing names with codes) prior to analysis and reporting

- C) Electronic data will be password protected and stored on non-college owned computers and in secure backup storage
- D) No identifying data (including demographic information that might identify an individual) will be reported to [REDACTED] or used in any presentation or publication

Potential Benefits

There are no known benefits that you would directly receive from participation in this research. The research may, however, help us to understand the broad networks and beliefs of a small private Christian college and to develop strategies for improving the task efficiency and learning capacity of the organization.

Incentives

For each person who completes the questionnaire, one free lunch in the main Dining Hall will be provided. A voucher for the free lunch will be placed in campus mail for you.

Protection of Confidentiality

We will do everything we can to protect your privacy. While we do request your name, it is used only to prepare the data for analysis. As soon as the data is prepared and secured, all names will be replaced with codes; the names will then be discarded and no longer used. No one, outside of the researchers, will have access to identifying information, and that information will be maintained in password-protected, non-college owned computers until no longer needed. No information will be released in publications or presentations or to officials at [REDACTED], that could directly or indirectly reveal your identity. [REDACTED] will not be identified in any publication or presentation.

In rare cases, a research study will be evaluated by an oversight agency, such as the Clemson University Institutional Review Board or the federal Office for Human Research Protections, that would require that we share the information we collect from you. If this happens, the information would only be used to determine if we conducted this study properly and adequately protected your rights as a participant.

Voluntary Participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study. Whatever you choose, your choice will not affect your employment.

Contact Information

If you have any questions or concerns about this study or if any problems arise, please contact Dr. Russ Marion at Clemson University at 864-656-5105 or at marion2@clemson.edu. If you have any questions or concerns about your rights as a

research participant, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-6460 or irb@clemson.edu. If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number 866-297-3071.

Consent

By checking this box, I agree to participate in this study

Appendix J

Participant Email Invitations

First Email

Dear [REDACTED] Employee,

Clemson University professor Russ Marion and I are conducting a research study of the dynamic structure of culture at [REDACTED], and we would greatly appreciate your participation. Our purpose is to examine the network dynamics of an institution's organizational culture. The intent is to develop an understanding of the collective structure and processes relevant to a college setting. The research is conducted under the auspices of Clemson's Office of Research Compliance, which has approved it for ethical treatment of subjects and for the measures taken to protect your responses.

The research has been approved by Provost and Senior Vice President Dr. [REDACTED]. The results will be used to offer feedback to the college and for publication and presentation. The results will also help to frame Daniel's dissertation, a qualitative analysis that is being pursued this year. A copy of the summary report will be available to the members of this college upon request.

This is not a traditional opinion survey—the analysis examines processes more than variables. The accuracy and usefulness of this analysis is dependent upon a high response rate. The estimated 30 minutes you devote to this will help us understand our college in ways we have never before explored, and the results can be used to benefit the college and its faculty, staff and students. Please go to the weblink below to read the IRB consent form and to complete the survey.

For everyone who completes the survey, a free lunch in the main Dining Hall will be provided.

Thank you in advance for your time and help.

(Insert weblink here)

Sincerely,

Daniel Bennett
PhD Candidate, Clemson University

Russ Marion, PhD
Professor, Clemson University

Second Email

Dear [REDACTED] Employee,

If you have completed the short survey on culture we circulated a few weeks earlier via email, we want to express our sincere appreciation. If not, this is a friendly reminder. This analysis will tell us about the dynamics of the [REDACTED] culture, and the results promise to be useful. We do need a high level of participation, so please take 30 minutes or so to answer the questionnaire. Your confidentiality will be maintained.

Our purpose is to gain a baseline understanding of the broad networks of perceptions about the culture of a private Christian college. In addition, this study will assist Daniel Bennett in better framing a final dissertation question related to the study of organizational culture within a Christian higher education context. Please go to the weblink below to read the consent and to complete the survey.

For everyone who completes the survey, a free lunch in the Howerton Dining Hall will be provided.

Thank you in advance for your time and help.

(Insert weblink here)

Sincerely,

Daniel Bennett
PhD Candidate, Clemson University

Russ Marion, PhD
Professor, Clemson University

Appendix K

Culture Questionnaire

- 1. Please check the box next to your name. Names are essential to properly set up the data, but will be converted to codes and discarded as soon as the database is created for the analysis. Names are also needed to send meal vouchers.**

(INSERT LIST OF ALL FULL-TIME EMPLOYEES)

- 2. Primary Functions: Select up to two categories that best describe your role.**

- Maintenance/Custodial Staff
- Clerical/Administrative Support
- Professional Support Staff
- Intercollegiate Athletics
- Instructor (teach on a part-time or adjunct basis)
- Professor (teach full-time, tenure track)
- Department Chair or Manager of other employees
- Dean/Associate Dean, Assistant Dean
- Cabinet Member (Vice President, President, Executive staff)

- 3. Employment status**

- Exempt (salaried, full-time)
- Nonexempt Full-time (hourly)

- 4. What location(s) do you spend the majority of your time while working?**

Choose up to three.

- City 1 Campus
- Athletic fields
- Student Center
- Library
- Chapel
- City 2 Campus
- Coffee shop(s)
- Davis Hall
- Administration Building
- Home office
- Guest House
- Gymnasium and Offices
- ████████ Hall
- ████████ Science Building
- ████████ Building on ████████ Campus
- Work-related Travel (recruiting, fundraising, building partnerships)
- Other, please specify _____

5. Gender

- Female
- Male

6. Age

- 18 - 30
- 31 - 42
- 43 - 54
- 55 and up

7. Total number of years of service at [REDACTED] including the current year.

- 0 to 3 years
- 4 to 7 years
- 8 to 11 years
- 12 to 15 years
- 16 to 19 years
- 20 to 23 years
- 24 to 27 years
- 28 or more years

8. What type of church do you attend?

- Baptist
- Charismatic and/or Pentecostal
- Non-denominational
- Reformed (Anglican, Episcopal, Presbyterian)
- Other? Please specify denomination _____

9. Select the department(s) in which you primarily work (select up to two departments as appropriate):

- Academic Affairs and Support Services (Support Services)
- Biblical, Religious, and Interdisciplinary Studies (SAS and SPAS)
- Business and Computer Information Systems (SAS and SPAS)
- Elementary Education (K-6) and Physical Education (SAS and SPAS)
- English and Foreign Languages
- Fine Arts
- Natural Sciences
- Outdoor Education
- Social Sciences
- Adult Studies Administration
- Advancement/Public Relations
- Athletics
- Finance/Business Office (Bookstore, Facility Scheduling)
- Enrollment Management
- Facilities/Housekeeping

- Information Technology
- President's Office
- Student Services

10. What work-related tasks do you do on a regular basis in your role at [REDACTED] [REDACTED]? Choose up to seven.

- Academic advising
- Academic work with students
- Access data on the Student Information System (power campus)
- Administer student finances
- Administrative support with students
- Budget management and decision making related resource allocation
- Creating and refining policy
- Customer Service (with students, staff, and faculty)
- Email communication (responding to and keeping up with)
- Grading student work
- Hiring of personnel
- Instruction/Teaching (including preparation, presenting/facilitating, grading)
- Maintaining existing infrastructure (facilities, grounds, technology)
- Managing personnel conflicts or issues
- Meet with supervisor regularly
- Mentor student(s)
- Planning and preparation of co-curricular or extra-curricular activities (athletics, student activities, special trips, parties, events, etc.)
- Professional development
- Promote, market, publicize the institution
- React and respond to work crises
- Recruiting students
- Serve on college wide committees or task forces
- Support student learning outside the classroom

11. What types of resources do you regularly use as part of your job? Choose up to seven.

- Automobile (car, van, or bus for carrying out work-related tasks)
- Basic computer software (Microsoft Word, Excel, Outlook, Access, Powerpoint)
- Bible
- Budget management software (i.e. FRX)
- Vice President or senior supervisor of your division
- Cell phone
- Computer
- Context-specific books
- Fellow co-worker(s)
- Fundraising software

- Internet
- Legal and risk management consultants
- Library
- Outside colleague, expert, or consultant
- Projector
- Recruiting software
- Research software
- Student Information System software (PowerCampus)
- Telephone (landline)
- Tools and equipment (to support maintenance, grounds, housekeeping, etc.)
- Student workers

12. How familiar are you with the following types of knowledge? Rate each from 1-4 with 1 Not at all, 2 Somewhat, 3 Good, and 4 Excellent.

- Basic software literacy (Microsoft Office: Word, Excel, Powerpoint, Access, Publisher)
- Basics of the evangelical Christian faith
- Communication skills
- Customer Service skills
- Department specific details
- Expectations of supervisor
- FRX
- History of the institution
- Hobson's EMT
- How to assess your work area for accreditation purposes
- Institutional priorities
- Razor's Edge
- Reformed theology
- Student Information System (PowerCampus)
- Understanding of the Academic Catalog
- Understanding of the Employee Handbook
- Understanding of the Faculty Handbook
- Understanding of the Student Handbook

13. Select the greatest sources of pressure you feel in your work experience. Choose up to seven.

- Compliance with internal protocol and external regulations
- Differences in worldview
- Disgruntled customers (students, parents, staff, faculty, or other)
- Employee meetings
- Employee morale
- Employee turnover
- Employees following through on policy-related tasks and protocol
- External forces and requirements (Federal government, SACS, economy, etc.)

- Fear of layoffs
- Financially providing for family
- Internal communication within the organization
- Lack of system or process in place
- Lack of tools, skills, training, or other resources to adequately accomplish tasks
- Maintaining and achieving goals
- Meeting deadlines
- Meetings
- Organizational crisis (a situation that presents a threat to organizational goals and requires a solution with time pressure resulting in the need to develop new behaviors to cope)
- Personnel conflict(s)
- Pressure of division, department, or program needing to balance budget or to be revenue generating
- Raising awareness and understanding of a program
- Recruiting mission-fit students
- Religious expectations of employees
- Retention of students
- Social expectations of employees
- Time management
- Underachieving students
- Under resourced services, programs, and departments
- Workload
- Work/life balance

14. With whom are you most likely to discuss college affairs (needs, concerns, advice)? Choose all that apply. (Note: All names will be changed to numbers to protect individual identity and maintain confidentiality)

(INSERT LIST OF ALL FULL-TIME EMPLOYEES)

15. Which of the following people have values (beliefs) regarding work at [REDACTED] similar to yours? Choose all that apply. (Note: All names will be changed to numbers to protect individual identity and maintain confidentiality)

(INSERT LIST OF ALL FULL-TIME EMPLOYEES)

16. In general, culture is the values that you share with others in the organization and that shape the everyday behavior in the organization. What formal values most strongly shape the culture of [REDACTED] in your opinion? Choose up to seven.

- Academic standards
- Chapel and convocation program
- Departmental goals

- Educational objectives
- Faith statement
- Guidance from the Board of Trustees
- Integration of faith and learning
- Liberal arts education
- Low student-faculty ratio
- Mission statement
- Presbyterian heritage
- Professionalism is practiced
- Pursuit of excellence in serving students
- Reformed tradition
- Revenue generating programs
- Salary structure
- Strategic Plan
- Student learning outcomes
- Training and ongoing professional development
- Values Pyramid (Academic Excellence, Community, Honesty and Integrity, Truth, Biblical
Worldview)

17. Which of the following informal values most influence the culture of [REDACTED] [REDACTED]? Choose up to seven. The response options below are based on the responses by fellow employees who completed a structured interview prior to the development of this questionnaire.

- Acceptance of the status quo
- Ambiguous institutional identity
- Blending of professional and personal life
- Compassionate community that extends grace to both students and employees
- College-wide emails discussing opposing viewpoints
- College-wide emails sharing work related information (policy changes or updates, announcements, etc.)
- College-wide emails sharing prayer requests, celebrations (personal or professional)
- College-wide emails to the "for sale" email list
- Conflict related to differences of opinion
- Conflict based on job related tasks
- Crisis mode of operation
- "Don't rock the boat" attitude
- Expectation to be fully committed
- Family-like atmosphere
- Flexibility in the workplace
- Integration of faith and learning
- Insufficient experience, skills, and training to accomplish job related tasks
- Laid back and informal demeanor of students, staff, and faculty
- Motivation to work extra hours based on the faith-based mission of the institution

- Optimism for future
- Prayer or devotional is offered before event, class, meeting, etc.
- Salary inequity
- Thrift, do more with less

18. On a scale of 1-7 with 1 Strongly disagree, 2 Disagree, 3 Somewhat disagree, 4 Neutral, 5 Somewhat agree, 6 Agree, and 7 Strongly agree, to what extent do you agree with the following statements related to leadership dynamics?

- My department makes decisions based on input collected from everyone in the department
- My department's decisions tend to be made on a more proactive and anticipatory basis as opposed to reacting to crises
- Senior administrative decisions are made based on collected input and relevant data from all relevant constituents
- Senior administrative decisions are made on a more proactive and anticipatory basis as opposed to reacting to crises
- Departmental decisions are consistent with the stated institutional mission, vision, and values
- Institutional decisions are consistent with the stated institutional mission, vision, and values
- My department is committed to the pursuit of excellence in our work
- Institutionally, [REDACTED] embraces a servant leadership style
- Collaboration and support between departments is normal practice
- My department embraces a servant leadership style

19. Which of the following informal activities do you engage in on a regular basis?

Choose all that apply.

- Attend athletic events
- Attend chapel and convocation
- Attend drama, music, theatre or other fine arts events
- Attend FCA
- Attend special college lectures
- Attend the same church with fellow employees
- Bible study/small group with fellow employees
- Catch up with people at the document center
- Celebratory events (Christmas party, birthday party, etc.)
- Church events with fellow employees
- Coffee breaks on or off-campus
- Email college-wide words of encouragement, affirmation, or personal thoughts
- Exercise with fellow employees
- Financially contribute to the college after receiving paycheck
- Hiking with fellow employees
- Informal conversations with staff and faculty while walking through campus

- ___ Informal conversations with students
- ___ Lunch with fellow employees on campus
- ___ Playing golf with fellow employees
- ___ Share a meal with fellow employee(s) off-campus
- ___ Skills or safety training with fellow employees
- ___ Vacations/travel with fellow employees and family

20. For the following internal influences on the [redacted] culture, please indicate whether it is a negative influence, more negative than positive, not influential, more positive than negative, not influential, more positive than negative, positive, or don't know.

Internal influences on [redacted] culture: Positive or Negative?	Negative	More Negative than Positive	Not Influential	More positive than negative	Positive	Don't know
Academic Catalog						
Academic programs						
Adaptability as an organization						
Assessment practices						
Athletic Department						

Internal influences on [REDACTED] culture: Positive or Negative?	Negative	More Negative than Positive	Not Influential	More positive than negative	Positive	Don't know
Board of Trustees						
Budget planning and resource allocation						
Cabinet						
Campus wide committees and task forces						
Chapel and Convocation program						
Christian worldview and orientation						
Commitment and involvement of faculty and staff						
Compensation and benefits						
Data-driven decision making						
Employee Benefits						
Employee Handbook						
Employee turnover						
Enrollment						
Facilities						
Faculty						
Faculty Handbook						
Faith integration in the classroom						
Faith integration in co-curricular activities						
Faith integration in administrative support services						
Faith statement						
Financial resource limitations						
Fundraising						
Hiring practices						
Informal/personal emails shared campus wide with staff and faculty						
Individual department and attitudes (who you work with)						
Institutional history						
Interactions with other departments						

<p style="text-align: center;">Internal influences on [REDACTED] culture: Positive or Negative?</p>	<p>Negative</p>	<p>More Negative than Positive</p>	<p>Not Influential</p>	<p>More positive than negative</p>	<p>Positive</p>	<p>Don't know</p>
Internal communication within organization						
Individual skills and training to accomplish tasks						
Location: [REDACTED] Campus						
Location: [REDACTED] Campus						
Location: [REDACTED] Campus						
Marketing						
Mission statement						
Organizational size						
Prayer (individual and corporate)						
Retention of students						
Retention of employees						
SAS Residential program						
SPAS Programs						
Staff						
Student life activities (extracurricular, nonathletic, traditions, events, etc.)						
Students						
Student Handbook						
Technology						
Workplace satisfaction						

21. For the following external influences on the [redacted] culture, please indicate whether it is a negative influence, more negative than positive, not influential, more positive than negative, not influential, more positive than negative, positive, or don't know.

External influences on Montreat culture: Positive or Negative?	Negative	More Negative than Positive	Not Influential	More positive than negative	Positive	Don't know
Accreditation standards (SACS, NCATE, DOE, etc.)						
Alumni constituents						
CCCU (Coalition of Christian Colleges and Universities)						
City of [redacted] and surrounding area						
City of [redacted] and surrounding area						
Economy						
Federal government						
Higher education marketplace						
Local and regional competition (other colleges)						
Local churches						
[redacted] Retreat Association						
Presbyterian/denominational ties						
Regional Consortiums ([redacted] Independent Colleges, Appalachian Colleges Association, other)						
State Government						
Technological trends and advancements						
Town [redacted]						

Thank you for completing this questionnaire. A voucher for a free lunch to the Howerton Dining Hall will be placed in Campus Mail for you.

Appendix L

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