

HOW IS CHARISMA ROUTINIZED?

A NEW LOOK AT AN

OLD QUESTION

by

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ABSTRACT

Leadership theorists Conger and Kanungo wrote, “We know almost nothing about the routinization of charismatic leadership.” This dissertation addresses the question, “How is charismatic leadership routinized in organizations?” The research required finding an intersection of multiple literatures: (1) from Organizational Behavior, leadership, especially charismatic leadership; (2) from Organizational Theory, institutional theory, especially how institutional theory can account for organizational change; and (3) from Methods, system dynamics, especially how system dynamics can be used to assess sociological theory. Drawing on the work of Weber, Trice and Beyer specified five essential elements of charisma and developed a theory of “the routinization of charisma”, which also consisted of five elements. Beyer and Browning later provided a case study of the SEMATECH organization to demonstrate how the routinization of charisma took place in that organization.

This dissertation makes use Vensim® computer software to simulate and assess Trice and Beyer’s theory of charismatic leadership using a system dynamics model and using Beyer and Browning’s case study as a source of data. It demonstrates to what degree each of the five elements of charisma must be present for charisma to emerge and how the five elements interact. Likewise it demonstrates to what degree each of the five elements of routinization must be present for charisma to become institutionalized and how these elements interact.

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CHAPTER I

INTRODUCTION

Saudi citizen Osama bin Laden, however indirectly, through his al Qaeda network (Marion & Uhl-Bien, 2003), led nineteen men to freely choose certain death in acts of war against America. How did he get them to do this? What kind of leadership does it require? For most Americans, I suspect that the answer comes back: charismatic leadership.

Much has been made of the United States of America's efforts to "get" bin Laden. Americans – for the most part – want those responsible for terrorist acts against America to be held accountable for those acts. For some, this means "dead or alive" – with, frankly, a strong emphasis on the former. For others, a court of law – military or civil – is seen as the best way to go. Still others want the United Nations to "handle" the problem. And we have to assume that there are those, who mostly keep quiet in the English language press, who feel that no action against bin Laden is justified.

Suppose – as some have suggested – that bin Laden is already dead. The United States, as a matter of policy, will not stop there. The United States is likely to keep up the military and political efforts until the al Qaeda organization is destroyed as an effective foe. Why would the national government do this? With Osama bin Laden dead, what do we as citizens have to fear from al Qaeda? Will terrorists continue to lay down their lives for an organization that is no longer led by its charismatic (Eggen & Dobbs, 2002, January 14) leader?

The answers to these questions lie in the concept of the routinization (or institutionalization) of charisma. If bin Laden is a charismatic leader and if that charisma

can be transferred to his al Qaeda organization, we can expect that his followers, still drawn to his organization, will continue to act in ways consistent with bin Laden's original charismatic appeal.

Motivation

Increased Emphasis on Leadership

We do not have to look far to find evidence of the continual increase in the study of leadership. Stogdill's (1974) *Handbook of Leadership* contained approximately 3,150 entries. Stogdill and Bass's (1981) second edition contained approximately 4,700 entries. By the time of the third edition (Bass, 1990), about 7,500 entries were included. See Figure 1-1, Growth in Articles Cited in the *Handbook of Leadership*.

The scholarly literature since 1990 has noted the same trend. For instance, House and Aditya (1997, p. 465), in a major review of the leadership literature, noted, "we expect the accumulation of knowledge about leadership to continue." Osborn, Hunt and Jauch (2002, p. 831) and Ammeter, Douglas, Gardner, Hochwarter and Ferris (2002, p. 751) similarly respectively recognized that "current leadership research and theory is not invalid, rather incomplete" and that "leadership has been an active area of scientific investigation for over half a century, with scholars developing different perspectives on antecedents, processes, and outcomes." Recent leadership books have recognized the same trend. Conger and Konungo (1998, p. 241) questioned explicitly, "What types of managerial and leadership roles will executives have to play to build organizations that can meet the environmental challenges of the 21st century." Yukl (2002, p. 2), similarly, concluded, "Some progress has been made in probing the mysteries surrounding

leadership, but many questions remain unanswered.” Even a standard undergraduate organizational behavior textbook (Schermerhorn, Hunt & Osborn, 2000, p. 287) mentioned, “The leadership literature is vast—upwards of 10,000 studies—and consists of numerous approaches.”

In short, the authorities (Mumford, 2005) are agreed: the study of leadership continues unabated and will continue so for the foreseeable future. In some sense, every question even tentatively answered generates two new questions that merit a fresh look. The present dissertation attempts to continue that effort.

Increased Emphasis on Charisma

Similarly, we do not have to look far to find evidence of the continual increase in the study of charisma. Stogdill’s (1974) *Handbook of Leadership* did not even mention the terms “charisma” or “charismatic leadership” in its subject index, although the term “charismatic leader” does appear in the text in a discussion of Weber’s “three types of legitimate authority” (p. 26). Stogdill and Bass’s (1981) second edition contained more than a dozen entries on charismatic leadership. Three of these included discussion of charisma, but the word “charisma” itself did not appear in the Subject Index. These three were in the context of heroic leadership, esteem and personal attractiveness, and personal power (Stogdill & Bass, 1981, pp. 9, 152, 172). This edition contained no discussion of any empirical investigation of the construct of charisma by researchers. By the time of the third edition (Bass, 1990), more than fifty individual sub-entries were included on the topic of charismatic leadership. In this edition, the term “charisma” finally appeared in the Subject Index (Bass, 1990, p. 1152); it included eight specific sub-entries. Bass

combined these subjects into Chapter 12, “Charismatic, Charismalike, and Inspirational Leadership (Bass, 1990, pp. 184-221). See Figure 1-2, References to Charismatic Leadership and to Charisma in the Subject Index of the *Handbook of Leadership*.

The scholarly literature since 1990 has noted the same trend. *The Leadership Quarterly*, the premier journal of leadership studies, dedicated a special double issue (Jermier, 1994a) to neo-Weberian perspectives on charismatic leadership in 1994 (Jermier, 1994b). House and Aditya (1997) classified neocharismatic theories of leadership with those of trait, behavioral, and contingency as the four major paradigms of leadership research. Two special issues of *The Leadership Quarterly* (Conger & Hunt, 1999a; 1999b), dedicated to “charismatic and transformational leadership“ included works by Hunt and Conger (1999, p. 335) and Hunt (1999, p. 130) who wrote, respectively, “The pervasiveness of transformational and charismatic leadership in recent academic and practitioner writings is striking, indeed” and “a major, if not the major, contribution of transformational and charismatic leadership has been its transformation of the field”. We may expect this trend to continue.

Recent leadership books have recognized the same trend. Conger and Konungo (1998, p. 3) wrote, “social scientists and managerial scholars started to show a genuine interest in studying the phenomenon of charismatic leadership in organizations only during the past decade.” Yukl (2002, p. 240), similarly, noted that the interests of management researchers in the “emotional and symbolic aspects of leadership” rose significantly in the 1980’s. The undergraduate organizational behavior textbook (Schermerhorn et al., p. 299) noted that “the new leadership is considered especially important in changing and transforming individuals and organizations with a commitment

to high performance.” Once again, the authorities (Hunt, 2005) are agreed: the study of charismatic leadership also continues unabated and will continue for the foreseeable future. And again, this dissertation attempts to continue that effort.

Most Charisma Research has Focused On

Conger and Kanungo (1998, p. 5) noted that as of 1988 the major areas of research into charismatic leadership were: “(1) behavioral dimensions of the charismatic leader, (2) the psychological characteristics or dispositions of charismatic leaders, and (3) the institutionalization of charisma.” In addition, they stated that “some attention” had more recently been paid to “(1) contextual factors, (2) succession and maintenance factors, and (3) the dark side of charismatic leadership.” This study explicitly addresses the third of those major areas of research: the institutionalization of charisma.

Shortcomings and Purpose

Conger and Kanungo (1998, p. 19) noted that, in the context of business, we know little about how followers relate to charismatic leaders and that there are few such studies. This dissertation addresses the followers of charismatic leaders in business contexts.

Conger and Kanungo also wrote (1998, p. 28) that “institutionalization is another area in which little research has been conducted in the organizational literature. We know almost nothing about the routinization of charismatic leadership.” A second purpose of this study is to address the routinization of charismatic leadership.

Conger and Kanungo, in their discussion of theory development and the evolution of the field of charismatic leadership further noted, “the subject has been explored using a

wide variety of research methods” (1998, p. 4). These methods included field surveys, laboratory experiments, content analysis of interviews and observation, and analyses of historical archival information. Conspicuously absent from this list is simulation.

Computer simulation is the discipline of designing a model of an actual or theoretical physical system, executing the model on a digital computer, and analyzing the execution output. Simulation embodies the principle of “learning by doing”—to learn about the system we must first build a model and make it run (Fishwick, 1995).

Much earlier, Ackoff (1970, p. 10) had pointed out that large systems “cannot be brought into a laboratory nor can experiments be conducted on them as a whole in their natural environment.” Thus “models are representations of systems that serve this purpose,” and simulations are experiments conducted on such models.

Although Jacobsen, Bronson, and Veckstein (1990) and Jacobsen and Bronson (1995) published simulations of sociological theory, and Jacobsen and House (2001) extended these by publishing simulations of charismatic leadership, any simulations of charismatic leadership that may have been published by 1998 had so little impact as to be absent from Conger and Kanungo’s (1998) references. A specific purpose of this present study is to lead to eventual scholarly publication that will further legitimate simulation as a widely accepted research method in leadership, and particularly for the area of charismatic leadership.

Background

The starting point of the dissertation is Trice and Beyer’s (1986) theory of charisma (described below), as derived from Weber (1922, 1946, 1947).

The Case

In 1999, Beyer and Browning published “Transforming an Industry in Crisis: Charisma, Routinization, and Supportive Cultural Leadership” in a special issue (Conger & Hunt, 1999b) of *The Leadership Quarterly*. Beyer and Browning’s article described a case study of Robert Noyce, the SEMATECH organization, and the routinization of Noyce’s charisma into SEMATECH. Beyer and Browning’s (1999) article provides the case study that is modeled in this dissertation. (SEMATECH is Semiconductor Manufacturing Technology, a Delaware corporation incorporated in August 1987 [U.S. General Accounting Office, 1991a]).

Beyer and Browning (1999) recounted the story of how the United States’ semiconductor industry developed a strategy for countering its Japanese competition in the 1980’s and 1990’s in a direct attempt to avoid, in the memorable phrase of Hayes and Abernathy (1980, p. 67), “managing our way to economic decline” and to achieve world leadership by the middle of 1993 (U.S. General Accounting Office, 1990). This strategy involved a grand experiment in cooperation among those who had always been fierce competitors through the creation of SEMATECH, a Research & Development consortium. “R&D consortia are self-governing, usually non-profit organizations run for the benefit of their members” (Beam, 1997, p. 123). The story and analysis centered on four interconnected parts: (1) how industry leaders came together to support Noyce’s charisma as the first CEO of SEMATECH; (2) how their shared early experiences in the industry provided the basis for their cooperation in SEMATECH; (3) how they built a nontraditional culture at SEMATECH based on participation and democracy; and (4) how Noyce’s charisma continued at SEMATECH after his untimely death, through the

process of routinization. This case study meets Yin's criteria (2003, pp. 160-165) for an exemplary case study, one that is significant, is complete, considers alternative perspectives, displays sufficient evidence, and is composed in an engaging manner.

Noyce's life and his leadership of SEMATECH demonstrated each of the five elements of charisma and the five elements of the routinization of charisma described previously as detailed in Table 1.1, Elements of Charisma and in Table 1.2, Elements of the Routinization of Charisma. For example, one of the elements of the Routinization of Charisma is the "incorporation of charismatic mission into organizational culture" (Beyer & Browning, 1999, p. 506). An example of this provided by Beyer and Browning (p. 506) is "cooperative and democratic practices survive Noyce's death and still persist." Beyer and Browning discussed this element (p. 508) under the heading "Incorporation into a Tradition," and I have modeled it as "Traditions." Noyce "invented traditions" (Hobsbawm, 1983) as an element of routinizing his personal charisma into the organization. In short, Noyce was, in Sydney Hook's notable phrase, an "event-making man," one "whose actions are the consequences of outstanding capacities of intelligence, will, and character rather than of accidents of position" (Hook, 1955, p. 154).

The time frame covered by the case ends in December 1994, consistent with the period described in Browning and Shetler (2000). Subsequent major events in the development of SEMATECH, while not considered in the model, are available online (History of the consortium, 2004, December 21). Two items stand out in this "since then" chronology. First, in 1995, SEMATECH approved a new business model that resulted in its rejecting further federal funding, and, in 1997 received "its final installment of funds from the federal government." The ability and willingness to reject millions of dollars in

government support surely stands as a success in an industry that, less than ten years before, was in such crisis that many knowledgeable observers questioned its ability to survive.

A second unexpected action was the creation, in 1998, of the subsidiary International SEMATECH, which included “some of the Asian firms they were setting out to compete with at the outset” (L.D. Browning, personal communication, March 1, 2005). The SEMATECH organization had succeeded to the point of taking in as members some of the very organizations that had originally threatened its existence.

The Research Question

I have considered the increased emphasis that organizational behaviorists have placed on leadership and the increased emphasis that leadership theorists have placed on charisma. I have looked at the origin of the academic study of charisma in the work of Weber and at the major threads of study that have followed his lead. This brings me to the primary research question: How is charisma leadership routinized (institutionalized) in organizations?

The Research Approach

The home page of the Systems Dynamics Society provides a succinct description of the proposed research approach:

System dynamics is a methodology for studying and managing complex feedback systems, such as one finds in business and other social systems. In fact it has been used to address practically every sort of feedback system. While the word system has been applied to all sorts of situations, feedback is the differentiating descriptor here. Feedback refers to the

situation of X affecting Y and Y in turn affecting X perhaps through a chain of causes and effects. One cannot study the link between X and Y and, independently, the link between Y and X and predict how the system will behave. Only the study of the whole system as a feedback system will lead to correct results.

The methodology:

- identifies a problem,
- develops a dynamic hypothesis explaining the cause of the problem,
- builds a computer simulation model of the system at the root of the problem,
- tests the model to be certain that it reproduces the behavior seen in the real world,
- devises and tests in the model alternative policies that alleviate the problem, and
- implements this solution.

Rarely, is one able to proceed through these steps without reviewing and refining an earlier step. For instance, the first problem identified may only be a symptom of a still greater problem. (System Dynamics Society, n.d.)

In shorter form, Oliva (2003, p. 553) observed that “the outcome of the *modeling* process should be a dynamic hypothesis in which there is a degree of confidence that it represents the structure and observed behavior of the problem situation.” (Emphasis in original).

System dynamics is “a visual language” (Goodman, 1995, p. 6). It is “a method to enhance learning in complex systems” (Sterman, 2000, p. 4). In particular, in this dissertation, I do computer simulation (Fishwick, 1995; Ilgen & Hulin, 2000) using the program Vensim® (Ventana Systems, 2002) to learn from and about the model of charisma developed by Beyer and her colleagues (Beyer & Browning, 1999; Trice & Beyer, 1986). The primary outcomes of the simulation are graphical representations of changes in variables over time. (See Figures 6.1a through 6.9b). Studying these changes—and understanding why they occur—allows us to learn about the problem

under consideration. This study and understanding can lead to what Malan and Kriger (1988) called “managerial wisdom” about a single organization.

Objectives

The primary objective of this dissertation is to produce a system dynamics (Forrester, 1961; Sterman, 2000) model of charismatic leadership as analogous to the case study described in Trice and Beyer’s (1986) theory of charismatic leadership. In particular, I seek to model the dynamic relationships among the variables and their behavior over time, as recorded in the historical record of Browning, Beyer, and Shetler’s (1995) and Beyer and Browning’s (1999) case studies of the SEMATECH organization and in Browning and Shetler’s (2000) book-length historical examination of SEMATECH.

“Dynamic models involve responses that change over time” (Hilborn & Mangel, 1997, p. 33). The model’s capability to reproduce the historical behavior over time will be used to demonstrate the accuracy of the causal relationships in the model and to validate the predictions (Simon, 1990) of the behavior of the model for the future.

The direct result will be an answer to the following question: does the formalized model predict the institutionalization of charisma in the same way that the written model does? In this way, I will test an important¹ theory of charismatic leadership. This theory has not, in the nineteen years since it was published, been publicly in the literature.²

¹ As of October 1, 2002, the ISI Web of Knowledge listed more than 100 references to Trice and Beyer (1986).

² My review of the abstracts of all of the citations of Trice and Beyer found no references to any attempt to test the theory.

Contributions

Substantive Contributions

This dissertation will contribute to the literature on charisma in at least five ways. As noted above, Conger and Konungo (1998, p. 12) wrote, “We know almost nothing about the routinization of charismatic leadership.” This dissertation will begin to close that gap by modeling Trice and Beyer’s (1986) theory using Beyer and Browning’s (1999) case study and, ideally, help answer a crucial question for leadership researchers.

Second, this dissertation will address the possibility of gaps in existing theory. Formalization of Tushman and Romanelli’s (1985) theory of punctuated equilibrium into a system dynamics model allowed Sastry (1997) to recognize – and correct for – at least one gap in the original theory. This dissertation does the same for Trice and Beyer’s theory of charismatic leadership. Similarly, Tushman and Romanelli operationalized their concepts in their theory of punctuated equilibrium; Beyer and her coauthors did not (Beyer & Browning, 1999; Trice & Beyer, 1986). This dissertation begins that process for them.

Third, this dissertation will demonstrate to what degree each of the five elements of charisma as originated by Weber (1946, 1947) and extended by Trice and Beyer (1986) and further developed by Beyer and Browning (1999) must be present for charisma to emerge and how they may interact. Are they necessary and sufficient prerequisites for charismatic leadership? Likewise I demonstrate to what degree each of the five elements of routinization must be present for charisma to become institutionalized and how they may interact.

Fourth, I extend Trice and Beyer (1986) by demonstrating how charismatic leadership will devolve into either autocratic or bureaucratic leadership (Weber, 1946, 1947). The system dynamics model can – and does – address this topic by allowing me to conduct “what if” analyses. That is, I simulate the model to evaluate “what happens if” certain conditions occur. For example, what happens if the leader does not establish an administrative structure into which his charisma can be routinized? If charisma is not routinized, then, in theory, only autocratic and bureaucratic leadership remain as possibilities. Knowing why it charisma may or may not become routinized, is a key contribution of the conduct of “what if” analysis.

Methodological Contributions

This dissertation contributes to the system dynamics methodology in at least three ways. First, it builds on previous work by Sastry (1995, 1997) and Jacobsen and his colleagues (1990, 1995, 2001) to demonstrate the use of the system dynamics methodology to assess sociological theory. Others (Coyle, 1981; Coyle 1983a; Coyle, 1983b; Crossland & Smith, 2002; Larsen & Lomi, 1999; Masuch, 1985; Perlow, Okhuysen, & Repenning, 2002; Repenning, 2002; Voyer, Gould, & Ford, 1997) have done the same as the system dynamics methodology gains wider acceptance.

Second, this dissertation builds on previous work by Jacobsen and House (2001) that demonstrates the use of the system dynamics methodology to assess charismatic leadership.

Finally, this dissertation demonstrates the use of case study data in tuning a system dynamics model. This is a major potential contribution as it has not, to my knowledge, been done and published so far.

Organization of Succeeding Chapters

Chapter II provides a literature review of some major models of charisma, a literature review of some institutional models of organizational change, a summary of some shortfalls of previous studies of charismatic leadership, and a brief overview of the development of system dynamics. In particular, the review of charisma concentrates on charismatic theories that are intellectual descendents of Weber's (1922) original work. New institutional theories are much better known for their explanation of the lack of change than they are for modeling change. Chapter II touches on this before moving on to address institutional models of change. Shortcomings in previous studies of charisma motivated the present study. I address these shortcomings as an explanation of why the present study is needed and warranted. A look at "how we got here" with the system dynamics methodology closes the chapter.

In Chapter III, I develop each of the formal hypotheses I later test using the system dynamics (Forrester, 1961; Sterman, 2000) methodology. The hypotheses are based on the assumptions and propositions of the theory developed in Trice and Beyer (1986) and in Beyer and Browning (1999).

Chapter IV addresses the procedures and methodology chosen to address the research question. In Chapter IV, I identify the constructs in Trice and Beyer's (1986) interpretation of Weber (1947). I then describe how the causal structure of the theory can

be represented. This description is followed by guidelines for formalizing the Trice and Beyer model. Finally in Chapter IV I describe the sources of data to be used in assessing the Trice and Beyer model.

Chapter V includes the formal description of each of the state variables (stocks) in the model (Sterman, 2000). Specifically, the model includes Crisis, Solution (vision), Followers, Successes, Administrative Apparatus, Rites and Ceremonies, Traditions, and Continuity. These allow the accumulation of stocks of variables that rise and fall depending on the flows in and out. A key portion of this chapter is defining these stocks in ways that allow consistency of units in the model. The eight state variables identified above, plus the gifted leader and the leader's successor are required, in Trice and Beyer's (1986) enumeration, for Charisma and Routinization to exist.

Chapter VI contains the results of the modeling process and specifically addresses the seven hypotheses. In addition, it considers opportunities for leverage in the process of routinizing charisma and contains an example of "What if?" analysis.

Chapter VII concludes the study, comparing desired contributions of the dissertation to those obtained. In addition, it contains considerations for future study.

Note on Terminology

The use of terminology derived from Christian history may cause some concern or discomfort for some readers in an increasingly multicultural society. I personally am an adherent to the Christian faith as practiced in the Protestant – and specifically the Baptist denomination's – tradition. However, no acceptance of supernatural aspects of the Christian faith by the reader is required to make use of Christian history and tradition as

they relate to the concept of charisma in this dissertation – only recognition of the fact that practicing Christians throughout history did themselves believe those supernatural aspects.

Table 1.1. Elements of Charisma

<i>Elements</i>	<i>Examples of Indicators</i>
A situation of crisis	Semiconductor industry losing market share to the Japanese, predicted demise of the industry
Extraordinary personal qualities and gifts	Brilliant scientist, innovative, visionary, statesman, magnetic personality, moral, fun-loving and adventurous, egalitarian
A radical vision offering a solution to the crisis	Unity and cooperation in the industry
A set of followers attracted to the leader who come to believe in the radical vision	Has confidence of industry leaders and U.S. Congress, asked repeatedly to head SEMATECH, other cultural leaders supported him, his presence attracted better engineers
Validation through success	SEMATECH achieved goals, U.S. regains market share from Japanese, supplier industry improves quality of products

Source: Beyer & Browning, 1999, p. 489

Table 1.2. Elements of Routinization of Charisma

<i>Elements</i>	<i>Examples of Indicators</i>
An administrative structure	Founding of SEMATECH with many cooperative linking structures
Transference of charisma to followers through cultural forms	Democratic and inclusive bodies and councils, democratic meeting techniques, no office walls, other egalitarian practices
Incorporation of charismatic mission into organizational culture	Cooperative and democratic practices survive Noyce's death and still persist
Selection of successor who resembles the charismatic	Successor differs in leadership style but retains cooperative and democratic structures and practices
Continuity of charismatic mission and continued coherence of members around it	SEMATECH survives, most large firms continue membership, members vote to forgo government funding, cooperative research expands to become international

Source: Beyer & Browning, 1999, p. 506

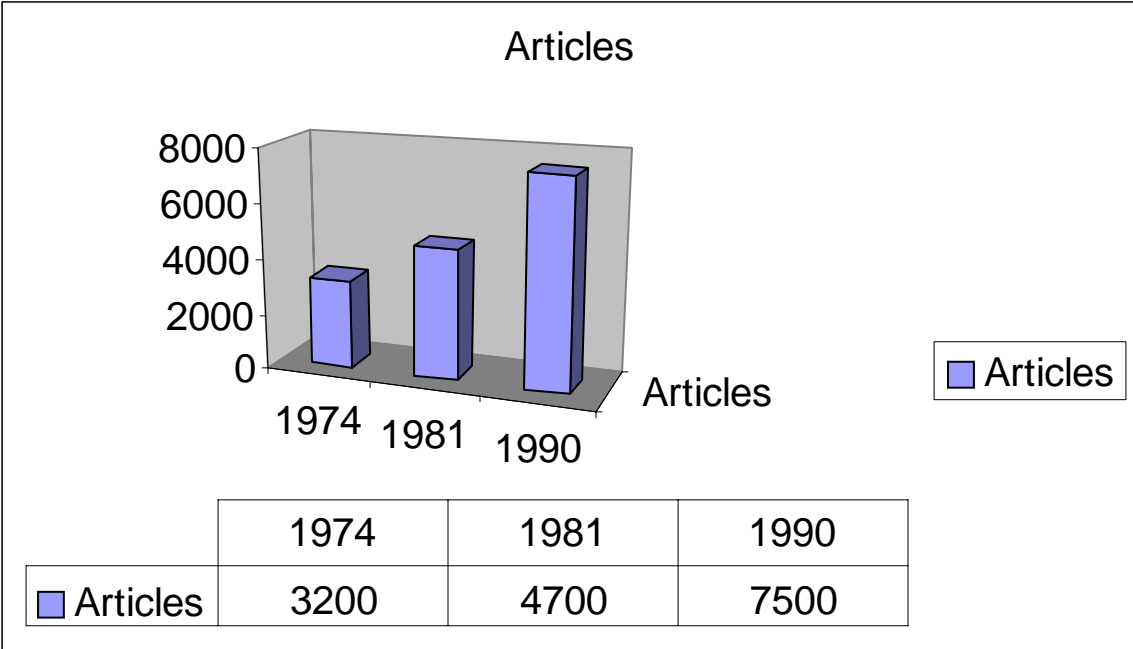


Figure 1.1. Growth in Articles Cited in the *Handbook of Leadership*.

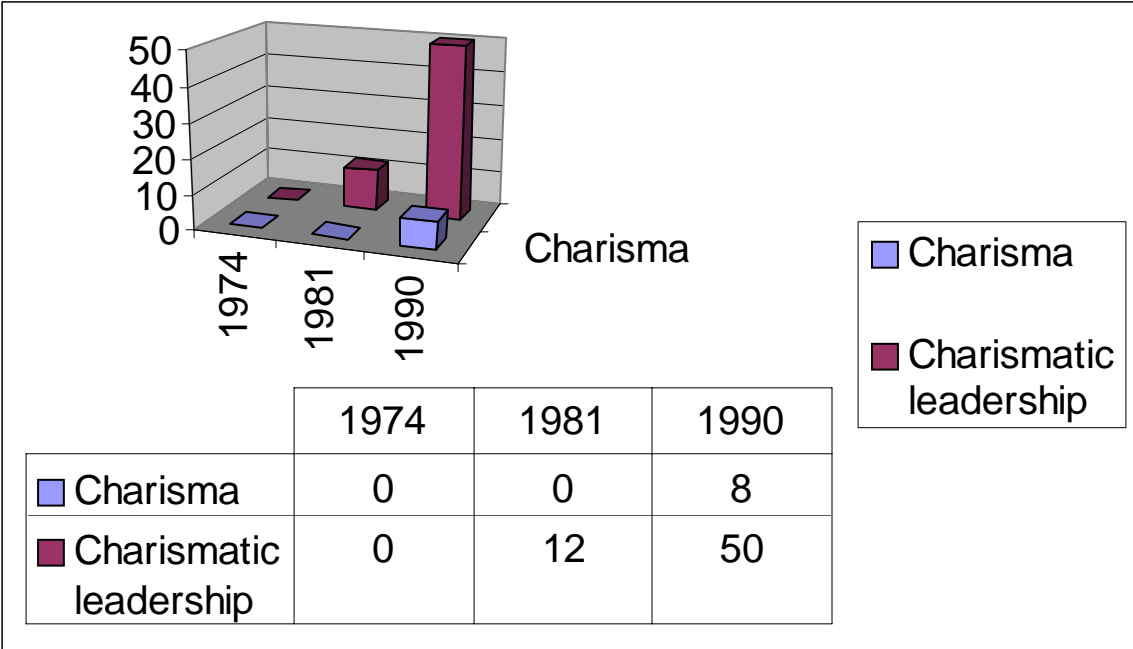


Figure 1.2. References to Charismatic Leadership and to Charisma in the Subject Index of the *Handbook of Leadership*.

CHAPTER II

LITERATURE REVIEW

The word “charisma” has a distinguished etymology, as noted by the two primary meanings identified in *Webster’s Third New International Dictionary* (Grove, 1976). First is “a spiritual gift or talent regarded as divinely granted to a person as a token of grace and favor and exemplified in early Christianity by the power of healing, gift of tongues, or prophesying.” Second is “a personal magic of leadership arousing special popular loyalty or enthusiasm for a public figure” or “a special magnetic charm or appeal.” In the evolution of the English language, the second meaning has developed from the first.

Origins of the concept of charisma

Max Weber (1947) gave the term “charisma” its current sociological meaning. He derived it from the Greek word *charisma*, meaning “grace, favor, or kindness” and translated in the New Testament of the Authorized (i.e., King James) Version of the Scriptures seventeen times as “gift” or “free gift” (Young, 1975, p. 390). Sixteen of these seventeen uses are found in the writings of Saint Paul, the other being in the writing of Saint Peter. Included are such well known passages as Romans 6:23:

For the wages of sin is death; but the gift (*charisma*) of God is eternal life through Jesus Christ our Lord.

Five of the seventeen uses appear in a single chapter—Chapter 12 of I Corinthians, Saint Paul’s most explicit explanation of the spiritual gifts available to the Christian.

The idea was that the person possessed of charisma was *literally* gifted by God with a special grace to minister to others. This gift was typically one that was evident to others and recognizable by them as God-inspired. “A short, simple definition might be: A spiritual gift is a Spirit-given ability for Christian service” (Godwin & Edgemon, 1988, p. 1797).

What charisma is not

Again, in the Christian sense, it is worthwhile to understand what spiritual gifts are not, as this also has meaning for our secular understanding of charisma. “Spiritual gifts are not natural talents” (Godwin & Edgemon, 1988, p. 1797). Likewise, spiritual gifts are not offices—or, in organizational terms, they are not positions on an organizational chart. They are not evidence of the “goodness” of a person’s life. Finally, they are not the same for all Christians (Godwin & Edgemon, 1988).

Why is an understanding of "what spiritual gifts are not" important to our secular understanding of charisma? Again, shades of meaning and understanding have crossed from the divine to the secular. For example, our secular understanding of charisma, while not literally including a divine component, still would involve something more than mere inborn talent. Likewise (as this dissertation will show), charisma is emphatically not inherent in the office of leader, chief executive officer, pastor, president, or any other “spot” on an organizational chart.

The possibility of the misuse of charisma by a person who might use that charisma for ill (or even for evil, to again go beyond the secular) is debated by scholars (Yukl, 2002) and is not resolved. But, in the popular understanding, surely Hitler, Lenin,

“Minister” James Jones, David Koresh, and, most recently and perhaps most famously, Osama bin Laden (Steyrer, 2002) must come to mind as those who have used their charisma for evil purposes.

Finally, charisma is not the same for all people. In the secular sense, this can be understood in several ways. To the extent that charisma is an influence process, that charisma will not be manifested in the same ways for all who exercise that influence. A moment’s reflections on the lives of General George Washington (Schwartz, 1983) and of popular music star Britney Spears (*Britney spears: The official website*, n.d.) will illustrate this observation. To the extent that charisma is demonstrated in individual behaviors, the behaviors of Mohandas Gandhi were surely different from those of self-proclaimed holy men such as James Jones or David Koresh. To the extent that charisma is attributed by followers to perceived behaviors, it will surely vary as those perceptions vary (Hunt, Boal, & Dodge, 1999). The conditions that facilitate charisma will inevitably vary between individuals. A United States President who governs in time of peace has little chance of being perceived as charismatic – compared to those who serve in time of war. House, Spangler, and Woycke (1991, p. 370) found that crises were positively related to “presidential behavioral charisma and presidential performance.”

Charisma in Christian history

Throughout subsequent history, “certain of these gifts have attracted particular attention and stirred considerable controversy” (Erickson, 1985, p. 877). These gifts included exorcism of demons, faith healing, and speaking in tongues, and some followers have understood these manifestations as direct guidance from God. While for Christians,

the primary historic concern has been whether or not these manifestations actually represent a special work of God the Holy Spirit in the church, the manifestations themselves and their effects in attracting followers to those who exhibit the manifestations, have led to a secular understanding of the term “charisma” (Erickson, 1985).

Max Weber and charisma

Weber, of course, provided a secular meaning for the word, but that meaning brought with it some of its spiritual and religious overtones (Gardner, 1993, pp. 34-35). While Weber’s conception of charisma is not necessarily reflected in the most current treatments of the concept (Beyer, 1999), Weber was interested in legitimate authority in society. He identified three ideal types of authority: (1) traditional, (2) bureaucratic, and (3) charismatic. He concluded that only the latter provided a means for positive change in society. The two former would tend to promote “more of the same” and the tendency to “do what we’ve always done.” Thus Weber asked (figuratively), “How can charisma survive the original charismatic leader and allow ongoing positive societal change?” His answer was: by institutionalizing the leader’s charisma into an organization.

Still, Weber did not enumerate the elements of a formal theory of the institutionalization of charisma (Trice & Beyer, 1986, p. 119). That task fell to Trice and Beyer and to Beyer and Browning (1999) who, based on their studies of Weber, developed five elements essential for charismatic leadership to emerge and five additional elements necessary for that charisma to be institutionalized into an organization. These elements provide the basic stocks for the simulation to be conducted.

Recent work

As previously mentioned, in their most recent book summarizing the major elements of what is known about charismatic leadership in organizations, leadership theorists Jay Conger and Rabindra Kanungo (1998) concluded that, “We know almost nothing about the routinization of charismatic leadership.” This leads immediately to the research question: “How *is* charismatic leadership routinized (institutionalized) in organizations?” The question is inherently one that calls for a study of temporal processes. We simply *must* think in terms of time and change in order to consider how a construct such as charismatic leadership can be institutionalized in an organization. The system dynamics (Forrester, 1961; Sterman, 2000) approach provides a methodology by which to do this.

Models of Charisma

While this dissertation tests Trice and Beyer’s (1986) model of charisma, a number of other influential models of charisma exist. This review of these models is intended to highlight aspects of these other models that are consistent with Trice and Beyer’s model and to lead to an explanation of the Trice and Beyer model that helps address the “So What?” question. Trice and Beyer’s model shares features with other models of charisma. Shortcomings and areas for further study in these other models are reflected – in some cases – in how the proposed dissertation will test the Trice and Beyer model. Thus, at the margin, I may shed light on alternate models of charisma as well.

Max Weber's model of charisma

The starting point for the modern, secular study of charisma is the work of Max Weber (1922, 1946, 1947). Weber used the term charisma “to describe a form of influence based . . . on follower perceptions that the leader is endowed with exceptional qualities” (Yukl, 2002, p. 241). Among the elements which Weber found necessary for charisma were a social crisis, a leader with a vision that offers a way out of the crisis, followers who accept the vision, successes in implementing the vision, and follower perception that the leader is indeed an extraordinary person.

Weber observed that charisma is inherently unstable or transitory when it is based on the followers' personal identification with the extraordinary leader. When that leader dies or otherwise departs from the organization, a crisis of succession is likely to occur. In order to preserve the charismatic nature of the organization, the charismatic leader can attempt to routinize his or her charisma within the organization by several methods.

“Max Weber concluded that societies passed through a sequence of three “pure” types of authority: the charismatic, the rational-legal, and the traditional” (Burns, J.M., 1978, p. 243). For Weber, the issue was authority. How did it arise? How was it embodied in organizations? Weber found that charisma explained the origination of authority. The heroic leader, such as Moses or Joan of Arc, through his or her own personal charisma as perceived in the historical crisis situation, stepped beyond existing rational-legal or traditional forms of authority.

But Weber saw the inherent instability in this authority. Neither Moses nor Joan or Arc could live and lead indefinitely. Weber saw that the likely result of the departure—by whatever means—of the charismatic leader was that authority would develop in a

rational-legal (bureaucratic) sense of rules and laws or it would develop in a traditional manner. In this sense, the king is the king, and he holds authority by divine right or simply because he is king.

As J.M. Burns noted (1978, p. 243), “Weber did not make clear whether this gift of grace was a quality possessed by leaders independent of society or a quality dependent on its recognition by followers.” This has resulted in what Burns called “overlapping meanings” (p. 243) for the concept of charisma. The proposed dissertation will select the meaning as defined by Trice and Beyer (1986), but Burns’ early recognition of the problems inherent with these “overlapping meanings” was quite prescient. They plague studies of charisma to this day. Burns gave up the fight and referred instead to “heroic leadership” (p. 244) instead. The disagreement continues in the leadership literature between those who view charisma as an attribution and those who see it as behavioral.

House’s model of charisma

House’s (1977) model of charisma established the definition of charisma based on its effect on followers. For House, a charismatic leader creates in his followers loyalty and devotion, personal identification with the leader, desire to be like the leader, self-esteem based on relationship with the leader, and trust in the leader.

An important aspect of House’s theory was that he developed a set of testable propositions of observable behaviors. In this, he went beyond historical studies, folklore, and mystery. As with Conger and Kanungo (1988, 1998, see below), House’s theory involved leader behavior, traits and skills, and the leadership situation. Unlike Conger

and Kanungo's theory, House's theory saw charisma in leader behaviors, not in attribution to the leader by followers.

Burns' model of transforming leadership

Yukl (2002, p. 240) emphasized that “the terms *transformational* and *charismatic* are used interchangeably by many writers, but despite the similarities there also appear to be important differences.” J.M. Burns' prize-winning (1978) treatise on political leadership, *Leadership*, influenced most of today's theories of transformational leadership (Yukl, 2002, p. 241), introducing the concept of transforming leadership.³

J.M. Burns (1978) proposed two kinds of leadership: transactional and transforming. The definitions of the two are critical for understanding his model. Burns (p. 19) defined leadership “as leaders inducing followers to act for certain goals that represent the values and the motivations—the wants and needs, the aspirations and expectations—of *both leaders and followers*.” Key to this definition is the understanding that “leadership, unlike naked power-wielding, is thus inseparable from followers' needs and goals” (p. 19).

However, Burns noted that the leader-follower interaction could take two fundamentally different forms. The first of these is transactional leadership. This “occurs when one person takes the initiative in making contact with others for the purpose of an exchange of valued things” (p. 19). The second of these is transforming leadership. “Such

³ Note that Burns described *transforming* leadership. The word “transformational” *does* occur in Burns, but the construct of interest is clearly defined as “transforming”. Apparently, the match of transformational with the other major construct in Burns, transactional, is just too good. Bass (1985) identified his major constructs as transformational and transactional. The term transformational has carried the day in the literature.

leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality” (p. 20).

Trice and Beyer’s model of charisma

Trice and Beyer (1986, p. 113) integrated the “concepts of charismatic leadership and its routinization” in their paper “Charisma and Its Routinization in Two Social Movement Organizations.” They provided an enumerative definition of both charismatic leadership and the routinization of charisma. Their paper drew on “participant observation data” (p. 113) in an examination of two charismatic leaders: the founder of Alcoholics Anonymous (AA) and the founder of the National Council on Alcoholism (NCA).

Drawing on the work of Weber (1947), Trice and Beyer (1986) specified the previously mentioned five essential elements of charisma and developed a theory of “the routinization of charisma,” which also consisted of five elements. Beyer and Browning’s (1999) case study applied this framework to the founding and evolution of SEMATECH. Trice and Beyer proposed that the emergence of charisma requires the presence, to some unknown degree, of: (1) a crisis situation, (2) a person of extraordinary qualities and gifts, (3) a radical vision for solution to the crisis, (4) a set of followers attracted to the leader, and (5) validation through success. They similarly proposed that the routinization of charisma requires the emergence, to some unknown degree of: (1) an administrative structure, (2) cultural forms that transfer charisma to followers, (3) organizational traditions that incorporate the charismatic mission, (4) a successor who resembles the

original charismatic leader, and (5) continuity of the charismatic mission and continued membership support of that mission.

Using their enumerative definitions for charisma and for the routinization of charisma, Trice and Beyer (1986) demonstrated that both the founder of AA and the founder of the National Council on Alcoholism were charismatic leaders. Again, using their enumerative definition of the routinization of charisma, they likewise showed that, for the founder of AA, charisma was institutionalized in the organization. Similarly, the charisma of the founder of the NCA was not routinized in that organization.

Trice and Beyer (1986) did not anticipate, and Beyer and Browning (1999) did not follow Shamir (1995) in distinguishing between charismatic attributions for those who view the leader from “close up” versus those who viewed the leader from a distance. This is consistent with Trice and Beyer’s and Beyer and Browning’s sociological view of charisma. For them, charisma exists as an enumeration of its elements. The perspective of an observer is unimportant.

Years have passed since the departures of both leaders from their respective organizations. AA continues to this day as a vital organization capable of changing lives as an “informal society of more than 2,000,000 recovered alcoholics” (Alcoholics Anonymous, 2004). The organization explicitly has “preserved the integrity of the A.A. message” while encouraging “new customs and practices within the Fellowship” (Alcoholics Anonymous, 2001a). Similarly, “all changes made over the years . . . have had the same purpose: . . . to reach more alcoholics” (Alcoholics Anonymous, 2001b). In short, the original charisma, routinized as described by Trice and Beyer in 1986, continues in the organization.

The NCA, under its current name of the National Council on Alcoholism and Drug Dependence (NCADD) (National Council on Alcoholism and Drug Dependence, 2002), continues as an organization but as one that is, in Weber's terms, institutionalized as bureaucratic-rational and not charismatic. Trice and Beyer (1986) had identified the organization as one in which the founder's charisma was not routinized, exemplified by the fact that in the 1980's "NCADD changed its name, broadening its organizational focus to include Drug Dependence" (National Council on Alcoholism and Drug Dependence, n.d.).

An understanding of what Trice and Beyer (1986) attempted and accomplished in their paper is essential to an understanding of the proposed dissertation. In plain language, the proposed dissertation will test Trice and Beyer's model of charisma and its routinization in organizations. The reviews of other models of charisma and of institutional models or organizational change are necessary for background and important for their connections to the Trice and Beyer model. The five elements of charisma and the five elements of its routinization, enumerated above, are the ten key elements that will be tested in the system dynamics model I am developing in order to answer the question, "How is charisma routinized in organizations?"

The elements of charisma and of its routinization are summarized, with examples, in Table 1.1. Elements of Charisma, and in Table 1.2. Elements of Routinization of Charisma.

Conger and Kanungo's model of charisma

Conger and Kanungo (1988) took a different approach in their model of charisma. They assumed that charisma is attributed by followers to leaders. They refined this theory later (Conger & Kanungo, 1998). According to their theory, followers will attribute charisma to a leader based on a joint determination of the situation, of the leader's skill, and of the leader's behavior.

This differs from Weber's historical-sociological approach and from Trice and Beyer's enumerative approach to modeling charisma. Given their perspective on charisma as an attributional phenomenon, we could actually determine that there are no charismatic leaders. Leaders themselves do not "possess" charisma. Followers *attribute* that quality to leaders based on certain behaviors that are seen by the followers as evidence of charisma. The leader can influence follower behavior because the followers identify with the leaders as part of the followers' relationships with the leader.

Yukl (2002, pp. 242-243) summarized the behaviors to which followers would attribute charisma in the Conger and Kanungo model. Although other variations exist (Hunt et al., 1999), those identified by Conger and Kanungo are: (1) The leader to whom charisma is attributed provides a radical – but not too radical – vision of the future; (2) the leader acts in unconventional ways to achieve his or her vision; (3) the leader incurs personal costs to achieve his vision; (4) the leader to whom charisma is attributed appears confident, enthusiastic, and competent and instills these attributes in his followers; and (5) the leader uses vision in his appeals to followers more than he uses authority or participation.

Conger and Kanungo's (1998) model includes the influence skills used by the leader to whom followers attribute charisma. The most important of these is personal identification. The followers identify with the leader and his vision. They seek the leader's approval as a measure of their own self-worth. Likewise, they avoid his disapproval and fear rejection. This powerful process allows the leader to influence the behaviors of the followers profoundly. It is particularly intriguing that, in this attributional model of charisma, the followers "make the call" on the existence or non-existence of charisma, yet they then are strongly influenced by a leader that they themselves have defined as charismatic and by his or her vision (Khurana, 2002, September 13). Still, this approach does have the advantage that it does not depend on observations of follower behavior in order to determine if the leader possesses charisma (J.G. Hunt, personal communication, December 5, 2002).

The second of these methods in Conger and Kanungo's (1998) model is the adoption of new beliefs and values by the followers. This will provide intrinsic motivation to the followers to accomplish the elements of the leader's vision.

Conger and Kanungo's (1998) model does not ignore the situation in which leaders and followers find themselves. A key element of the situation in which followers may attribute charisma is a crisis. Followers are flatly dissatisfied with their current situation. But Conger and Kanungo see this differently than do Weber (1946, 1947) and Trice and Beyer (1986). For Weber and for Trice and Beyer, a crisis is essential to the existence of charismatic leadership, by definition. For them, no crisis means no charisma – period. For Conger and Kanungo, the leader may manipulate the situation by discrediting existing institutions and processes or may precipitate a crisis. In either case,

the leader still provides the compelling vision of how to improve the situation, drawing followers to himself.

Differing from Burns' (1978) view of transforming leadership that must always be moral, Conger and Kanungo's model includes the possibility of what they call "the shadow side of charisma" (1998, pp. 211-239). For them, the possibility that followers might attribute charisma to immoral leaders is quite real. In contrast to the positive form of charismatic leadership, a negative leader is egotistic, has needs for personal power, personal achievement, and self-aggrandizement, influences others by control, emphasizes compliance behaviors on the part of followers and their personal identification with him, and finally, is immoral (See also Bryman, 1992; Howell, 1988).

Boal and Bryson's model of charisma

Boal and Bryson (1988) postulated that there are two, distinct kinds of charismatic leadership. These are visionary and crisis-produced. "The common thread to both is that each tries to create a new or different world that is phenomenologically valid for his or her followers" (p. 16). Boal and Bryson do not see charisma as being attributed to leaders by followers. Rather, they observe the effects of charismatic leaders on followers. Those leaders who generate charismatic effects in followers are charismatic leaders. These differ primarily in how they generate these effects in followers.

For Boal and Bryson (1988), *visionary* charismatic leaders "produce charismatic effects primarily through helping to heighten *internal correspondence* for individual followers or *co-orientation* with a group of followers" (p. 16). That is, visionary

charismatic leaders connect to the followers by providing a vision that connects to the followers at the deepest levels of their personalities.

Likewise, “crisis-produced charismatic leaders create charismatic effects primarily through helping to heighten *external correspondence* for individual followers and *system effectiveness* for groups of followers” (Boal & Bryson, 1988, p. 16). In short, the crisis-produced charismatic leader reaches his followers by providing them (individually and as a group) ways to deal with a crisis.

Boal and Bryson (1988) developed an intricate model of charismatic leadership in organizations (pp. 20-21), but it was one in which temporal aspects of charismatic leadership were not explicitly considered. Likewise, Boal and Bryson’s whole paper rests on the idea that a crisis is not necessary for charismatic leadership to emerge. After testing the model derived from Trice and Beyer with case study data, one of the “what if” questions to be addressed will be, “What happens to charisma and its routinization in the absence of crisis?”

Boal later teamed with Hunt and Dodge (Hunt et al., 1999) to test Boal and Bryson’s (1988) theory explicitly in a laboratory experiment. In this experiment, crisis-produced charisma was renamed crisis-responsive charisma. They found support for the hypothesis that there are indeed two forms of charisma, visionary and crisis-responsive. They also found support for their hypothesis that the effects of crisis-responsive charismatic leadership will fade faster than those of visionary charismatic leadership. These too will be tested by the proposed model of the routinization of charismatic leadership. Observation of the behavior of the variables charisma and institutionalized charisma overtime will allow us to conduct these “what if” experiments.

Criticisms of the external validity of laboratory experiments using students (such as Hunt, Boal and Dodge [1999] conducted) are well known but may not deserve quite the weight that they carry (Anderson, Lindsay, & Bushman, 1999). I stand with Mook (1983) in accepting such studies as being, at the very least, demonstrative that the hypothesized results *could occur* outside of laboratory conditions. In a parallel sense, my simulation of Beyer and her colleagues' model of charisma will demonstrate that the hypothesized results *could occur* outside of simulated conditions.

Institutional Models of Organizational Change

Yukl (2002, p. 273) noted, "Leading change is one of the most important and difficult leadership responsibilities. For some theorists, it is the essence of leadership and everything else is secondary." The Trice and Beyer (1986) model of the routinization of charisma is equally a model of the institutionalization of charisma. This leads us to consider institutional models of change, a field of study that intersects with the study of charisma in testing the Trice and Beyer model.

The institutional economists

Thorstein Veblen is commonly associated with the study of Institutional Economics (Heilbroner, 1972; Hodgson, 1994; Oser & Blanchfield, 1975), along with two other great figures, Wesley C. Mitchell and John R. Commons. Yet the "Old" Institutional Economics is somewhat a stepchild of economic thought. Although there is little evidence of direct influence by the Institutional Economists on organizational theorists, there are several aspects of the Institutionalist School that bear on how we think of organizational change today.

Oser and Blanchfield (1975, pp. 362-265) identified eight key ideas of the Institutional School, all of which are of interest to organizational institutionalist theorists. Most of these are appropriate to the model of charismatic leadership developed by Trice and Beyer (1986) and tested by this dissertation. These are:

1. The economy must be studied as a whole, rather than examining small parts as separate entities isolated from the whole.
2. This school emphasized the role of institutions in economic life.
3. The Darwinian, evolutionary approach should be used in economic analysis, because society and its institutions are constantly changing.
4. The institutionalists rejected the prevailing idea of normal equilibrium.
5. Instead of the harmony of interests that most of their contemporaries and predecessors deduced from their theories, the institutionalists recognized serious clashes of interest.
6. The institutionalists espoused liberal, democratic reforms in order to bring about the more equitable distribution of wealth and income.
7. This school favored the inductive rather than the deductive approach.
8. The institutionalists repudiated the pleasure-pain psychology.

Even casual observation of this list provides many areas of overlap between the “Old” (or “early” [Hirsch, 1997, p. 1706]) Institutionalists and organizational Institutional Theory as it has developed. As we will see below, DiMaggio and Powell (1991) were able to contrast these along fourteen dichotomous axes.

Veblen subtitled his first – and ultimately best-known – book, *The Theory of the Leisure Class* (1899/1954), as *An Economic Study of Institutions*, giving notice from the beginning that he would take an institutionalist perspective on the world around him. He emphasized evolutionary processes of change, even capturing the facts of feedback loops and delays (although he did not use those terms):

Institutions are products of the past process, are adapted to past circumstances, and are therefore never in full accord with the requirements of the present At the same time, men's present habits of thought tend to persist indefinitely, except as circumstances enforce a change. (as cited in Oser & Blanchard, 1975, pp. 370-371)

In recognizing these, he was well ahead of his time.

John R. Commons, although also identified as an economist, consciously “sought to integrate the social sciences—ethics, sociology, psychology, political science, history, and jurisprudence—with the study of economics” (Oser & Blanchfield, 1975, p. 383).

While organizational analysis does not appear in this list, each of the items that does appear has influenced organizational analysis.

What aspects of Commons' thought are relevant to Trice and Beyer's (1986) theory of charisma and its routinization? Primarily, this is Commons' emphasis on the transaction. Note that, unlike in Commons' approach, the transaction is not the unit of analysis; the analysis takes place at the system level. However, the role of the individual transaction and the critical role of measuring those transactions accurately and with consistent units of measure (Hodgson, 1994; Williamson, 1994) are essential to the system dynamics methodology.

Glen Atkinson has noticed the parallels between the institutional economics the practice of systems dynamics, recently identifying “some common ground regarding the structure of the economy and the processes of change emanating from that structural order” (Atkinson, 2004, p. 275).

Selznick's model

In the work of Philip Selznick we come to a key representative of the “Old” Institutionalism (DiMaggio & Powell, 1991). In an early paper, Selznick (1948) attempted to identify the “foundations of organizational analysis.” This paper was influential in bringing a systems thinking perspective to organizational analysis and was later collected in Fred Emery’s influential *Systems Thinking* (1969). In his 1948 paper, Selznick identified two analytical standpoints from which we may evaluate organizations: as an economy and as an adaptive social structure. Here, whether consciously or not, he draws from the perspective of the institutional economists, explicitly tying together economics with adaptive social structure. Key from the perspective of the proposed dissertation is the emphasis on adaptation. In 1948, Selznick had already brought into place the need for a temporal view of organizations.

A second foundation that Selznick provides for organizational analysis is cooptation, which he defines as “the process of absorbing new elements into the leadership or policy-determining structures of an organization as a means to averting threats to its stability or existence” (Selznick, 1948, p. 34). This process, while not identified as cooptation by Trice and Beyer (1986), is an integral part of the routinization of charisma into organizations.

Finally, Selznick’s emphasis on how organizations become “infused with value” (Selznick, 1957) (and reemphasized more recently by Ellsworth in 2002) by in the process of becoming value-based institutions is again essential to the processes described by Trice and Beyer (1986). In order for an organization to adopt the gifted leader’s vision and to routinize it in both rules and in rites and ceremonies, this value infusion process must take place.

DiMaggio and Powell's model

We may consider DiMaggio and Powell's (1991) "Introduction" to their *New Institutionalism in Organizational Analysis* as a summary of the essence of the New Institutionalism. Of particular interest is Table 1.1, The Old and New Institutionalisms, in their paper (p. 13), which contrasts the Old (OI) and New Institutionalisms (NI) along fourteen dichotomous axes. Five of these are key for a consideration of institutional change and how it may help explain the changes that take place during the emergence and routinization of charisma in organizations.

First, we consider what the organization is embedded in. From the OI perspective, the organization is embedded in the local community; from the NI, it is in a field, sector, or society. Next is the locus of institutionalization. From the OI perspective, the locus of institutionalization is the organization; from the NI, it is the field or society. Third, are organizational dynamics. From the OI perspective, organization dynamics focuses on change; from the NI, the focus is on persistence. Fourth, is evidence for the critique of utilitarianism. From the OI perspective, this is unanticipated consequences; from the NI, it is unreflective activity. Finally are key forms of cognition. From the OI perspective, these are values, norms, and attitudes. From the NI, they are classifications, routines, scripts, and schema.

From the perspectives of Trice and Beyer's (1986) theory and of the system dynamics methodology employed herein, we find somewhat of a split between the OI and the NI. Of the five axes above, we agree with the NI on axis one, with the OI on axes

two, three, and four, and with both on axis five, indicating a melding of both Old and New Institutional perspectives.

DiMaggio and Powell (1991, p. 27) “suspect that something has been lost in the shift from the old to the new intuitionism” and frankly admit that one of their goals is to better address the issue of institutional change. This dissertation will do just that.

Scott’s model

W. Richard Scott’s *Institutions and Organizations* (2001) provides another way to think of institutional explanations for organizational change and includes an entire chapter on institutional change. Scott readily admits (p. 181) that “change poses a problem for institutional theorists, most of whom view institutions as the source of stability and order” – not change.

Scott begins his analysis of institutional change with a consideration of processes of deinstitutionalization as developed by Oliver (1992). In particular, he agrees with her that there are three generic types of pressures that lead to deinstitutionalization. These are: functional, political, and social. Functional pressures relate to performance problems in an organization. Political pressures result from “shifts in interests” (p. 183) in power relationships. Social pressures result from changes in groups and in individual beliefs.

From this beginning with deinstitutionalization, Scott moves to a model (p. 195) of multiple levels of processes of institutional creation and diffusion, i.e., change. His emphasis on multiple levels of analysis – i.e., individuals, organizations, fields, and societal institutions is fundamental. He concludes the “seeds of change are lodged both

within and outside of institutions” (p. 203) and by restating the need to study change at multiple levels.

The systems thinking perspective will allow consideration of multiple levels of analysis, from the system level down. Finally, Scott rightly recognizes that change is at least partly endogenous. So too does any approach to systems thinking or system dynamics modeling (Senge, 1990; Senge, Kleiner, Roberts, Ross, Roth, & Smith, 1999).

Others have recognized this, writing that:

Senge’s “disciplines” of mental models and personal mastery are based on individual learning models whereas his discipline of shared vision is a group level phenomenon that is based on cognitive assumptions. The discipline of team learning is clearly group focused and based on sociocultural assumptions while systems thinking can be applied at all levels of analysis as it shares assumptions across the psychological spectrum. (DeFillippi and Ornstein, 2003, p. 33)

Greenwood and Hinings’ model

Greenwood and Hinings (1996) and Greenwood, Suddaby, and Hinings (2002) have explicitly attempted to reconcile the old and new institutionalisms in organizational analysis.

Their distinction between radical and convergent change (“Convergent change occurs within the parameters of an existing archetypal template. Radical change, in contrast, occurs when an organization moves from one template-in-use to another.” [Greenwood and Hinings, 1996, p. 1026]) parallels Trice and Beyer’s enumerated requirement for radical change in the emergence of charisma. Research consortia (Aldrich, Bolton, Baker, & Sasaki, 1998), such as SEMATECH, “represent a formalized vehicle for directed variation in the form of deliberate experimentation” (Miner & Robinson, 1994, p. 353) at the field level.

Scott (1987, p. 493) wrote that “the beginning of wisdom in approaching institutional theory is to recognize that there is not one but several variants.” The review of various theories and models of institutional change given here can only support this assertion. It can, in fact, add yet another variant to the list. No single theory of institutional change supports the emergence of charisma and its routinization in organizations as described by Trice and Beyer (1986) and by Beyer and Browning (1999). A new review, selecting those aspects of the major variants that support Beyer and her cohorts, indicates that theories of institutional change are far from settled.

Shortfalls in Previous Studies

Bryman’s critique

Leadership theorist Alan Bryman famously challenged the overall positive view of charisma and of transformational leadership in his *Charisma and Leadership in Organizations* (1992) and elsewhere (Bryman, 1996). In his work he identified recent studies of charisma and transformational leadership as “New Leadership” theories, a designation that appears to have lasted among leadership theorists.

What are the major areas of concern for Bryman in evaluating the New Leadership theories? First is his concern about vision, “a central theme in the approaches associated with the New Leadership” (Bryman, 1992, p. 149). Bryman asks (p. 149), “Is vision good for organizations?” Most of the New Leadership theories would seem to answer the question in the affirmative, and the implicit answer in Trice and Beyer’s (1986) theory is also affirmative. Yet Bryman reminds his readers of instances in which

charismatic leaders have produced visions that turned out to be not so good for their organizations.

Second, Bryman (153, p. 155) wonders, “What about the team?,” raises “problems with an emphasis on top executives,” and challenges us to wonder if the gifted leader really was so responsible for organizational success. Going *way* back in organizational history, even Moses (Genesis 18) found that a division of labor was necessary for his success. Surely those to whom much labor was divided deserve to be credited with some of the success. The system dynamics model will allow us to address the impact of followers on charisma and its routinization by conducting “what if” analysis.

Third, Bryman raised the issue of lack of situational analysis. Bass (1990) rightly credits the work of Fiedler (1967) in raising the awareness of leadership theorists to the importance of the situation (or contingency) in leadership studies. Has situational analysis “fallen by the wayside” in the enthusiastic study of New Leadership theories? Bryman seems to think so. The system dynamics model will allow us to address the influence of the overall situation by evaluating both charisma and its routinization from a systems thinking perspective.

Finally, Bryman addresses (p. 161) the risk of “change for change’s sake” in adopting the New Leadership perspectives. Unstated, but potentially “out there” is the idea that “change is good” – regardless of its implications for the organization in any particular situation. The proposed system dynamics model can – and will – address the issue of change explicitly in response to defined organizational crisis, avoiding this possible pitfall.

Yukl's critique

Yukl (2002, p. 253) identified four practical implications for organizations that, while not exactly critical of the concept of charisma, do raise issues of concern about how charisma may function in organizations.

“Charismatic leadership is risky.” Yukl (2002, p. 253) rightly notes that we cannot predict the effects that charismatic leadership may have in an organization. Power can be misused; the charismatic can be immoral. Followers can do bad things, in the name of the leader, that they would never do on their own. Second, the radical change in the organization that is inherent in charismatic leadership may not be appropriate to any given organizational situation.

Third, charisma is not easy to manipulate. Can we really train people to be charismatic? Many would argue that we can; but the issue is not resolved. “Finally, most of the descriptive research suggests that a charismatic leader is not necessary to achieve major changes in an organization” (Yukl, p. 253). If we do not need it, why are we seeking it, given its risks?

Yukl further identified several biases in the conceptualization of leadership as a whole that are specifically applicable to studies of charisma (p. 431). These are: “(1) the importance of ‘heroic’ individuals versus shared leadership, (2) the importance of dyadic versus collective process, and (3) the importance of identifying essential traits and behaviors versus specification of explanatory processes.” The system dynamics model will allow us to address each of these issues in the model of charisma as conceptualized

by Trice and Beyer (1986) and exemplified in the “intensive case study” (Yukl, 2002, p. 258) of SEMATECH (Beyer & Browning, 1999).

Yukl also identified several controversies about research methods in the study of leadership that are specifically applicable to studies of charisma (pp. 435-438). “Major issues include: (1) the utility of quantitative, hypothesis-testing methods versus descriptive, qualitative methods, (2) the utility of survey versus experimental studies, and (3) the appropriate level of analyses for quantitative data.” In addition, he identifies as minor issues (1) problems with convenience samples, (2) lack of consideration of temporality, and (3) a bias toward easy methods.

In this instance, I cannot claim that the system dynamics methodology will deal effectively with each controversy. However, it can deal with some of them, sometimes by addressing the controversy from a non-traditional perspective. For example, the methodology is neither one of traditional hypothesis testing nor one of qualitative study (Miles & Huberman, 1994). It is not quite right to say that the methodology “splits the difference,” but that concept comes close.

Similarly, the proposed methodology is not one of survey versus experiment. Simulation can be a “third way” or, in the memorable phrase of Hulin and Ilgen (2000), “the third scientific discipline” and of Thomas Ostrom (1988), “the third symbol system,” used to “illuminate general properties of systems” (Mihata, 1997, p. 35). Likewise, the system level of analysis allows the simulation to take into account delays and feedback loops and the fact that, even in a simulated organization, the whole is greater than the sum of its parts.

Among the minor methodological weaknesses Yukl identified, the proposed simulation *does not* involve a convenience sample (one in which “no special screening criteria are set up by the researchers to make certain that the individuals in the sample possess certain characteristics” [Huck, 2000, p. 124]) and *does* explicitly take into account temporality. I also believe that the unbiased observer will ultimately conclude that the system dynamics methodology cannot fairly be accused of being an easy method

Development of System Dynamics

System dynamicist George P. Richardson (1991, p. 94) identified Rosenbluth, Wiener, & Bigelow’s (1943) “Behavior, Purpose, and Teleology” as the “first published article linking human systems with the engineer’s concept of feedback.” Richardson described how the engineering concept of feedback entered the social sciences during the years 1943 to 1953, although as late as 1968, R. P. Abelson found system dynamics methods “not relevant” (p. 279) to the simulation of social behavior.

In particular, Richardson’s history of the emergence of the feedback concept in his aptly titled *Feedback Thought in Social Science and Systems Theory* identified “two feedback threads” (1991, pp. 92-168) which he called the servomechanisms thread and the cybernetics thread. Major fields contributing to the former were biology-math models, econometrics, engineering, and social sciences. Major fields of study contributing to the later were engineering, social sciences, biology-homeostasis, and logic.

Key authors contributing to the cybernetics thread of feedback included Ashby (1956), Boulding (1956), Miller (1978), von Bertalanffy (1968), and Wiener (1948).

According to Richardson (1991, p. 128), these authors limited their use of the concept of feedback to negative feedback loops, addressed mostly theoretical and philosophical issues about control, tended to make verbal analyses rather than to model feedback processes, and were associated with the ideas of feedback in communication.

Major authors contributing to the servomechanism thread, which “had its beginnings in the use of electrical, mechanical, and fluid devices to simulate economic dynamics”: (Richardson, 1991, p. 129), were Allen (1955, 1956), Forrester (1961), Goodwin (1951), Phillips (1954), Simon (1952), and Tustin (1953). According to Richardson (1991, p. 159-160), these authors “focused on the role of feedback in creating the patterns of movement in dynamic systems,” employed formal models, included consideration of positive feedback loops, and directed their work toward policy analysis issues. The system dynamics methodology employed here is a part of this servomechanism thread of feedback in the social sciences (Forrester, 1993).

Summary

In this chapter I provided a literature review of some major models of charisma, a literature review of some institutional models of organizational change, a summary of some shortfalls of previous studies of charismatic leadership, and a brief look at the development of the field of system dynamics. The review of charisma concentrated on charismatic theories that are intellectual descendents of Weber’s (1922) original work.

New institutional theories of organizations are much better known for their explanation of the lack of change than they are for describing change. I touched on this prior to going on to address models of organizational change. Shortcomings in some

previous studies helped motivate this dissertation. I addressed some of these shortcomings as an explanation of why the present study is needed and warranted.

Finally, I considered the development of system dynamics as a field of study and as a methodology for understanding problems. In the following chapter, I develop testable hypotheses.

CHAPTER III

HYPOTHESES

Content of Charisma

Use of the system dynamics methodology calls for a different perspective on hypotheses from that ordinarily considered when using the regression methodology. Assumptions about the development and routinization of charisma are “built in” to the structure of the model based on the theory and case study being evaluated. However, as Vennix (1996, p. 36) noted, “Frequently a problem formulation contains one or more hidden assumptions which will not hold under scrutiny.” The development of a system dynamics model is a helpful way to surface these assumptions, and what were “tacit causal assumptions” become testable hypotheses in the course of evaluating the model as developed.

For example, Beyer and Browning (1999, p. 486) state “charismatic leadership involves more than a set of extraordinary characteristics of a person—it involves a social process that is the *product* of the complex interactions of all of these elements” (emphasis added). Mathematically, the word “product” implies a multiplicative structure. That is, when we combine these five variables in a model, we must multiply them together.

However, elsewhere, Trice and Beyer (1986, p. 132) appear to state the opposite, when they write, “we see charisma as a continuous variable with various levels of the five components we have delineated *summing up* to more or less charisma. We reject, moreover, the idea that any one or two of these components—even when present to an exceptional degree—are sufficient to constitute charisma” (emphasis added). If we are

adding them together, we have the possibility that charisma could exist when one or more of them do not exist (i.e., have a zero value).

In short, the written description of theory seems to try to have it both ways. Consequently the question arises: Is charisma the sum or the product of its components? Trice and Beyer (1986, p. 132) also state “our definition also was intended as a listing of conditions necessary for charisma to emerge and endure. However, we do not believe that all of the components of charisma must be present to a high degree in order for charisma to occur—only that they must be present to some minimal degree that has not yet been determined.” I see this as an emphasis on multiplication of the components. This leads to: *Hypothesis 1: Charisma accumulates the product of crisis, solution, followers, successes, and leader.*

While not a part of Trice and Beyer’s (1986) theory, this hypothesis is consistent with theory later developed by Klein and House (1998), in which they characterized charisma as a relationship between a leader who possesses charismatic qualities and followers who respond to those qualities. In particular, they state:

Charisma is a fire, a fire that ignites followers’ energy and commitment, producing results above and beyond the call of duty. Charisma is the product of three elements: (1) a spark—a leader who has charismatic qualities, (2) flammable material—followers who are open or susceptible to charisma, and (3) oxygen—an environment conducive to charisma. Charisma is not the spark. It is not the flammable material. And it is not the oxygen. Charisma is the product of their union. (pp. 3-4)

This explicit claim that charisma is a product of other elements is consistent with hypothesis 1. But it involves fewer—and different—enumerated variables. Both Klein and House (1998) and Trice and Beyer (1986) include the leader, followers, and the crisis (environment, in Klein and House’s terminology) as enumerated elements of charisma.

But Trice and Beyer also include the leader's solution (vision) and eventual successes, a more restrictive understanding of charisma as a relationship.

Vision / Solution

The model should allow us to evaluate a second possible inconsistency in the written theory. In discussing the relationship of leader and followers, Trice and Beyer (1986, p. 140) write "their personal characteristics must attract followers, arouse in them excitement, awe, and reverence, and generate in them the willingness to break with traditional/rational norms to follow their radical mission."

But Beyer and Browning (1999, p. 514) write "followers were not attracted to Noyce's leadership and vision because of some personal tendencies or their magnetizability but because of their perceptions of crisis and their acceptance of his vision as a possible way of dealing with the crisis." The former indicates followers are attracted to the leader. The latter finds followers attracted to the leader's vision. It is not clear to me from reading Trice and Beyer (1986) and Beyer and Browning which view might be most representative. Therefore, since the later is the more recent exposition of Beyer and her colleagues' theory, I take it that it more accurately represents the intent of the theory. Thus:

Hypothesis 2: Followers are attracted to the leader's vision, not to the leader.

Successes

Other descriptions of dynamic behavior support other hypotheses without conflicting with written description as detailed in Table 5.3, Summary of Textual Coding Categories.

One element of the routinization of charisma is the requirement for personal and organizational successes, i.e., “the validation of that person’s extraordinary gifts and transcendence by repeated success” (Trice & Beyer, 1986, p. 119). Senge (1998, p. 178) recognized “the capability of great leaders to focus attention on a small number of critical success factors.” In the case of SEMATECH, “it achieved its phase 1 goal of making chips with .80 micron etched lines in March of 1989, its phase 2 goal of .50 micron lines in October of 1989, and its phase 3 goal of .35 micron lines in December of 1992” (Beyer & Browning, 1999, p. 505).

Hypothesis 3: The routinization of charisma requires that the organization’s initial major goals have been met.

Crisis

Another element of the routinization of charisma is a crisis, i.e., “a social crisis or situation of desperation” (Trice & Beyer, 1986, p. 118). In the case of SEMATECH,

By 1989, when the turnaround of the U.S., industry first began to show effects on sales, the Japanese had 51% of the market and the U.S. had 37%. Thereafter the U.S. share of the market began to increase so that by 1992 the U.S., share exceeded the Japanese slightly. Only four years after SEMATECH was founded, the U.S. industry had rebounded and again exceeded the Japanese in global market share. By 1994 the U.S. share was 48% compared to Japan’s 36%. (Beyer & Browning, 1999, p.485)

This compares to Kotler and Heskett's observation that successful change leaders, if not already facing a crisis, began their jobs "by trying to create an atmosphere of perceived 'crisis'" (1992, p. 94).

Thus:

Hypothesis 4: The routinization of charisma requires a crisis.

Solution

Another element of the routinization of charisma is the solution, i.e., "a set of ideas providing a radical solution to the crisis" (Trice & Beyer, 1986, p. 118). In the case of SEMATECH:

Noyce's charismatic vision was validated in two ways before his death. First of all, member companies learned to cooperate constructively to solve technical problems by sharing information and expertise. Second, SEMATECH realized two steps toward its technical goal of reducing the size of the etched lines on chips and improving the equipment used to manufacture them. After his death, the ultimate goal of the consortium was also achieved when the U.S. industry recaptured market share it had lost to the Japanese. (Beyer & Browning, 1999, pp. 514-515)

Thus:

Hypothesis 5: The routinization of charisma requires that the solution be implemented successfully.

Followers

Still another element of the routinization of charisma is the existence of followers, i.e., "a set of followers who are attracted to the exceptional person and come to believe that he or she is directly linked to transcendent powers" (Trice & Beyer, 1986, pp. 118-119). While individual membership in the group of followers may change due to conflict

from a variety of sources (Washington, 2004), an identifiably particular group must remain, reflecting sufficient membership continuity (Arrow & McGrath, 1995). Thus:

Hypothesis 6: The routinization of charisma requires that followers remain after the leader departs.

Successor

The routinization of charisma requires “the selection of a successor who resembles the charismatic sufficiently to be like a ‘reincarnation’” (Trice & Beyer, 1986, p. 134). Similarly, Trice and Beyer state a requirement that unless “the successor chosen is tied firmly into the charisma, the organization is unlikely to retain a clear direction consonant with the charismatic mission” (p. 159).

Hypothesis 7: The routinization of charisma requires a successor similar to the leader.

Testing

I test these hypotheses by modeling them using the system dynamics (Forrester, 1961; Sterman, 2000) methodology. The model has been revised repeatedly until the variables reproduce the behavior that the case study predicts. Then the variables are modified as suggested by the hypotheses to determine how they impact the model. Simulation allows us to change the values of the variables and their relationships to one another repeatedly to learn some of what the case study does not tell us and to learn “real world” aspects a laboratory study could not reproduce. Similarly, the costs, delays, and general difficulties of repeated surveys over time are avoided by simulation.

Other benefits of testing by modeling and simulating using a model include the fact that thinking through the process of modeling forces the researcher to think more specifically about the theory being modeled. In short, one must be more rigorous in approaching the theory. Codifying theory into a dynamic model allows for hands on “What if?” analysis and experiments, and it generates a model that can, in theory, be made even more robust through optimization and sensitivity analysis. Like Newton’s laws, the model attempts to describe reality.

Structures

Typically, variables such as Charisma, Administrative Apparatus, etc. do not grow without bound. There are almost always practical limits to available resources that at first allow rapid growth but later result in slowing, and ultimately limited, growth over time. This produces the characteristic S-shaped (or logistic or sigmoid) growth (Goodman, 1974) familiar (Wolstenholme, 2004) to modelers, organization theorists, and marketers. S-shaped growth is produced by an interaction of two of the three fundamental modes of system behavior, exponential growth and goal seeking (Sterman, 2000, pp. 118-121). Exponential growth is caused by positive feedback, and goal seeking is caused by negative feedback. S-shaped growth results in systems that are dominated first by positive feedback, and then, when resources become relatively limited, by negative feedback.

All ten state variables in this model are modeled to produce S-shaped growth, a recognition that these variables do not – and did not in the case study – grow without limits. While this is an assumption, it does match semiconductor industry experience for

basic technology and for manufacturing capability, both of which are known to exist on an S-shaped growth cycle (Spencer, 1994). The basic structure of the variable Followers, in particular, follows a modified (Sterman, 2000, pp. 342-343) Bass (1969) model of growth.

Figure 3.3, Generic S-Shaped Growth, is a generic model of S-shaped growth. In this generic model, there exists a stock variable *Quantity*, which grows at some varying *quantity growth rate* and declines at some varying *quantity decline rate*. The *quantity growth rate* is the product of the *quantity capacity* times a *quantity growth fraction* times the *Quantity*. The *quantity capacity* is limited by a *quantity max*, in recognition that *Quantity* cannot grow without bound.

Likewise, the *quantity decline rate*, which depletes the variable *Quantity*, is the product of the *Quantity* and a *quantity decline fraction*. A *quantity ratio*, normalized by a *quantity norm*, creates a dimensionless number that allows this generic *Quantity* to be multiplied by other ratios for other variables without violating dimensional consistency in the model.

The detail involved in the model does not allow the entire model to be viewed in full on a single page. Figures 4.1 through 4.10 provide detailed views of each of the ten sectors (Burns, J.R. & Ulgen, 1978) of the model. Figure 3.1, Sector View of the Model of the Routinization of Charisma provides an overview of the entire model, with “boxes” representing each of the ten sectors of the model and the relationships between them. Figure 3.2, Sector View of the Model of the Routinization of Charisma with Leader and Successor provides a similar overview and includes the variables Leader and Successor. This allows one to view each of the twelve variables (e.g., Charisma, Crisis, Solution,

Followers, Successes, leader, Administrative Apparatus, Rites & Ceremonies, Traditions, continuity, Routinization, and Successor) addressed by theory (Trice & Beyer, 1986) and their top level relationships at once.

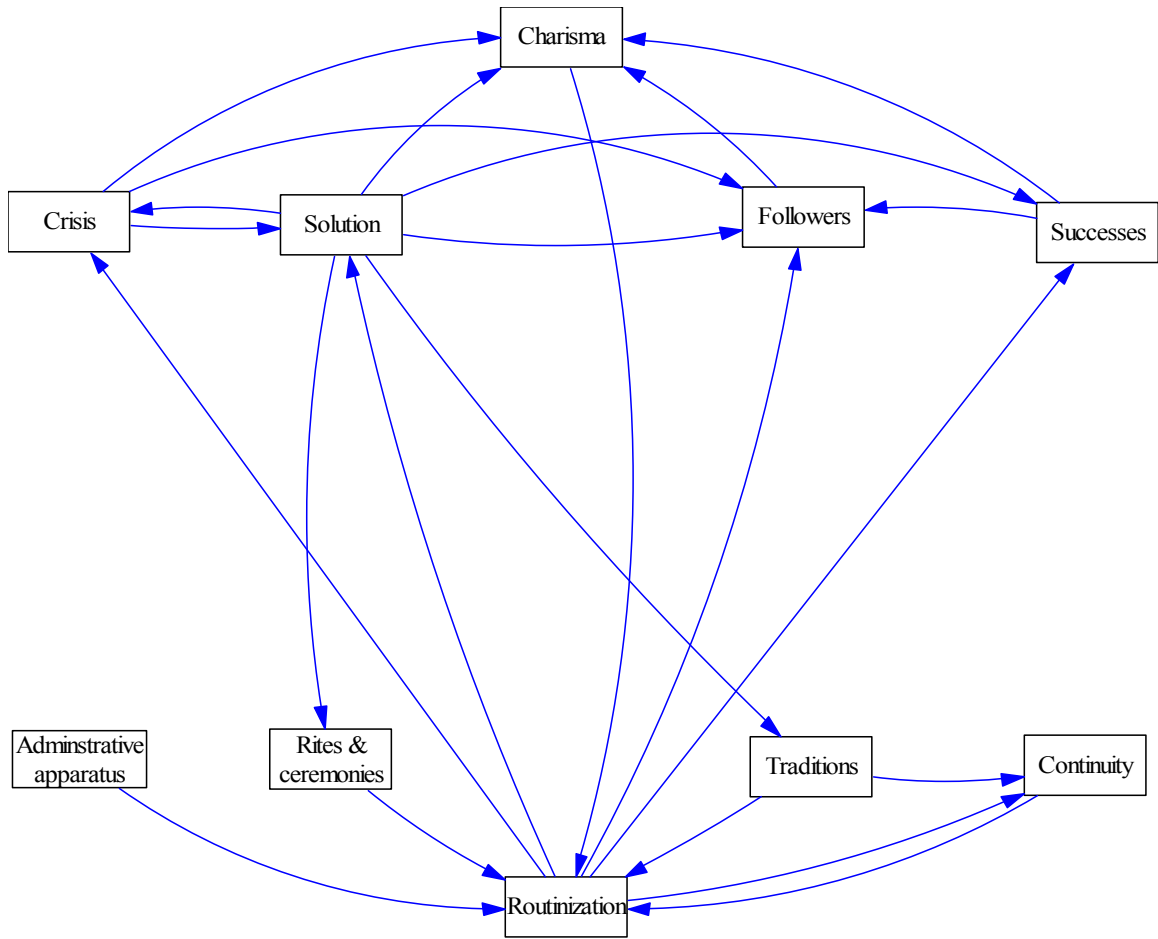


Figure 3.1. Sector View of the Model of the Routinization of Charisma

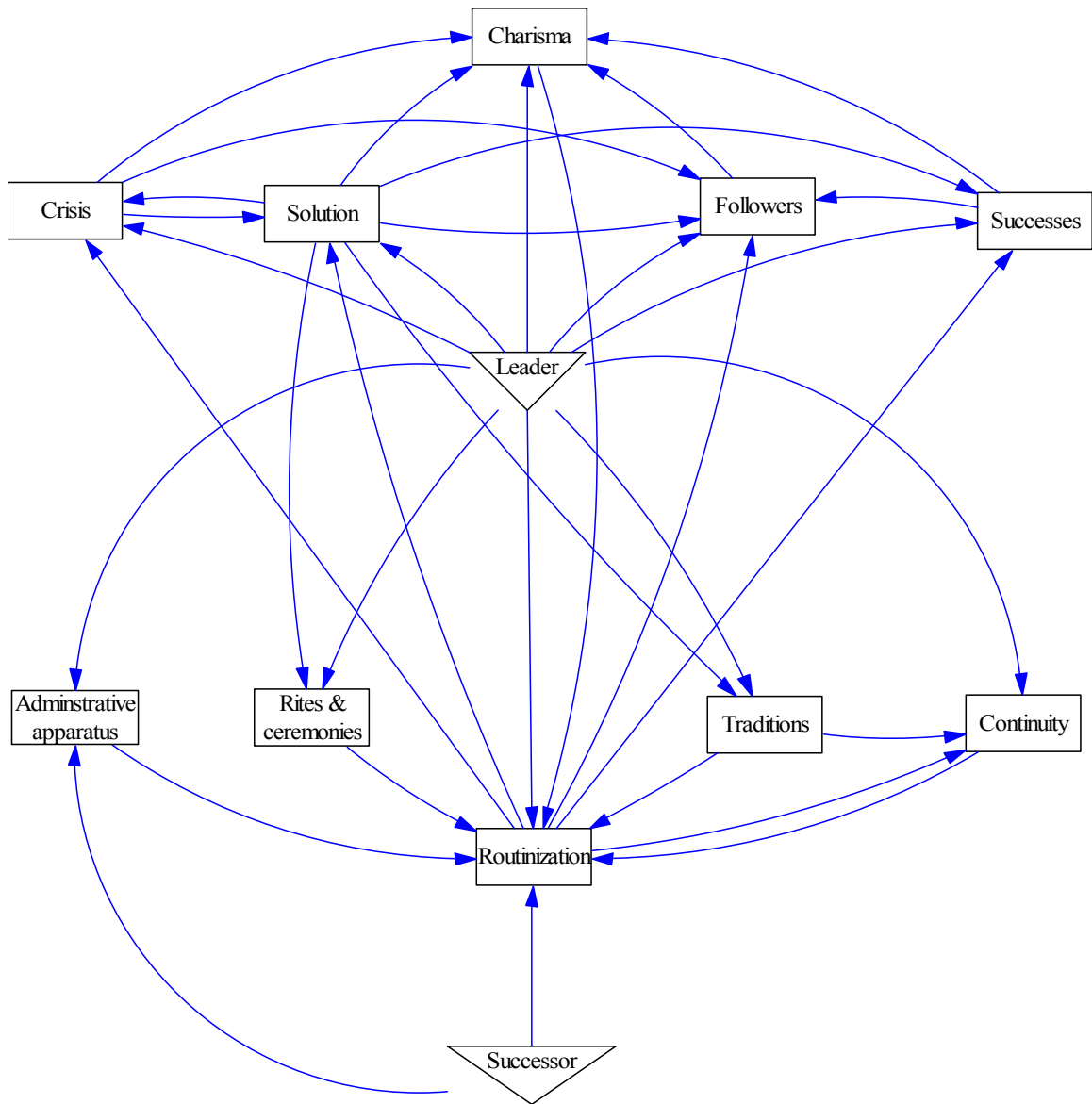


Figure 3.2. Sector View of the Model of the Routinization of Charisma with Leader and Successor

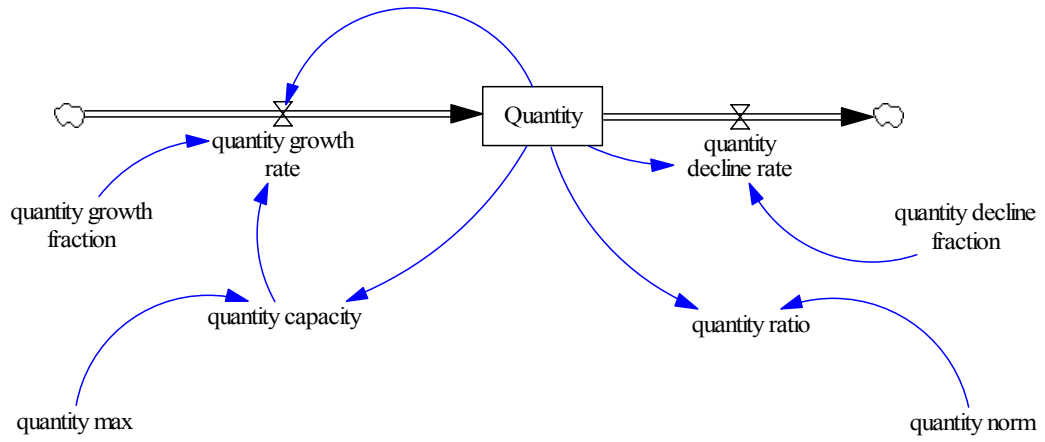


Figure 3.3: Generic S-Shaped Growth

CHAPTER IV

PROCEDURES AND METHODOLOGY

Why do we model using computer simulation? “Simulation speeds and strengthens the learning feedbacks” (Sterman, 2000, p. 37). We use computer simulations to learn about the real world. According to Sterman (p. 34), the real world is of unknown structure, is dynamically complex, contains time delays, and cannot be studied using controlled experiments. Construction of a virtual world (pp. 33-39) provides several benefits. Compared to even attempting to experiment on the real world, simulations or virtual worlds are relatively low cost. They “provide high-quality outcome feedback” (p. 35), and they allow us to compress into very little time evaluation of decisions and actions that might otherwise take months or years. Simulations allow us to test complex mental models (Senge, 1990) in ways that they cannot otherwise be tested.

I have chosen the system dynamics (Forrester, 1961; Sterman, 2000) methodology to address the research question, and I have followed an approach to the study of sociological theory demonstrated by Sastry (1995, 1997). Her work provided a roadmap for mine.

Jacobsen and House (2001) applied this methodology to study the dynamics of charismatic leadership. A dynamic model can capture changes over time, providing a good tool for analyzing organizational changes. The model proposed in this dissertation will be a reflective⁴ model, designed to “uncover flaws and hidden assumptions,

⁴ The term “reflective” is used in measurement models “because the measures are viewed as ‘reflections of’ or ‘effects of’ the underlying construct” (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003, p. 617). This usage may be familiar to most readers. Within the system dynamics methodology, the term “reflective” is used in opposition to the term

challenge preconceptions, and expose assumptions for critique and improvement” (Sterman, 2000, p. 858). *Step one* in the analysis is to identify the constructs and their relationships as they appear and are developed in Beyer and her cohorts’ two articles. This step will require detailed reading and coding to develop definitions of variables, explanations of the structural relationships in their model, and descriptions of how those relationships behave over time. Of particular importance is to determine which variables are state variables and are thus essential to modeling the theory. *Step two* is to relate the variables to each other using a causal loop diagram, *e.g.*, to capture the implied causality of their model. *Step three* is to specify “the model to capture the elements of the original theory accurately” (Sastry, 1997, p. 246). This specification will result in a model divided into sectors that represent each of the state variables in the form of a stock and flow diagram, complete with parameter values for constants and initial conditions for state variables. *Step four* is to simulate the model. This will require the use of all twelve of the tests for assessment of dynamic models (Sterman, pp. 859-890).

The model, at this stage, will include stock and flow variables representing each stock and flow in the Trice and Beyer (1986) model. It will produce behavior-over-time for Charisma and for Institutionalized charisma that matches that predicted by the theory. It will be dimensionally consistent and error-free in the sense that it “passes” both a “Units Check” and a “Model Check” when using the Vensim® PLE Plus simulation software (Burns, J.R., 2000; Ventana Systems, 2002). It will use standard notation and

“protective”. A protective model would be used by the modeler to prove a point, to hide assumptions, to promote the modeler’s authority, etc. A reflective model would be used to promote inquiry, expose assumptions, challenge preconceptions, etc. See Isaacs and Senge (1992, pp. 190-191) and Sterman (2000, p. 858) for discussion. The use of the term reflective in this dissertation is consistent with its use in the system dynamics tradition.

will allow parameters to be entered “directly”, without having to make changes by changing formulas for individual variables.

Readers unfamiliar with the system dynamics perspective on stocks and flows may remember the bathtub metaphor used by Diericks and Cool:

The fundamental distinction between stocks and flows may be illustrated by the “bathtub” metaphor; at any moment in time, the stock of water is indicated by the level of water in the tub; it is the cumulative result of flows of water into the tub (through the tap) and out of it (through a leak.)

A crucial point illustrated by the bathtub metaphor is that *while flows can be adjusted instantaneously, stocks cannot.* (1989, p. 1506. Italics in original.)

Even system dynamics modeling guru John Sterman (2001, p. 14) took note of this comparison.

Identifying Constructs

Obviously, Trice and Beyer (1986) and Beyer and Browning (1999) did not develop their theories with the intent that they be tested using the system dynamics methodology. The constructs that they developed were described verbally, not mathematically or symbolically. This verbal description requires close reading on the part of the analyst to identify and to classify the variables that are necessary to simulate the theory successfully. The five elements of the emergence of charisma and the five elements of the routinization of charisma form the basis for identifying the necessary variables, and they form the structure of the causal loop diagram used to describe the model.

As mentioned previously, these twelve variables (i.e., the five elements of charisma, the five elements of routinization, charisma itself, and routinization itself) are identified as Leader, Crisis, Solution, Followers, Successes, Administrative Apparatus,

Rites & Ceremonies, Traditions, Continuity, Successor, Charisma, and Routinization. I have modeled all but Leader and Successor as state variables. (Those two are not modeled as state variables since they do not involve flows). Thus the model contains ten sectors (J.R. Burns & Ulgen, 1978), each of which is developed in individual views using the Vensim® PLE Plus 32 Version 5.0c1 software available from Ventana Systems (2002).

Given that the model addresses the behavior of the twelve variables over time, the appropriate time horizon deserves consideration. According to Sterman (2000, p. 90), the “time horizon should extend far enough back in history to show how the problem emerged and describe its symptoms. It should extend far enough into the future to capture the delayed and indirect effects of potential policies.” Following Browning and Shetler who provided a 24 year chronology (2000, pp. 234-237), I have modeled the years 1971 (founding of the Semiconductor Equipment and Materials Institute) through 1994 (SEMATECH announces it will cease dependence on federal assistance). Thus, January 1971 is represented as Month 1, and December 1994 is represented as Month 288. Because most of this time is taken up by the growth and recognition of the crisis (See Figure 6.2a, Five Elements of Charisma Baseline), most of the figures show only the period August 1986 (Month 200—just prior to the formation of an industry steering committee in recognition of the crisis) through December 1994 (Month 288).

Representing the Causal Structure of the Theory

J.R. Burns and Marcy (1979, p. 387) began their analysis of the characterization of causality in system dynamics models with the recognition that “causality and its

perception is fundamental to human understanding of processes and systems.” Indeed, the second step in model development and in data analysis is to relate the variables identified in the first step to each other using a causal loop diagram (Sterman, 2000). The causal loop diagram captures the implied causality of the model in graphic form.

Guidelines for Formalizing the Model

The third step in analysis is to specify the model. This is given graphically in the form of a stock and flow diagram (Sterman, 2000), complete with parameter values for constants and initial conditions for state variables. These are given in Appendix A, Program Steps.

Sources of Data

Data for evaluating the model structure will be drawn from Beyer and Browning’s (1999) case study of SEMATECH, from Browning and Shetler’s (2000) book-length study of SEMATECH, and from study by the Congressional Budget Office (1987) of the benefits and risks of federal funding for the SEMATECH organization. See also Browning and Beyer (1998), Browning, Beyer, and Shetler (1995), Irwin and Klenow (1996), Spencer and Grindley (1993), U.S. General Accounting Office (1991b), and U.S. Congress (1993).

Unique Benefits of the Methodology

The system dynamics methodology (Sterman, 2000) provides the opportunity to model social systems while including temporality, feedback loops, and delays. The

importance of time in social scientific studies has a long and important history. The authorities cited in the literature review have called for such studies; simulations (Hulen & Ilgen, 2000) are one way to accomplish them. Including feedback loops in models helps identify causal structure. They are an integral part of the archetypes (Senge, 1990) of many social structures. Delays are evident when we begin to consider time as we should.

Another key benefit of the methodology is the ability to perform “what if” analysis. After the model is developed more fully and can successfully reproduce historical data, a number of “what if” questions can be considered. Observation of behavior-over-time charts (Kim, 1995) when other variables are varied gives us the opportunity to examine how the system would behave in both likely and in extreme conditions. The performance of “what if” analysis, commonly known in the system dynamics community as “policy design” (Sterman, 2000, pp. 103-4), is a standard technique for learning from models and should not be confused with the illegitimate practice of HARKing, i.e., hypothesizing after the results are known (Kerr, 1998), a practice that betrays the scientific spirit by presenting as theoretically developed hypotheses that were in fact created after observing experimental results.

Empirical Case Studies in Leadership Research

Trice and Beyer (1986, p. 116) identified empirical case studies dealing with charisma which were published as far back as 1941. These were produced by a variety of authors in a variety of fields, with a variety of foci, in a variety of settings, and over extended periods of time. Table 4.1, Empirical Studies Dealing with Charisma,

summarizes key sources that Trice and Beyer used as background for their previously cited study of charisma in the founder of Alcoholics Anonymous and in the founder of the National Council on Alcoholism and of the routinization of that charisma in the Alcoholics Anonymous organization.

The publication of empirical case studies of charisma has continued since Trice and Beyer's (1986) summary. Roberts (1985) and Roberts and Bradley (1988) focused on a longitudinal study of a district school superintendent who became a state commissioner of education in the 1980s. Wesley and Mintzberg (1988, 1989) worked to develop a typology of strategic styles and to demonstrate the varieties of leadership style in studies of inventor Edwin Land, entrepreneur Stephen Jobs, politician Rene Levesque, and executive managers Lee Iacocca and Jan Carlzon. Frank J. Weed (1993) addressed charismatic leadership in a reform movement with a study of Candy Lightner, founder of Mothers Against Drunk Driving (MADD). This list, while not exhaustive, indicates something of the breadth of empirical case studies of charisma that have appeared.

In short, the literature has provided many an empirical case study of charisma. But none of these listed has attempted to model charisma. This dissertation does so, and it will provide a template for future models of charisma that may be used to evaluate the various case studies.

Focus

A point of clarification may be in order. The use of the system dynamics methodology, however, unusual in the study of leadership (Jacobsen & House, 2001), should not overwhelm an emphasis on leadership itself. As used in this dissertation, the methodology is and remains a tool for investigating the phenomenon of charisma and its

routinization in organizations. The focus, mission, vision, nay, even the “big hairy audacious goal” (Collins & Porras, 1994, p. 9; Thompson & Strickland, 2000, p. 49) of this dissertation is to develop and extend leadership theory.

Table 4.1. Empirical Studies Dealing with Charisma

<i>Author</i>	<i>Focus</i>	<i>Setting</i>	<i>Approximate Time Period</i>
# Apter (1965)	Emergence of Nkrumah as political leader and the failure of his charisma to become routinized	Late colonial and post colonial Ghana	1945-1968
Constas (1961)	Emergence of Lenin as political leader and routinization of his charisma	Bolshevik Revolution in Russia	1910s-1930s
Friedland (1964)	Founding of labor unions and supporting social context	* Labor unions in Tanganyika	Late 1950s-1960s
F.C. Miller (1966)	Problems of succession and routinization of charismatic leadership	Chippewa Indian tribe in Minnesota	1900-1950
Kanter (1968)	Commitment of members to utopian communities	* 30 utopian communities in U.S.	1780s-1960s
Clark (1972)	Radical change and its institutionalization	* Three U.S. colleges	Early 1900s-1970s
Geertz (1977)	Central location of charisma in social order	Royalty in England, Java, and Morocco	1200s-1890s
Salaman (1977)	Case study of problems inherent in moving from personal, charismatic authority to organizational leadership during planned change	* Medium-size manufacturing company in English Midlands	1960s-1970s
Yukl & Van Fleet (1982)	Elective patterns of leadership (including inspirational leadership)	* U.S. Air force units in combat and noncombat situations	1950s-1970s

Table 4.1. Continued

<i>Author</i>	<i>Focus</i>	<i>Setting</i>	<i>Approximate Time Period</i>
Schwartz (1983)	Heroic, but uncharismatic, leadership of George Washington	Emergence of U.S. Revolutionary Army and federal government	Colonial period, 1774-1803
# Roberts (1985); Roberts & Bradley (1988)	Longitudinal study of charismatic leader	District school superintendent; state commissioner of education	1980s
# Wesley & Mintzberg (1988)	Development of a typology of strategic styles	Emergence of the Parti Quebecois in Quebec; Technical imagination	1940s-1980s
# Wesley & Mintzberg (1988)	Varieties of leadership style	Products, markets, ideals, organizations, service	1940s-1980s
# Weed (1993)	Charismatic leadership in a reform movement	Non-profit organization	1980s-early 1990s

Source: Trice & Beyer, 1986, pp. 116-117, with additions

* Organizational settings, broadly defined

Representative studies not considered by or published since Trice and Beyer's

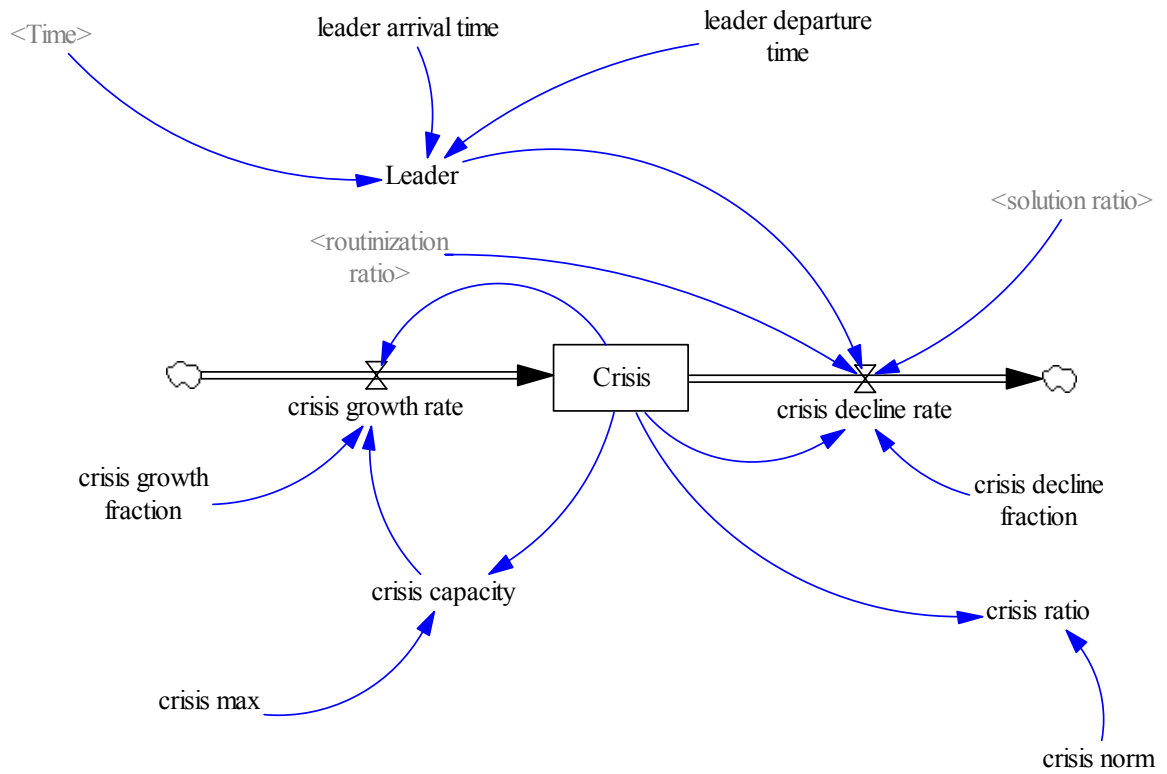


Figure 4.1. Crisis Stock and Flow Diagram

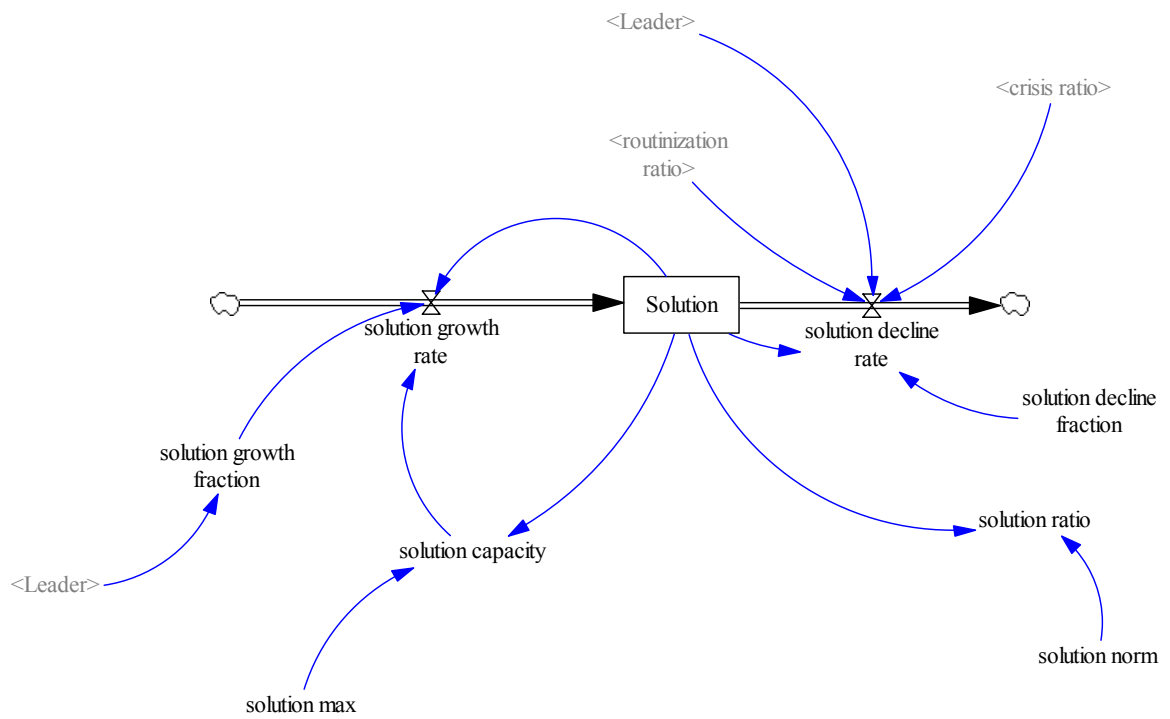


Figure 4.2. Solution Stock and Flow Diagram

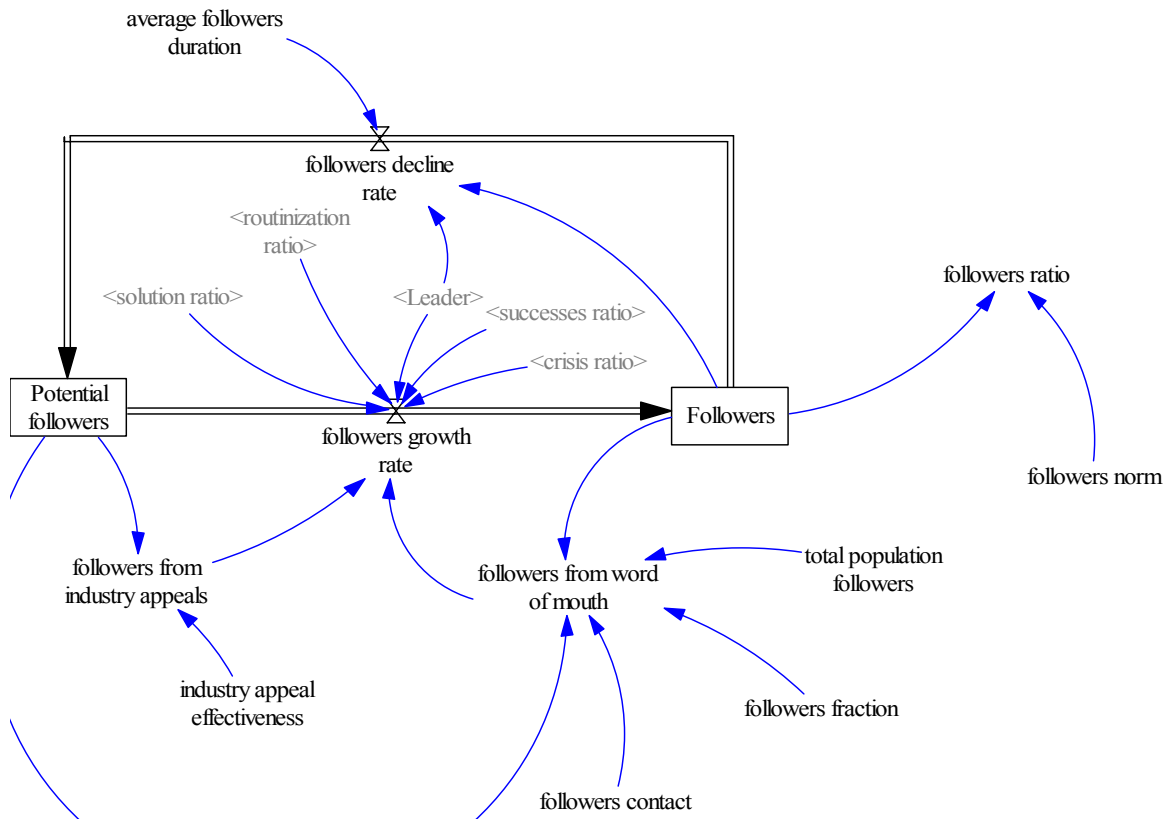


Figure 4.3. Followers Stock and Flow Diagram

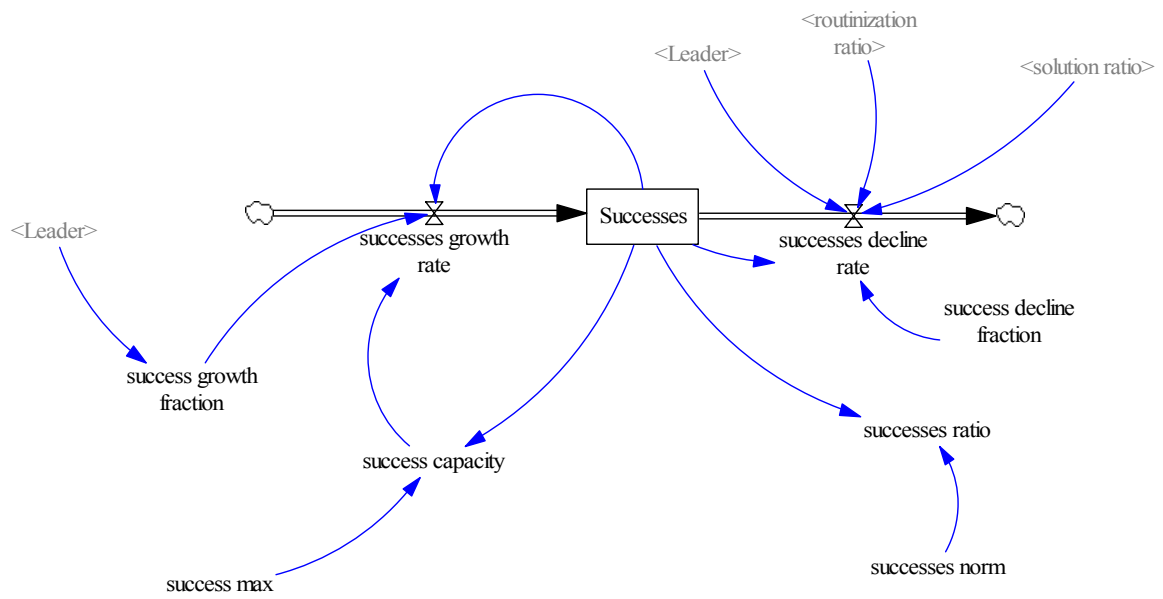


Figure 4.4. Success Stock and Flow Diagram

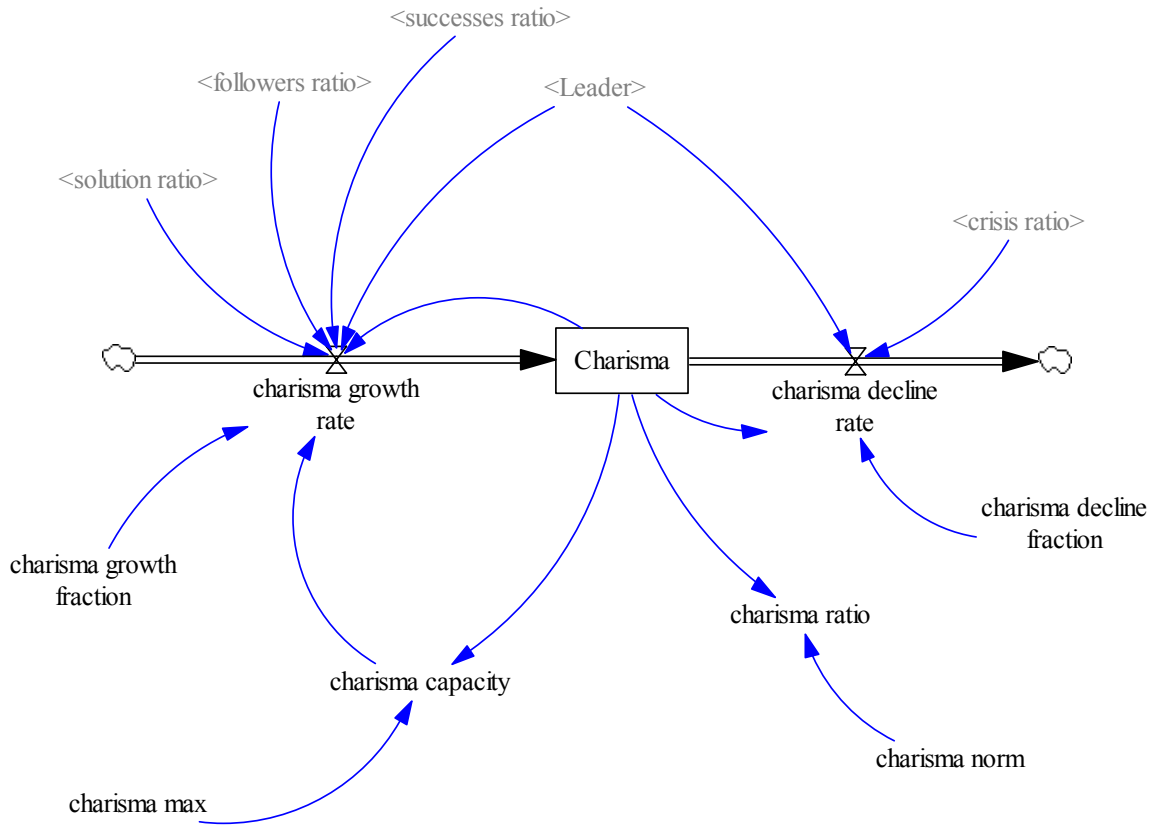


Figure 4.5. Charisma Stock and Flow Diagram

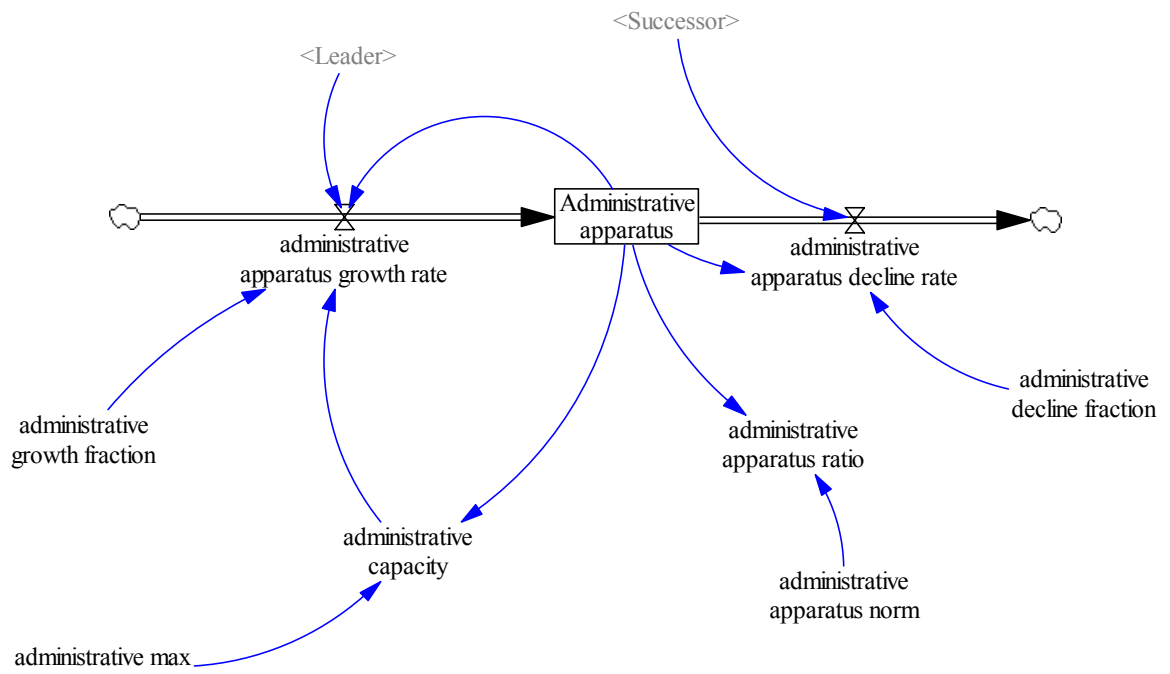


Figure 4.6. Administrative Apparatus Stock and Flow Diagram

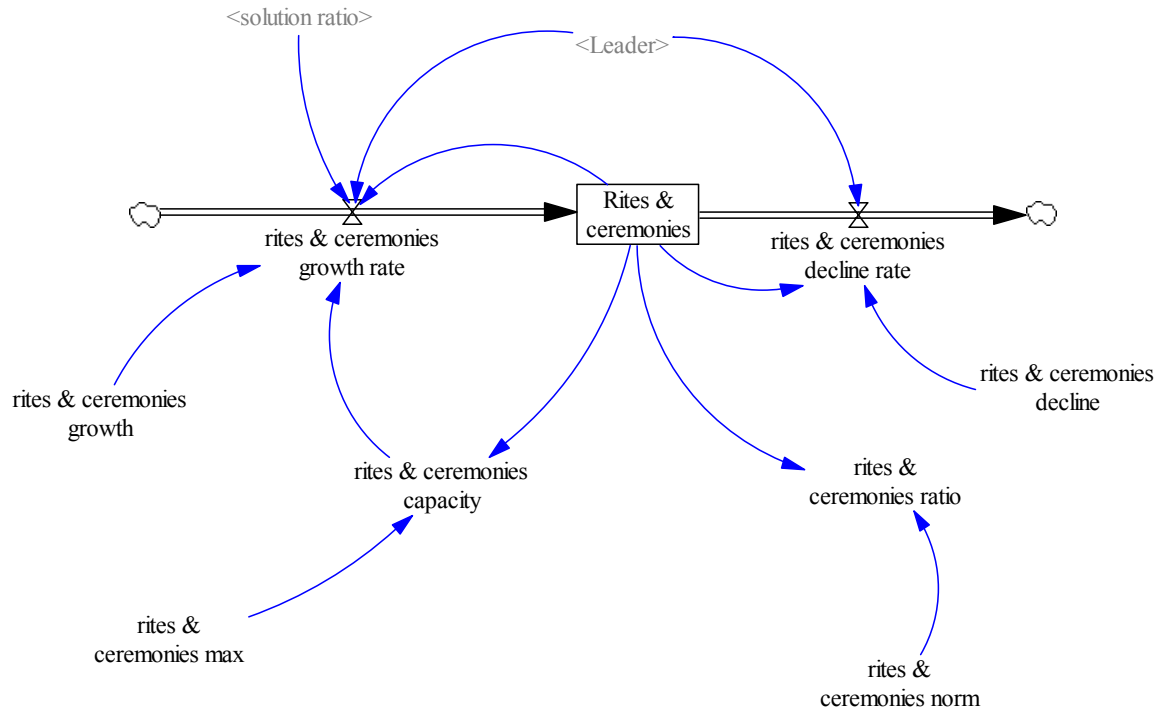


Figure 4.7. Rites & Ceremonies Stock and Flow Diagram

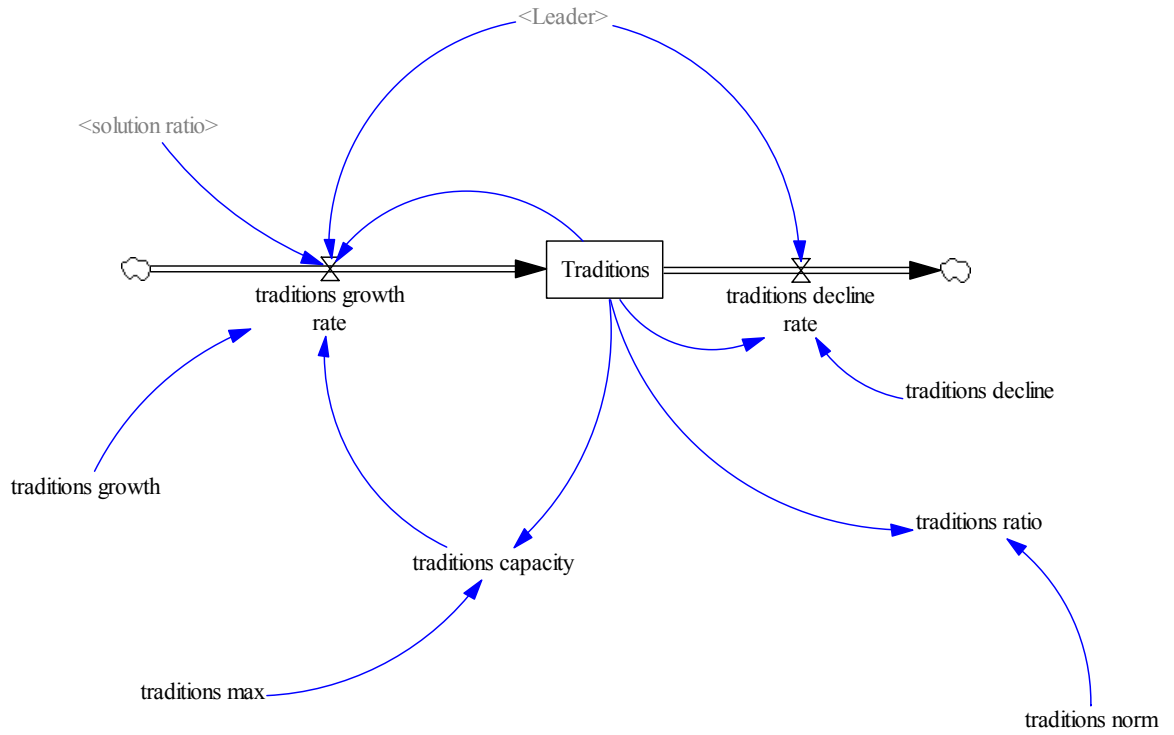


Figure 4.8. Traditions Stock and Flow Diagram

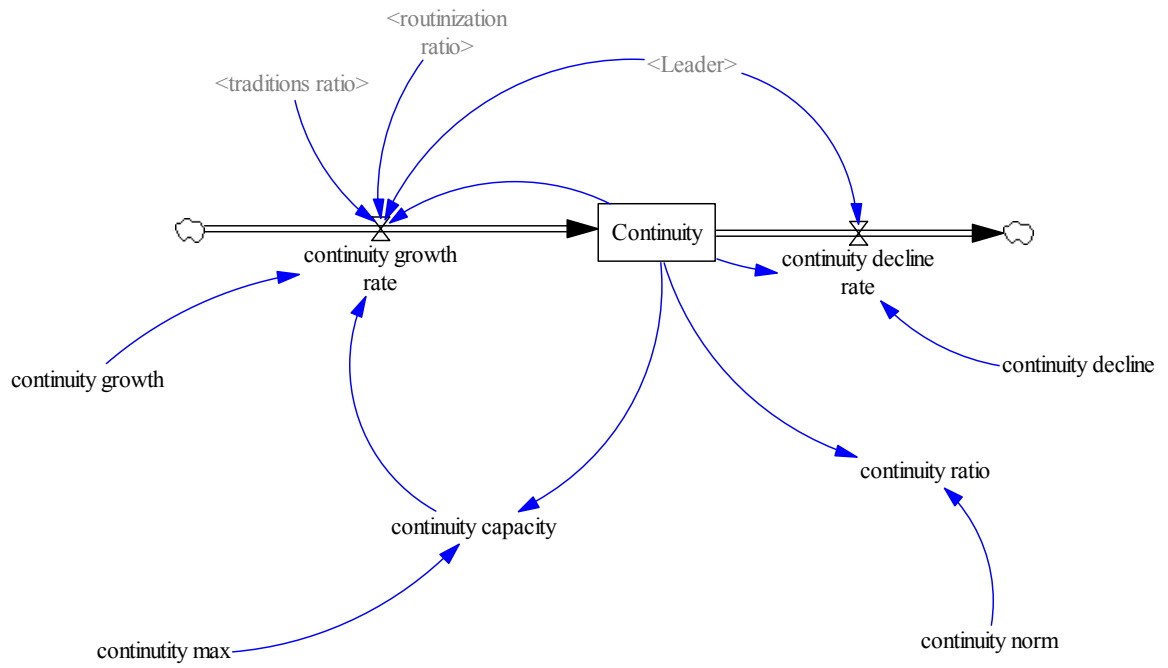


Figure 4.9. Continuity Stock and Flow Diagram

