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An exploration of what attracts leaders to city manager positions and how city managers have adapted in their positions

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AN EXPLORATION OF WHAT ATTRACTS LEADERS
TO CITY MANAGER POSITIONS AND HOW CITY MANAGERS
HAVE ADAPTED IN THEIR POSITIONS

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Dissertation Abstract

An Exploration of What Attracts Leaders to City Manager Positions and
How City Managers Have Adapted in Their Positions

The city manager is the leader in many local government organizations; yet, to date, no studies have explored what attracts individuals to the role and how they have adapted to the role of city manager and chosen to remain in it, which was the subject of this study. This study utilized a qualitative research design, and the theoretical foundation used was complexity science. Participants, all city managers, were prompted to tell the story of their career experiences. The study focused on 11 complex adaptive entities: autopoesis, open exchange, networks, fractals, dynamism, phase transitions, attractors, strange attractors, emergence, connectedness, and sensitive dependence.

The first research goal was to ascertain the extent to which complex adaptive entities played a part in the participants' career paths and current positions. The findings showed that the careers of the participating city managers did reflect the complex nature of career, and each individual participant's career exhibited at least 3 of the 11 characteristics of complex adaptive entities. The second goal was to determine the participants' awareness of their careers being impacted and characterized by complex adaptive entities; the study showed that such awareness was minimal.

Six themes emerged from the participant interviews:

1. Their careers changed, and they adapted to these changes. The participants had a strong professional connection, were resilient, and had a commitment to public service that anchored them throughout their adaptation.

2. They exhibited commitment and motivation and sought new fitness peaks for their organizations and communities.

3. They were drawn to their profession by strange attractors that included public service and improving quality of life generally and within their respective organization and community.

4. Their career paths were not linear.

5. Their previous work experiences served as fractals of the position of city manager.

6. They were influenced by networks throughout their careers.

The study concluded with recommendations and implications for the field of city management, the education of leaders with respect to complexity science, and suggestions for further research.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

| Robert B. Bell | January 6, 2011 |
| Candidate | Date |

Dissertation Committee

| Deborah P. Bloch | December 9, 2010 |
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THE RESEARCH PROBLEM

Statement of the Problem

A large population of workers in all sectors of the economy is aging. This is

having a major effect on the labor force and reshaping how individuals participate in it.

Moreover, the advanced age in both the national and the international workforce has

some experts predicting a labor shortage across the board over the next 20 years (Frisby,

2003; Toossi, 2007; Young, 2003). Some sectors have a higher percentage of older

workers, and thus, are more vulnerable to this labor shortage. One such sector is

government. In addition to the aging demographics, many governmental agencies offer

pension plans that make retirement very attractive (Dudek, 2006). These factors are

further exacerbated by the emerging global economy, which has moved the talent

competition to an international stage (Jorgensen & Taylor, 2007). Even with the

economic downturn that began in 2008 and the high unemployment rates that resulted

from that downturn, competition for qualified and talented workers is expected to be

high. And yet, over the course of the next 2 decades, older workers will be leaving the

labor force, and there will be fewer qualified workers to replace them (Bureau of Labor

Statistics, 2008). The confluence of these factors is creating a perplexing problem for

governmental agencies. An important question must be asked: How do governmental

agencies attract and retain top talent to their workforce?

The risk of losing talent is emerging as a critical issue for local governments. A

study commissioned by the International City/County Manager's Association

underscored the issue (Frisby, 2003). In the study, the potential exodus of city managers

from local government was called a "quiet crisis." The study attributed a variety of factors to this quiet crisis, which included the imminent retirement of baby boomers, the competition for a finite group of skilled candidates, and the attitudes of the younger workforce, which at the time of this study did not look favorably on government jobs.

Although there is an awareness of the aging workforce and the prospective worker exodus from government employment, there is inadequate research on why individuals choose a career in government and why they stay in those professions. I was unable to find any study that specifically addressed these issues at the leadership level of local government. In many local government organizations, the city manager is the leader of the organization; yet, to date, no studies have explored what attracted individuals to the role and how they have adapted to remain in the position of city manager. The studies that were found in the literature included studies on the models of leadership in local government (Kiel & Watson, 2009), effects of administrative leadership and governing board behavior (Gabris, Keenan, Ihrke, & Kaatx, 2000), organizational life cycle and culture of Southern California cities (Utoomporn, 2000), as well as other studies related to the role of the position, personality types, and tenure of city managers in local government.

Purpose

The purpose of this study was to explore the career paths of city managers, specifically what attracted these city managers to their chosen careers and how they adapted in their careers as city managers. A qualitative research design was utilized in this study. Career narratives (Savickas, 1993) were obtained from city managers in municipal agencies. Through open-ended interviews, participants were prompted to tell

the story of their experiences as city managers, which enabled me to identify the events and experiences that have most influenced and shaped their careers. This approach allowed for the revelation of even small events that have had large effects on the participants' careers. Further, this nonlinear approach de-emphasized predictability and reductionism. There is a growing interest in applying this approach to public institutions (Grobman, 2005). The process helped me seek out the uniqueness of each person's career experience while also identifying patterns of themes within the collective career stories of those who were interviewed as part of the research.

Background and Need

The Bureau of Labor Statistics (BLS) reported that California's unemployment rate in August 2009 was 12.2% (Bureau of Labor Statistics, 2009). This may suggest that there are ample workers available for a dwindling supply of jobs; however, once the economy rebounds from the recession of 2008, there may, in fact, not be enough qualified workers participating in the labor force (Toossi, 2007). Moreover, the search for qualified workers may be highly competitive.

Toossi (2007) pointed out that the U.S. labor force is poised to realize a much slower growth rate over the 2006-2016 decade. She identified two factors attributable to this slow down:

1. The baby-boom generation (those born between 1946 and 1964) is aging and beginning to retire; and

2. The participation rate of women in the labor force has peaked.

Further, she noted that this is contrary to what occurred in the second half of the 20th century when labor-force growth grew rapidly due to the influx of the baby-boom

generation and the increased number of women participating in the workforce. It appears

that both of these phenomena are leveling off. The annual growth rate of the labor force

is projected to increase by 13 million by 2016 reaching a total of 164.2 million workers.

This represents an annual growth rate of only .8%, which is much lower than the 1.2%

annual growth rate registered during the previous decade of 1996-2006.

Local Government Leadership Needs

In local government, Henderson (2008) emphasized the fact that the slowdown in

the workforce growth rate is co-occurring with the forthcoming retirement of

governmental agencies workforces. He reported that in Plano, Texas, nearly half of the

municipal workforce is eligible to retire, and in Roseville, California, 80% of the city

staff is eligible to retire. Further west, another California city, Redwood City, has 50% of

its workforce eligible to retire. The retirement eligibility trend reaches all levels of these

organizations, including the top rank of city manager. In 2000, over 37% of city

managers in the US were over age 55 (Frisby, 2003), while in 1971, only 8% were in this

age cohort. Table 1 illustrates the age demographic of city managers over several

decades. It shows that, unlike previous decades, a majority of city managers is part of

older cohorts of workers.

Table 1

Percentage of Age Distribution of Appointed Managers

Age Bracket	Year: 1934	Year: 1971	Year: 2000
Under 30	7	26	2
31-40	34	45	16
41-50	37	21	40
51-60	19	5	37
Over 60	3	3	6

Note: Table taken from M. Frisby (2003). What can be done? Attracting young adults to careers in local government, *Public Management, 85,* p. 1. Copyright 2007 by International City/County Manager's Association. Reprinted with permission.

Attracting qualified and competent leaders to local government comes at a particularly important time for cities. Henderson (2008) reported on the growth rates of urban areas, which are projected to increase precipitously over the next 20 years or so: In 2000, 39% of the U.S. population lived in metropolitan areas, and by 2030, it is projected to be 90%. This increase will create a larger demand for services on cities, such as a need for additional housing, street and sewer systems, water supplies, public safety, libraries, and recreation programs. In addition to these service and infrastructure needs, cities are charged with an increasing number of regulations they must enforce on such issues as open space, environmental protection, health hazards, and emergency operations. The increased population, coupled with the complexity of municipal operations and regulations, suggests a need for well-qualified professional administrators who are willing to lead municipal institutions.

Municipal Organizations and Leadership Positions

As a human resources director of a municipal organization that employs over 700 employees in over 100 different classifications, I have intimate knowledge of the various

positions that municipal government employs. This includes leaders of a number of diverse disciplines, including police chief, city librarian, human resources director, information technology director, parks and recreation director, fire chief, city engineer, and city attorney. These positions typically require advanced degrees, numerous years of professional experience in the applicable field, and expertise in general public administration. With respect to general public administration, the requirements include familiarity with rules and laws that govern municipal finance, budgets, public meetings, public information and notices, and public personnel, and labor relations administration. In addition, many professional administrators require core skills for specific positions, and they work in a highly political world in which elected officials cycle through the city with their own personal agendas and the imperative of pleasing their constituencies. Professional administrators must continually strike the delicate balance of serving the elected officials while remaining politically neutral.

In many U.S. cities, the responsibility for leading municipal organizations is given to the city manager. The position was created more than 100 years ago as part of the progressive reform movement to combat corruption and unethical activity in local government (International City/County Manager's Association, 2009). In this governance model, which is known as the council-manager form of government, elected council members hire and retain a city manager to lead city operations. Similar to the chief executive officer of a private firm, the city manager is responsible for the overall operation of the organization and for such things as preparing the city budget; hiring, motivating, and terminating personnel; serving as the council's chief policy advisor; and making recommendations for new revenue opportunities and fees (International

City/County Manager's Association, 2009). This position has grown increasingly

popular. In 2007, more than 3,500, or 49%, of U.S. cities with populations of more than

2,500 had incorporated the city manager position, and in cities with populations of more

than 100,000, 58% had city managers running their municipal operations.

A 2009 report of the International City/County Manager's Association detailed

the benefits of the city manager model of government. First, political power is

concentrated in the entire governing body, and all share in the legislative function

(International City/County Manager's Association, 2009). This differs from a

strong-mayor form of government in which the mayor serves as both legislator and

administrator. Another benefit is the fact that policymaking resides with elected officials,

while oversight of the day-to day operations of the community resides with the manager.

This frees up the elected officials to devote time to policy planning and development. The

city manager is also charged with carrying out policies with an emphasis on effective,

efficient, and equitable service delivery. Rather than representing one area or district

within a city, the city manager is a professional public administrator who is responsible

for ensuring all citizens in the community have access to city services.

Having worked for city managers over the past 14 years, I have observed

firsthand some of the unique characteristics of the position. First, the city manager must

report to a number of elected officials who do not always have experience in managing

others and setting expectations. Rather, they are often elected because of the work they

have done in the community and not their ability to manage or delegate to a city manager.

Second, and specific to California, the Brown Act requires elected officials to have open

meetings, and as such, the city manager is rarely able to meet with the city council in

private (International City/County Manager's Association, 2009). The city manager is only allowed to meet in what is called a closed session during an annual performance evaluation. Third, the city manager serves the community, and therefore, virtually everyone in the city is the city manager's customer. City managers seem to get very little private time and are often known throughout the community. In this sense, any time the city manager is in public, he or she is on the job.

Upward Trajectory of the City Manager Professional

Traditionally, individuals have entered the profession of city management by following a public administration generalist career path (International City/County Manager's Association, 2009). Such a path involves working with municipal planning departments, finance, and human resources. The upward trajectory of the career involves entering the profession with a degree in public administration or political science and then moving into an internship position (nearly 67% of managers in the US have a master's degree in either public or business administration or public policy). From there, individuals often take on analyst positions in operating departments and become acquainted with public finance, capitol improvement projects, human resources, and labor relations. In these positions, they often prepare presentations and work closely with elected officials on policy development and community issues related to running the organization and meeting community needs. On average, city managers have 19 years of experience working in local government (International City/County Manager's Association, 2009). Several professional networking organizations are available to city managers where they can network with other managers and develop key relationships that will aid them in better serving their jurisdictions. These agencies include the International

City/County Management Association and the National Civic League. These

organizations are committed to developing the leadership attributes of city managers.

The main focus of this research was the careers of city managers. The study

explored what attracted them to their positions and to what extent they adapted during

their careers.

Theoretical Framework

The purpose of the study was to explore what attracted individuals to the position

of city manager and how individuals adapted in the position of city manager. To

understand both the small and large events that occurred in the careers of the participants,

as well as to better understand how networked relationship influence individuals and

careers, complexity science was used as the theoretical foundation for this dissertation.

The following section describes complexity science and highlights some of the classical

works of complexity science from the literature.

Complexity Science

Complexity science examines *complex adaptive entities* and their ability to

self-organize, network, and adapt to survive and retain life in their environment. *Complex*

adaptive entities respond to changes in their environment by attempting, through

adaptation, to achieve a better fit. This is referred to as the "search for fitness peaks"

(Bloch, 2005). Complex adaptive entities are generally spontaneous, disorderly,

nonlinear, and changeable. This study examined the leadership careers of city managers

in the context of complex adaptive entities, which allowed for the dynamic aspect of their

careers to be revealed, with the ability to illuminate even small changes that may have

had large impacts on their careers. The nonlinearity of their careers may shed new light on what has kept them in their positions.

As is the case with many theories, there are classical works that inform the science. Additionally, there are relevant works that apply complexity science to career and career development. The following sources will serve as the foundation of the theoretical framework: (a) *At Home in the Universe* (Kaufmann, 1995); (b) *The Essence of Chaos* (Lorenz, 1993); (c) "Complexity, Chaos, and Nonlinear Dynamics: A New Perspective on Career Development Theory" (Bloch, 2005); (d) "The Chaos Theory of Careers" (Bright & Pryor, 2005); and (e) "Archetypal Narratives in Career Counseling: A Chaos Theory Application" (Pryor & Bright, 2008).

At Home in the Universe

Kaufmann (1995) sought to understand the origins of life through complexity science. He argued that while natural selection is important, it has not labored alone to craft the fine architectures of the ecosystem. Kaufmann identified self-organization, as the root source of order. The emerging sciences of complexity suggest that order is not accidental, but rather, are vast veins of spontaneous order. This process is neither predictable nor elaborately planned. Kaufmann pointed out that there are patterns of life's bursts and burials that are caused by internal processes, endogenous and natural. He explained that these patterns are the spontaneous dynamics of a community of species or complex adaptive entities.

Kaufmann (1995) further elaborated on these complex systems by identifying the fact that the complex whole can exhibit properties not necessarily revealed in dissecting its parts. The whole can exhibit collective properties that have their own emergent

features. There is a state of both order and chaos, which is the fate of all complex

adaptive entities. Kaufmann compares single cells to economies and stated that both are

complex adaptive entities that evolve as a grand compromise between structure and

surprise. It is in this state that small and large events occur that are both competitive and

cooperative in nature for the purpose of survival. This is illustrative of nonlinear

dynamics.

 Nonlinear dynamics are small changes that bring about large effects and change

the environment and the complex adaptive entity. Kaufmann (1995) also described *phase*

transitions. Phase transitions can bring about sudden and giant changes, and their

emergence is natural, and at the same time, expected. It is through phase transitions that

minimal complexity continued to adapt, and new forms of life emerged.

 It is at the edge of chaos that one finds the compromise between structure and

surprise (Kaufmann, 1995). Kaufmann's theory encompassed both the role of

self-organization and Darwinian selection in identifying new thinking about evolution. In

this marriage, both randomness and organisms adapted by genetic changes and worked

together to explain evolution. "The evocative phrase that points to this working

hypothesis is this: life exists at the edge of chaos. Borrowing a metaphor from physics,

life may exist near a kind of phased transition" (Kaufman, p. 26). He used this marriage

to also describe *fitness landscapes* and *fitness peaks:* "Evolution is a story of organisms

adapting by genetic changes, seeking to improve their fitness. Biologists have long

harbored images of fitness landscapes, where the peak represents high fitness" (p. 26).

Further, the compromise between structure and surprise can include both random and

deterministic values, and these were elaborated on by Lorenz (1993).

The Essence of Chaos

While Kaufmann's (1995) classical work provided a means for understanding complexity science as a whole, Lorenz (1993) brought clarity to random and deterministic behavior related to chaos theory. Lorenz stated that "random sequence of events is one in which anything that can ever happen can happen next" (p. 4). He contrasted this with a *deterministic sequence of events*. A deterministic sequence of events is the concept whereby each ensuring event is governed by precise laws. *Random sequence of events,* on the other hand, allows for *emergence*, which is less deterministic whereby new opportunities and events can unfold. A deterministic approach allows for predetermined events or opportunities to unfold.

Systems can have both random and deterministic behaviors (Lorenz, 1993). That is, the present state can almost completely determine the future state, even though it may not be evident. In these systems, two identical states can be followed by two other states that appear to have no resemblance to the prior states. Systems in this situation are sensitively dependent on their initial conditions. A system that is adapting may no longer look like its previous state; however, that previous state is, in fact, influencing its adaptation; the adaptation is sensitively dependent on the former state.

Lorenz (1993) also identified the concept of *attractors*, which are states of any system that reoccur, or are approximated again and again, and therefore, belong to a restricted set. (There are a number of attractors, including *point attractors, pendulum attractors*, and *torus attractors*. These three types of attractors are covered separately under definition of terms.)

Lorenz (1993) described *strange attractors* as ones that consist of an infinite number of curves, surfaces, or higher-dimensional space with a gap between two members of the set. Strange attractors are at the heart of chaotic systems. To illustrate a strange attractor, Lorenz used the weather. The weather's strange attractor is the climate. The climate, which is the external network or atmosphere, shapes and influences the weather. The weather is chaotic system that emerging in a vast array of shapes and forms.

Fractals, or pieces of the whole that are self-similar, were also described by Lorenz (1993). Fractal dimensions, when magnified, resemble the whole and the entire system. Similarly, the notion of fracticality is self-similarity. Examples of fractals are trees with their trunks, limbs, and branches. Fractals are a picture of a larger system or entity carrying with it features of that larger system. But another way, fractals are pieces of the whole that contain the characteristics of the entire entity. For the purposes of this dissertation, careers will be viewed from this fractal vantage point as explained by Bloch (2005).

Careers as Complex Adaptive Entities

Through complexity science, Bloch explored careers as complex adaptive entities that are in a constant state of exchange and emergence with the network in which the career participates. Drawing from the work of Kaufmann and others, Bloch (2005) articulated how careers are complex, adaptive, and in a constant state of change in response to their environments—that is, complex adaptive entities that maintain themselves even when their elements or shape may change. Bloch noted that through the complexity process of *autopoesis* (self-creation), people continually reinvent their careers and move freely among the many roles identified as the career path. Careers also require

living bodies to function and are in continuing exchange with all the entities of that body.

In other words, careers are built on relationships, network, and connections and are in

constant open exchange with those other entities. Careers can also be regarded as fractals

of one individual's life as well as fractals of the overall network in which the individual's

career or job position participates. One's career reflects aspects of the entire person as

well as the occupation, industry, organization, and social aspects of the outside network

in which the career and person participate.

Bloch (2005) also discussed how open exchange and networks have an impact on

careers and lead to change. She referred to these open exchanges and networks as phase

transitions between order and chaos. Bloch described these career changes as actively

sought after or seemingly accidental and thrust upon an individual. No matter what the

cause, these changes are part of the relational network associated with career. It is in

these transitions that career is characterized by the search for the best that each person

can imagine for her- or himself. Sometimes other elements are at play that limit the

growth of career or impede the career from reaching new fitness peaks. These may be

attractors that limit growth. Other times, there are strange attractors at play that allow for

the career to emerge with new life and surprises. These major changes can be brought on

by relatively small events.

The Chaos Theory of Careers

Bloch's (2005) work applying complexity science to career was echoed by Bright

and Pryor (2005). In their chaos theory of careers, Bright and Pray identified a

prerequisite of a chaos theory approach to career, which was to accept that career

development was subject to a range of influences, which are continually changing at

different paces, and to different degrees. They noted that career behavior is influenced by

unplanned and chance events. They promoted career narratives as an effective tool for

counseling, asserting that narrative provides a vehicle for understanding the motive

processes in an individual's career. The authors used emergence, attractors, and

adaptation to explore the unpredictable nature of career and the nonlinear aspect of career

development.

Archetypal Narratives in Career Counseling

Pryor and Bright (2008) expanded on their work regarding chaos theory and

career counseling by looking at archetypal behaviors. They examined archetypal

narratives derived from previous work that represent systems of meaning. These systems

provide insight into how these individuals interpret their career experiences. They then

combined these archetypal narratives with the concepts of attractors and complexity

science. The goal was to provide a holistic framework rooted in the belief that aspects of

reality can only ultimately be comprehended when considered in the entirety of the

individual. The researchers emphasized the fact that this system of career has a complex

interdependence of components that is dynamic and sensitive to change. The change

capacity was noted as being nonlinear.

These attractors and archetypal behaviors could be used by career counselors in

three ways. First, to help people become unstuck in their thinking about their careers,

Pryor and Bright (2008) suggested presenting different plots to understand their careers.

Second, this method could be used to alter individual expectations about complexity and

career development. Third, the researchers suggested that the archetypal plots and

attractors be utilized to show the uncertainty of a complex future by developing ways to recognize and generate positive opportunities.

Theoretical Framework Summary

The characteristics of complex adaptive entities were used to discover new meaning regarding careers in local government. Fitness peaks, open exchange, emergence and connectedness, to name a few, are elements relative to the notion of career. Careers are not logical, linear maps that move from one point to the next. Rather, they are dynamic entities that are part of larger networks, constantly changing their shape and form. Small, seemingly innocuous events can have large impacts on a career. Individuals often search for new fitness peaks for their careers; yet, they are often amazed at the unexpected turn of events that present new opportunities. Careers can also be constrained by forces that are not understood by those who are experiencing them. These forces may, in fact, be strange attractors pulling individuals between order and chaos. These concepts, derived from for the work of Bloch (2005) and Pryor and Bright (2005, 2008) form the basis of the research questions that follow.

Research Questions

The following two research questions were explored in this study:

1.   To what extent do the stories of city managers reveal that their careers may be characterized as complex adaptive entities, exhibiting the characteristics of (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e) dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i) emergence, (j) connectedness, and (k) sensitive dependence.

2.   To what extent do city managers express awareness of their careers as

complex adaptive entities or any of the characteristics associated with them,

including (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e)

dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i)

emergence, (j) connectedness, and (k) sensitive dependence.

<div align="center">Definition of Terms</div>

Conceptual and operational definitions of terms used in this study are

as follows:

Attractors

There are three types of attractors: *point, pendulum*, and *torus* that limit

movement and growth of complex adaptive entities. The *point attractor returns the*

entity to the same state (Bloch, 2005). With regard to one's career, with this type of

attractor one often feels bound to one's occupation for his or her entire career. The

pendulum attractor moves back and forth between two states. Vis-à-vis one's career, the

pendulum attractor may inhibit one's ability to move forward due to indecision. In the

case of the *torus attractor,* the entity moves in a circular pattern. The torus attractor may

be at play in one's career when the individual repeats the same pattern with only slight

deviations during career changes.

Autopoesis

This aspect of complexity science refers to self-creation. Complex adaptive

entities have the ability to maintain themselves, although they may change their

components and shape. That is, people reinvent their careers and the anticipated roles

they play in their careers. The development of one's career is an internal process based on

the premise that careers are complex adaptive entities. With specific regard to the career

of city managers, the individual may have the ability to maintain him- or herself in the

career, although the components and shape of the job may change in response to the

external and internal processes, such as the political environment, the economy, and a

sense of satisfaction and accomplishment in the role of city manager.

Career

In general, *career* refers to the various activities individuals pursue in their work

and leisure. For the purposes of this study, *career* refers to the professional and

occupational activities specific to city managers.

Career Path

This term is defined as the unexplained trajectories and apparent, but not actual,

disconnected events that occur in one's career (Bloch, 2005). For the purposes of this

study, one's career path involves the trajectories and events that occurred in a city

manager's career.

City Manager

The city manager is the individual holding the office that is considered the

operational leader of a municipal organization.

Complex Adaptive Entities

Complex adaptive entities are living organisms that have the ability to self-

organize, network, and adapt to survive and retain life in their environment. These

entities respond to changes in their environment by attempting, through adaptation, to

achieve a better fit. For the purposes of this research, careers of city manager will be

viewed as complex adaptive entities that have the ability to maintain themselves, although their components and shapes may change.

Complexity Science

Complexity science examines complex adaptive entities and their ability to self-organize, network, and adapt to survive and retain life in their environment. In this study, complexity science defines the careers of city managers as complex adaptive entities with focus on the process of adaptation to retain their careers as city managers.

Connectedness

This term refers to the interdependence that is required of living systems. Complex adaptive entities exist as part of an inseparable network, and each entity relies on the others for its very existence. Careers exist within networks and are interdependent on livings systems. First, careers are part of the living system of the individual. For a career to exist, it must be connected to an individual. Careers are also connected to a network of jobs, industries, and economies for their very existence.

Dynamism

Complex adaptive entities are in constant exchange of forms, components, and energy—or *dynamism*. Entities move between order and chaos searching for fitness peaks within which they have the best chance for survival, creativity, and the emergence of new opportunities. The same is true with careers. Careers do not follow a deterministic path, but rather, they, too, are in the constant exchange of form, components, and energy, or dynamism, as careers move between order and chaos.

Fractals

Complex adaptive entities are the parts—or *fractals*—upon which larger entities are formed, and they mirror these larger network. In other words, each entity carries with it the entirety of the organism within its shape. It is in this way that a person's career is a fractal of the person's entire life. A career is also a fractal of the work itself and the economic network in which it exists. The job of city manager is an entity of other entities and carries with it the city manager's life, relationships, organizations, and economic networks in which it exists.

Local Government

Local government refers to incorporated cities, towns, or counties in the US operating under the city council-city manager form of government.

Municipal Agency

The term *municipal agency* is a city government organization that employs individuals to provide services to the community.

Networks

Complex adaptive entities are part of larger connections, often referred to as *networks,* that are moving in and out of a state of equilibrium. Careers are part of the internal person and the external environment. This external environment includes any entity the individual comes into contact with in work, education, occupation, industries, family, and leisure. City manager careers involve the internal processes of the individual as well as the many external connections and relationships that accompany a city manager's position. This includes, but is not limited to, professional organizations, elected officials, and the city manager's social and family structure.

Open Exchange

Complex adaptive entities maintain themselves through *open exchange,* which is the ongoing flow of interchange and energy. Careers do not exist independently of individuals. The career itself is equally defined and impacted by an exchange with all the entities of that body and the network that the body is part of—that is, all of its interactions with other entities. City managers maintain themselves through the ongoing flow of interchange and energy in their careers.

Phase Transitions

Phase transitions are changes best defined by using nonlinear dynamics. Complex adaptive entities do not behave in linear terms. They do not produce equal changes and effects. Rather, complex adaptive entities behave in nonlinear ways.

> Because the transitions between order and chaos are drawing on multiple causes from multiple network relationships, from a continuing interplay of the internal and external, it is often what would have been considered "noise" in reductionist science that is of most importance in understanding the dynamics of nonlinear entities. (Bloch, 2005, p. 3)

It is through this notion of nonlinear dynamics that small changes can bring about large effects. Since careers are part of relational networks, and since these networks are in constant open exchange, career changes occur.

Sensitive Dependence

Sensitive dependence is the potential for small changes to bring about large effects. These can be random, often small, events that bring about sudden shifts and changes that may lead to significant changes in career. For example, an unpleasant interaction may simply be "the straw that broke the camel's back" and lead to an

individual leaving a job; this is how sensitive dependence may affect one's career—random and small changes that have large effects on the careers of city managers.

Strange Attractors and Emergence

As a complex adaptive entity experiences transitions, it may retain life through the creation of new forms and shapes. This is known as *emergence*. *Strange attractors,* as discussed earlier, yield entity shapes that are neither linear nor contained, and when plotted mathematically, the patterns form unique shapes and fractals. It is through strange attractors that careers take new shapes and emerge in forms different than what was previously seen or experienced. Individuals continue to learn and have experiences in life and career that, in fact, reshape the person's career; this is career emergence.

Limitations

This study was limited in scope in that it explored the career experiences of five city managers who served cities that are located in close proximity to my work location in Northern California. Additionally, there are many state laws and intergovernmental relationships in the position of city manager in California that influence the role and may have a bearing on the results of this study. These include open meeting laws, state and local government budgeting, and California environmental laws that greatly impact planning and building in California. As such, these findings are not generalizable to all cities and city managers. Additionally, the research exclusively explored the city manager profession, and therefore, the findings are not applicable to other leadership positions in city government or other industries.

Significance

This dissertation has contributed to a gap in the literature with regard to city managers and what attracts them to the profession and how they have adapted to their environments in order to stay in their positions. Based on the fact there are so many cities that have a council/manager form of government, there is inadequate research on the attraction and retention of city managers. This study used complexity science to illuminate the nuances of the city manager career. No research could be found using complexity science with the city management profession. Thus, this research adds to the body of work using complexity science with career development. Specifically, it was the first study to explore complexity science vis-à-vis the city manager profession, which provided new knowledge vis-à-vis the connections, adaptation, and networks of public service leadership. I also hope this study will serve to encourage other academics and career counselors to utilize the science as it relates to research in public administration.

This dissertation has educational value for educators and career counselors as it provides educators with new knowledge on the factors that influence people's decisions to enter local government careers and what continues to motivate them in those careers. This new information will prove valuable when designing curriculum on career development as well as when counseling students on career choices. The results of this study reveal how individuals adapt and grow in the city manager profession and how the role shapes one's career. For teachers of public administration, this data will be valuable and add to the relatively little research available on the attractors and motivators of the city management profession.

Moreover, this study will aid local government agencies in their efforts to attract and retain employees, because it offers local agencies new information regarding what attracts and retains leaders in their public agencies. Because the information is provided in a narrative format, it offers agencies rich text to draw from and use for a variety of human resources programs, including developing recruiting and training programs for emerging leaders based on attractors, fitness peaks, adaptation, and nonlinear aspects of the careers of city managers. Based on the age of current city managers serving various municipalities and the overall aging workforce, the information may prove to be invaluable in seeking and retaining future city managers.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to identify and explore the major factors that have

attracted individuals to the city management profession and why they have chosen to

remain in these leadership positions. This research was conducted at a time when the

overall workforce is aging, and there is an anticipated workforce shortage looming over

the next 2 decades. Based on the purpose of the study, the aging labor force, and the fact

that complexity science was the theoretical foundation of this research, the literature

review covers four broad areas: (a) emerging workforce demographics, (b) strategies for

dealing with changing workforce demographics, (c) the city management profession, and

(d) the application of complexity science to the study of careers.

Emerging Workforce Demographics

The first part of the literature review addresses the workforce demographics, both

nationally and internationally. The workforce is aging, and there are fewer workers to

replace those nearing retirement. Statistics and literature were reviewed to help quantify

and identify issues that an aging workforce presents to organizations.

The Bureau of Labor Statistics (BLS) released a report in late 2009 that provided

employment projections for 2008-2018 (Bureau of Labor Statistics, 2009). It projected

that the civilian labor force in the US will grow by 12.6 million between 2008 and 2018

to a total of 166.9 million workers. BLS stated that this is a slower growth rate than in

previous decades. The report also claimed that this is a result of a slower population

growth rate as well as a decrease in the overall labor force participation rate (the

percentage of the population that participates in the labor force). Further, BLS reported

that the growth rate of the labor force from 2008 to 2018 is projected to be 8.2%, as compared to 12.1%, which was the growth rate during last 10-year period, 1998-2008. Those in the labor force age 55 or older are projected to make up nearly one quarter of the workforce in 2018, while those aged 16-24 are expected to account for only 12.7% of the workforce. These figures support the findings that indicate there will be fewer workers to replace the retiring baby-boomers in the years to come.

The same report projected the future supply of workers by combining population projections with the projections of the labor force participation rate. As population projections decline and the workforce ages, the labor force participation rate also declines. In the last 50 years, the labor force participation rate has steadily increased, reaching a peak of 67.1% in 1997; however, it is expected to drop to 65.5% by 2016 (BLS).

The Bureau of Labor Statistics (BLS) also projected growth rates for a number of occupations, including service occupations (wholesale and retail trade), transportation and warehousing, financial services, professional and business services, and government employment. BLS projected that service occupations will see the highest growth rate of any other occupational groups. In terms of government job growth through 2018, BLS projected that federal government employment will increase by 95,000 jobs to 2,859,000, while state and local government employment will increase by 1,591,000 to 21,237,000 jobs. Further, government employment will account for 14.5% of total U.S. employment. Slower labor force participation rate coupled with job growth in the public sector may create a vexing situation for governmental agencies.

Toossi (2007) analyzed the current U.S. workforce as well as the ramifications an aging workforce and labor shortage could have on the overall economy. The analysis was based on a literature review of 14 different publications that addressed workforce demographics and labor shortages. The purpose of the research was to explore the trends of the workforce and identify issues that may arise from an older workforce or labor shortage. She found that the slowdown of the participation rate is critical to the overall economy. In the research, a common theme emerged: The continued growth of the labor force is essential for the creation of goods and services. The research also underscored the fact that the labor force influences the long-term growth of the gross domestic product (GDP). Toossi wrote, "All other things equal (including productivity), slower labor force growth means slower growth in the level of goods and services an economy can provide" (p. 35). This also indicates that employers will be competing for a smaller pool of candidates to create and supply goods and services.

In an emerging global economy, the demand for qualified workers takes on new meaning. Jorgensen and Taylor (2008) examined the aging workforce in the global terrain. The purpose of their report was to assess the risks and prospects for older workers and to provide recommendations to marshal the interests of employees, businesses, and governments. They examined the policy approaches taken by Australia, the US, and the European Union, reviewing 99 articles and governmental reports on the issue of aging and the global workforce. They found that the global employment participation rate was 2.8 billion as of 2005. Similarly, to the U.S. workforce, the participation rate of the global workforce is also expected to decline.

Jorgensen and Taylor (2008) found that the numerous issues are posed by the dwindling labor force with regard to the global economy. One critical issue is the increased movement of skilled labor from developing nations to developed nations. This is largely due to the capacity of the labor force in developing countries. Although it is growing, the skills and competencies of the developing nations' labor forces lag behind that of developed nations. This is why certain regions, such as the European Union, US, Russia, and India, are developing policies to both retain their proportion of home-grown science and technology skills, as well as to attract a larger share of the globally mobile science and technology workforce.

Strategies for Dealing With Changing Workforce Demographics

As the economy of the labor force changes, both workers and organizations may need new strategies to adapt. The issues this phenomenon presents are examined here in two ways: first, strategies in dealing with the changing workforce in all sectors, and second, strategies in dealing with it in local government.

Strategies in Dealing With the Changing Workforce: All Sectors

In the study referenced above, Jorgensen and Taylor (2008) found that the attributes workers look for in employment include greater autonomy, organic structures, teamwork, participation, diversity, and problem solving. Collectively, these attributes describe a work environment in which workers not only produce the goods and services, but also design the processes in which the work is created or performed. Rather than having rigid hierarchical structures, an organic organization is more fluid and takes on new shapes and forms, as its environment requires adaptation. The researchers suggested

that in order to accommodate these attributes, organizations need to become more flexible and encourage continuous learning and education of their workforce.

Callanan and Greenhaus (2008) researched the attitudes and opinions people have of older workers and examined methods to retain older workers in the labor force. The researchers asserted that retaining older workers was one effective approach in dealing with an impending labor shortage. They performed a literature review of contemporary organizational attitudes toward the baby-boom workforce as well as career management programs. After reviewing 57 articles and reports, the researchers summarized the recommendations that were consistently mentioned in the literature. First, they discussed changing the organizational attitude toward older workers. There is substantial empirical evidence that discredits the assumption that aging necessarily precipitates unavoidable declines in work performance. The researchers also found that older workers tend to be more loyal, have lower rates of absenteeism, and are generally more reliable than younger workers.

Callanan and Greenhaus' (2008) second strategy considered the importance of a hassle-free and nurturing environment. This type of environment is sought after by older workers and new workplace entrants alike. Recent research for assessing career success revealed a considerable emphasis on criteria other than prestige, power, and money, and rather, emphasized less tangible factors, such as the degree of balance between job and personal life, job challenge, and the opportunity to develop social networks. In addition to advocating these factors, Callanan and Greenhaus also recommended that organizations offer career management and developmental assistance as strategic programs that will aid in attracting and retaining workers. The last strategy identified by

the researchers addressed how to best attract workers to an organization's workforce.

They recommended creative approaches, such as taking the company's message to the

potential workers, using marketing techniques to highlight company programs, and

establishing an attractive internal work climate.

Strategies for Dealing With Changing Workforce Demographics: Local Government

Henderson (2008) did a case study of a program entitled "City Hall Fellows."

This program was aimed at attracting college students to local government. The research

sought to determine the interest level of students in the program and look at the goals of

the program. In the study, the researcher first examined the need for the study by

featuring three city governments in California that had over 80% of their staff eligible to

retire. Many of those eligible to retire were in the management and leadership ranks in

their respective agencies. In terms of strategies to attract individuals to local government,

the City Hall Fellows program sought to raise awareness of the opportunities in local

government. The program was also designed to market the positive aspects of working

for government. Over 400 college seniors and recent college graduates applied for 20

class positions in San Francisco and Houston. The Fellows had the opportunity to serve

the community, work with civic leaders, and gain valuable work experience.

Unfortunately, Henderson has not reported any follow-up information on the career paths

of the participants.

Young (2003) studied the scope of the aging workforce and approaching

retirement wave within the government sector with the goal of identifying innovative

solutions that jurisdictions have implemented to address the challenges associated with

changing demographics and a potential labor shortage. In this qualitative study,

previously published reports regarding the government's workforce were reviewed and analyzed. This included reports from the federal, state, and local level. To identify innovative programs, 12 jurisdictions that represent different levels of government and a variety of approaches to developing the workforce were selected. The agencies were identified as having innovative practices based on interviews Young conducted with a variety of professional organizations dedicated to human resources and the public sector.

The findings in Young's (2003) report showed that the government workforce is older than the private sector workforce and that a significant number of the government workforce is retirement eligible. The report also found that forecasting when individuals would actually retire versus just being eligible to retire was hard to predict. In terms of innovative programs, the report found that a coordinated action plan that includes all phases of the employee lifecycle was the best way to hire and train the workforce. This included forecasting the skills needed in the future so agencies could start developing their workforce to meet the new skill sets.

After this study, Young (2005) began another research project to further explore this coordinated action plan concept, seeking methods to build the leadership capacity in local, state, and federal government. She conducted a qualitative study of 17 governmental agencies, including federal, state, and municipal agencies. She interviewed and collected documents relative to the agencies' workforce development programs. From the findings, an integrated approach to developing the leadership skills in governmental agencies was identified. The approach included competency identification and development, workforce and succession planning, knowledge transfer, promotion and career mobility, and program evaluation.

Young (2005) described competency identification and development as forecasting the types of skills and competencies the organization would need in the future and then planning recruitment and employee development activities based on those skills and competencies. Formal programs for knowledge management and transfer were established to transfer institutional knowledge learned over the course of employment. Methods recommended were either through formal documentation or through conversation and interviews with tenured staff. Career mobility and promotion involved identifying job paths that individuals could move through to develop their leadership skills. Finally, Young looked at how agencies were evaluating their workforce and leadership development programs. Methods varied from pre- and posttests that measured program participants' learning to tracking career progress of those who formally participated in a succession and workforce-planning program.

Frisby (2003) examined a committee that was formed to address the issue of attracting and retaining individuals to local government by the League of California Cities, a nonprofit agency that advocates for local government and develops policies and programs to serve municipal leaders. In this research, Frisby performed a case study by interviewing members of the committee and examining their published reports. She found that the group has a twofold strategy to address the anticipated workforce shortage and leadership vacuum in local government.

The first strategy is to groom professionals already in management positions to prepare them for top leadership roles. In order to do this, the group identified best practices for preparing early- and mid-career professionals for advancement. They surveyed agencies throughout California with regard to their leadership development

programs and released a publication that featured successful programs. Similar to Young's (2003) findings, many of these agencies employed an integrated and coordinated approach to workforce development. Another part of this strategy was to market the benefits and rewards of serving in a leadership position to those already in the municipal workforce. The group also recommended widening the net when seeking qualified candidates for municipal service. In other words, the group has encouraged agencies to look at candidates from other industries and identify transferable skills needed for city service. In so doing, the group concluded larger applicant pools of qualified candidates would be available for leadership positions.

The second strategy is to attract young talent to the field of local government work (Frisby, 2003). The group recommended that agencies study the attitudes and opinions students have of government and government work to ascertain their perceptions of government. The group also recommended that new marketing and recruitment approaches be used that specifically target college students entering the workforce. As a result of these recommendations, a new marketing campaign titled "Careers in Local Government, Your World Starts Here" was launched in 2007 (F. Benest, personal communication, November 16, 2009). The program's goal was to convey the message that, by working for local government, one would make a difference in one's own community.

Section Summary

As the literature revealed, industries are beginning to grapple with a changing and aging workforce. These demographic changes are compelling the development of new human resource programs to attract and retain a diverse workforce. As the literature

suggested, new employment relationships that are based on flexibility, autonomy, and skill development are increasingly sought after by a dwindling pool of workers. Additionally, industries and organizations are being advised to use creative marketing approaches to generate positive messages about what they offer as employers.

The literature review has revealed a number of programs that local government agencies have developed to build their leadership capacity and attract new talent to local government. From formal relationship-building programs to new marketing campaigns, local government agencies have implemented programs to better prepare their organizations for a changing workforce. The literature also revealed that some local governments have implemented leadership development programs to prepare their workforces for higher-level roles in the future.

No literature was found that considered the elements that have drawn individuals into city management positions in the past and how they have adapted in the role of city manager. Nor is there any research, empirical or otherwise, that has studied the factors that have influenced individuals to pursue this occupation and how they have adapted to retain the position of city manager.

<center>The Careers of City Managers</center>

Relatively few studies were found related to the careers of city managers in computer searches, which is surprising when one considers the fact that the profession is over 100 years old. Four databases—ProQuest, Omnifile, Lexis Nexis, and Gale—were used to search the following three terms: (a) city manager, (b) city manager and public administration, and (c) city manager and leadership. The first search term produced over 174,000 documents. A scan of those documents showed articles on such topics as trash

costs, policy advisory groups, federal stimulus money, library funding, and pension reform. This demonstrated the plethora of issues that city managers must deal with in their roles. However, very few studies were found that dealt with the leadership aspect of the city manager role, what attracted those individuals to the profession, and why they choose to stay in their roles. The following literature does have relevance to this study and is divided into two separate sections: (a) the fit and tenure of the city manager and (b) the role of the city manager.

<p align="center">*Fit and Tenure of the City Manager*</p>

Hanbury, Sapat, and Washington (2004) examined a fit model of leadership and the city manager tenure. They conducted this study because the mean length of service in the position of city manager in a city is a mere 6.4 years. The researchers developed a survey questionnaire to examine the relationships between six independent variables: (a) leadership style, (b) personality type, (c) self-perception of fit, (d) perceptions of the city council about fit, (e) the demographics of the city manager, and (f) the demographics of the city they serve and the dependent variable of years of service in the job. They felt that these six independent variables would determine the fit model of leadership for city managers. In addition to some self-report and demographic questions, the survey instrument included the Leadership Behavior Analysis II-Self and the Meyers Briggs Type Indicator. The researchers sent the self-administered mail survey out to a stratified, random sample of 600 city managers in the U.S. A response rate of 52% was attained with more than 50% responding in each population stratum.

Hanbury et al. (2004) found that 83% (adjusted $R^2 = 0.832$) of the variation in the tenure of city managers surveyed can be explained by all of the independent variables

taken together. In addition, there were several statistically significant relationships between individual independent variables and tenure. Three of these findings supported the hypotheses of the study:

    1. The *P,* perceiving personality dimension, of the Meyers Briggs Type Indicator would be more positively related to tenure than the *J,* judging personality dimension.

    2. More positive performance evaluations by the city council were more likely to extend the tenure of the city manager.

    3. Older age is associated with longer-tenure city managers.

Three of the following significant findings were contrary to the hypotheses:

    1. High leadership effectiveness was associated with shorter tenure.

    2. Longer tenure was more associated with the *I,* Introverted personality dimension, rather than the *E*, Extraverted type personality dimension, as measured by the Meyers Briggs Type Indicator.

    3. Total years of experience as a city manager is not related to increased tenure in a particular job.

    In addition, three demographic variables were found to impact tenure:

    1. City managers in cities with higher household incomes had longer tenure.

    2. City managers in cities where the population is predominately white had shorter tenure.

    3. City managers in cities with higher percentage of people born outside of the US also had shorter tenure.

    McCabe, Feiock, Clingermayer, and Stream (2008) examined turnover among city managers and the relationship between turnover and political and economic change.

They were interested in identifying whether changes in city council members and economic development in a community, or lack thereof, increased turnover of city managers. Their study included 143 U.S. cities with populations over 75,000 that had the council-manager form of government. They gathered data on the cities from the National League of Cities and the International City/County Manager's Association Municipal Yearbook. These data sources provided information related to council elections and city council turnover of these cities, as well as per capita income, for the period of 1987 to 1999. The empirical analysis showed that political changes tend to increase the chance of the city manager departing by 15%, while changes in short-term per capita income increase the likelihood of the city manager departing by 2%.

Hassett and Watson (2002) explored long-serving city managers. Specifically, they identified 146 city managers who had served in the role in the same community for a minimum of 20 years. They sought to determine which factors led to their long service. The city manager participants were asked to complete a survey in which they evaluated the extent that various factors had on their careers; these factors were related to political environments, policy development, and the values of their careers. The city managers were asked to make qualitative statements regarding these aspects of their jobs, and the text was analyzed to identify patterns that would explain the long tenure. The overall themes that emerged as factors related to tenure were (a) adaptability in a political environment, (b) active participation in the community, and (c) maintenance of values that anchor the city manager, such as individual rights and social equity in the communities they serve.

The Role of the City Manager

In addition to studies that looked at tenure and variables that may influence the retention of the city manager, studies were found that dealt with the role of the city manager. These studies focused on the role of the city manager vis-à-vis the elected city council. They examined the dichotomy view and the complementarity model associated with the city council-manager form of government. This dichotomy view identifies functions that are strictly within the purview of the city council and those that are solely the responsibility of the city manager. The complementarity model includes all of the functions associated with running a city placed on a continuum with the council and manager playing a role in varying degrees in all of these functions.

Demir (2009) conducted one study that examined the complementarity model of the council-manager form of government. Using survey data collected from a nationwide sample of 1,000 city managers obtained from the International City/County Manager's Association, he explored the empirical foundations of the complementarity model. The survey, which was mailed to participants, included statements that were intended to gauge the perception of city managers regarding their involvement in political and policy activities. Seven variables were identified to explore the continuum of politics-policy. Those variables included (a) political particularism, which is appealing to narrow interests opposed to those of the broader community; (b) policy leadership; (c) conflict resolution; (d) policy initiation and formulation; (d) goal setting and resource allocation; (e) policy evaluation, and (f) policy analysis. He found that policy leadership and political particularism were the variables that city managers felt they had the least involvement with in the complementarity model. In the middle of the continuum were

activities associated with conflict resolution and policy evaluation. Providing rationale to the public on policy issues was highly associated with the city manager's job, as well as goal setting, resource allocation, and policy analysis.

Svara (1999) also examined the shifting boundary of duties between the elected officials and the city manager, with particular attention to cities with populations of over 200,000. Svara studied 31 large cities in the US with the council-manager form of government. He sent surveys to council members and city managers in these cities and asked them to rate the relationship between the council and the administrator, as well as his or her performance in various roles. He found that over 80% of the elected officials and city managers felt the relationship between the parties was working well with only 4% stating it was working poorly. Nearly all respondents felt the city manager had a significant role in policy formulation and development of long-term strategic initiatives in the community.

Section Summary

The literature regarding the role of the city manager illustrated the politically turbulent and sometimes ambiguous environment in which the city manager must work and oversee many people and programs. The tenure of a city manager was shown to be based on a variety of variables that were not necessarily under his or her direct control. Surprisingly, the "fit" measured by tenure in the position did not have a positive correlation with leadership effectiveness. Moreover, the data showed the role of the city manager is not neatly packaged in administration; rather, the role flows along a continuum of politics and administration, which renders the city manager position very complex.

What the literature did not yield were studies that explore the relationships and nuances of city manager careers. The attractors that pulled them to the profession and are at play in their role were not revealed in the studies found to date. Nor have the relationships, networks, and phase transitions that city managers have experienced in their careers been explored. Also, how city managers and their careers have adapted to seek new fitness peaks is research that has yet to be conducted.

<div align="center">Complexity Science</div>

As a theoretical foundation for the study, complexity science was used to analyze the text obtained in the interviews with the city manager participants. As such, a literature review on complexity science and careers was conducted. Specifically, research that explored complexity science and its application in career and public sector organizations was performed on computerized databases. Two relevant studies were found.

In the first, Grobman (2005) examined complexity science as a way to look at organizational change in public agencies. He argued that the classic organizational theory of viewing organizations as machines is an outdated model; yet, this model is still prevalent in government organizations. He conducted his study on complexity science and organization theory by examining 32 individual studies on these theories. In his research, he found methods for applying complexity science to an organizational setting and made recommendations for managers to consider. First, he asserted that viewing organizations as open systems that are adaptable and flexible would facilitate learning and growth. He also suggested a number of other factors that would optimize organizational effectiveness. These included (a) increasing the flow of information, (b) using fundamental questioning to keep organizational members thinking, (c) keeping

work teams to 12 members or less so team members could maximize the relationships, and (d) viewing the manager as a participant and part of the team rather than as an outsider. Lastly, Grobman advised leaders to not be afraid of letting unstable situations simmer until a solution emerges rather than force a solution on the organization.

Martin (2007) used complexity science as a theoretical foundation to explore the behaviors and experiences of eight former adjunct community college faculty who had obtained tenure-track positions at their respective community college. Martin contended that there was a problem in that each year only a few adjunct faculty attained tenure-track positions at their colleges. Martin wanted to find out how those who had obtained tenure-track positions (a) adapted themselves to their particular community college, (b) engaged with other people professionally, (c) were influenced by their other work or school experiences, and (d) allowed themselves to be open to chance events or small changes. She explored this by asking the following research questions:

    1. To what extent do the patterns of behavior of the participants show adaptability to their particular environment?

    2. To what extent do the patterns of behavior of the participants demonstrate networking between other faculty members, their academic departments within their colleges, college staff outside their department, and professional organizations and contacts outside of their college?

    3. To what extent do the patterns of behavior of the participants demonstrate that their fitness levels at the college where they received their tenure-track position were influenced by their other work or school experiences?

    4. To what extent were the careers of the participants influenced by sensitive dependent behaviors, such as chance events or by small changes, either personal or from their environment? (Martin, 2007, p. 21)

She obtained a sample through an informal network from 13 community colleges in Northern California. The requirements for the participants were that they (a) had served as an adjunct faculty member for at least 3 years, (b) had worked for at least two community colleges, and (c) had obtained their tenured-track position at a community

college where they previously served as adjunct staff. She obtained data by having participants complete a demographic and work history questionnaire, and then each person participated in two 1-on-1 interviews.

In responding to the research questions, Martin (2007) found that participants did show adaptability to their particular environment. They did this in two ways: by adapting to their respective community college and adapting to the community college's application process for tenure-track positions. In the second research question, she wanted to find out how tenure track faculty used networks with other faculty and professionals. She found that all participants described examples of personal work networks. Those included "networks with other adjunct faculty members, tenure-track faculty, other college staff and contacts outside of their college" (p. 113).

Her third research question dealt with the influence that other work and school experiences had on the tenure-track faculty. She used patches and fitness peaks to analyze her responses. She found that the participants in the study clearly felt that their teaching and life experiences played a significant role in obtaining tenure-track positions. Her last research question dealt with the extent that careers were influenced by sensitive dependent behaviors. She found that all the participants' careers were influenced by sensitive-dependent behavior, which she described as "chance events, small changes, either personal or from their environment" (p. 132).

Stackman, Henderson, and Bloch (2006) examined three organizations from the perspectives of complexity science and communities of practice. They conducted in-depth interviews with the leaders of a nursing organization, a self-development practice of the Jewish faith, and a co-housing community. They found a relevant similarity

dealing with communities of practice and 12 comprehensive elements of complexity science. They describe communities of practice as "groups of people who share a concern, set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 81).

They found that the three entities examined were (a) informally bound together; (b) fostered new approaches to tackling problems or challenges; (c) are all about bringing the right people together; (d) are not mandated and remain completely voluntarily; (e) have built an infrastructure; (f) measure their value in nontraditional ways, primarily through spreading their knowledge and learning through their networks; (g) understand that the effects of, and value from, what they do can diffuse and often delay.

Stackman et al. (2006) enumerated four lessons they learned. First, the individuals came together as complex adaptive entities. Second, the communities of practice were successful and their success was related to self-organizing and adaptation. Third, all the entities were both high touch and high tech and relied on a variety of media to stay connected. The fourth lesson dealt with the communities of practice redefining success and having an understanding of sensitive dependence.

Bloch, Henderson, and Stackman (2007) did another study utilizing complexity science. In this study they described themselves as researchers using complexity science approaches. The authors discussed their emergence as a social inquiry group. It was borne out of an interest that each had in using non-linear approaches to organizational research. They also believed that "…complexity science provides a means to understand organizational life, a means that is not available through more traditional, reductionist points of view" (p. 199).

The researchers sought to uncover patterns that would help them understand how entities sustain themselves and how organizations act as complex adaptive entities. They used 12 characteristics of complex adaptive entities in their study (Bloch et al., 2007). They found these characteristics in the organizations that they examined. They found that each organization functioned as a community of practice; participation in the organization was constant, and that learning appeared to be a critical motivator. They indicated that their most important finding centered on tensions related to research. One was the tension between the process of the current state to a future state. A second tension "lies between the habits of reductionist-trained scientists and the heart of complexity science" (p. 203). A third tension deals with the outcomes of research and the pattern of identification and prediction. A fourth tension was more specific to the participants in their study. This tension dealt "with the importance of spiritual connection in what they were doing and of meaning making, and bowing to the 'bottom line'" (p. 204). The researchers concluded their study by underscoring how sensitive dependence was the most applicable to their research. The participants underscored for the researchers how small changes can bring about large effects. The articulated that "by changing oneself or by changing one's community, perhaps larger, more profound and more permanent change follows" (p. 204).

Section Summary

In applying complexity science to careers and organizations, the literature pointed to new ways of thinking about each of them. Both are complex adaptive entities that are in a constant state of change in their respective environments. The literature also showed how applying complexity science to organizations and career experiences can reveal new

information about adaptability, networks, sensitive dependence, and fitness peaks as they relate to careers and organizations. The literature also showed that the application of this theory has been applied to careers on a minimal basis, and no research could be found that applies this science specifically to the careers of city managers.

It is possible that the research that was conducted in this study is the first to explore the career of city managers from the perspective of complexity science and the fractacality of career as a complex adaptive entity related to the human entity (Bloch, 2005). The ability to serve in a city manager position—which is both highly political and administratively challenging—is viewed as adapting at the edge of chaos.

<div align="center">Literature Review Summary</div>

The literature reviewed in this chapter demonstrated that there is a very large cohort of the workforce that is aging. Additionally, the research showed that competition for skilled workers and leaders is now global in scale. Both private and public sector organizations have begun to adapt and reshape the way in which they recruit workers and develop their leadership capacity.

The literature also demonstrated that one leadership profession—that of city manager—employs an aging cohort of workers. The city manager position also serves in a highly political environment, and the tenure of the individual may be related to variables both in and outside of the person's control. Although the role was designed to focus on the operational aspects of municipal organizations, it also has a role in the political aspect of local government. This renders the position particularly vulnerable to the subtle changes that can occur in a highly political environment.

Until this study, no research had been conducted on what attracts individuals to the city manager position and why they stay in these roles, nor had the nuances been explored of their experiences that require them to adapt and change in order to survive in their careers. In the literature review, no research was found that explored the networks and open exchanges that provide avenues for city managers to continue or seek new fitness peaks. In addition, the actual experiences of city managers and how those experiences have shaped their careers had not been explored before this study.

CHAPTER III

METHODOLOGY

Statement of the Purpose

The purpose of this study was to explore the career paths of city managers, specifically what attracted these city managers to their chosen careers and how they adapted in their careers as city managers.

Research Design

This study used a qualitative, descriptive, nonexperimental design (Creswell, 2003). The study was qualitative in nature as it sought to describe the experiences of local government leaders. In this type of study, the researcher explores in depth a program, event, activity, or process of one or more individuals. A narrative approach (Savickas, 1993) in which participants were asked to look at the story of their careers was foremost in gathering data. The text obtained in the research was analyzed inductively using qualitative inquiry techniques (Bogdan & Biklen, 2007). Meaning was of essential importance in this qualitative approach. The researcher was interested in how individuals make sense of their careers, and therefore, the participant's perspective was critical to the intent of the study and the data that was collected. Detailed information was obtained through in-depth interviews with five city managers in California. The transcripts from those interviews were used to reach a deeper understanding of the careers of city managers as complex adaptive entities.

Population, Sample, and Recruitment

Population

The population for this study was city managers. As previously discussed, the

position of city manager was created more than 100 years ago as part of the progressive

reform movement to combat corruption and unethical activity in local government

(International City/County Manager's Association, 2009). In this governance model,

which is known as the council-manager form of government, elected council members

hire and retain a city manager to lead city operations. Similar to the chief executive

officer of a private firm, the city manager is responsible for the overall operation of the

organization and for such things as preparing the city budget; hiring, motivating, and

terminating personnel; serving as the council's chief policy advisor; and making

recommendations for new revenue opportunities and fees (International City/County

Manager's Association, 2009). This position has grown increasingly popular. In 2007,

more than 3,500, or 49%, of U.S. cities with populations of more than 2,500 had

incorporated the city manager position, and in cities with populations of more than

100,000, 58% had city managers running their municipal operations (International

City/County Manager's Association, 2009).

Sample

For this study, the sample was five city managers who met the following criteria:

(a) were or recently had been city managers in municipal organizations that have city

populations of 25,000 to 200,000, (b) had served in the role of city manager for at least 3

consecutive years in the same city, and (c) were currently serving as a city manager or

had served in the role of city manager within 3 years of the date of the first interview.

The individuals asked to participate were all over the age of 18, and both male and

female city managers were solicited. Although no one was selected based on their

ethnicity, gender, or any other demographic characteristic, it was hoped that there would

be some diversity among these five individuals. Cities with populations of 25,000 and

200,000 were selected as those cities tend to not have a strong mayor form of

government. In a strong mayor form of government, the mayor acts as the chief operating

officer (International City/County Manager's Association, 2009).

Recruitment

A convenience sample of city managers with whom I was already acquainted

through professional contacts was used for soliciting participants, and they were selected

based on their proximity to my work location. Based on the proximity criterion, four were

city managers in the San Francisco Bay Area, and one was selected. In three cases, I had

worked for the participant; however, I had no employee-employer relationship with any

of the participants during the course of the study, and none of them was currently

employed by the city in which I was employed.

The e-mail requesting participation in the study is attached as Appendix A. Those

individuals who agreed to participate were presented with the Informed Consent Form

(Appendix B) and asked to sign it. In addition, they received a copy of the Research

Subjects' Bill of Rights (Appendix C). The subjects' identities were protected by using

pseudonyms for both the subjects and the cities in which they currently work or have

worked. All university guidelines of the University of San Francisco's Institution Review

Board for Protection of Human Subjects were followed.

Participant Information

Table 2 provides general information about each participant:

Table 2

General Information About Study Participants

Pseudonym	Gender	Age Range[2]	Years as City Manager [2]	Highest Level of Education
Adam	Male	60-70	10	Master's
Bev	Female	50-60	5	Master's
Charles[1]	Male	60-70	18	Doctorate
David[1]	Male	60-70	24	Master's
Eric	Male	50-60	8	Master's

[1] Retired city managers who had served in the role within the last 3 years.
[2] Age range and years as city manager at time of first interview.

Information Regarding Participants' Local Agencies

The participants all worked for, or had recently retired from, municipal governments located in California. The cities that the participants worked for, or had retired from, all had populations within the range of 25,000 to 200,000 residents. With the exception of Eric's current city, all the participants worked for, or had retired from "full-service" cities. Full-service cities are cities that provide library, parks, recreation, planning, police, fire, engineering, planning, public works, water, and sewer and storm drain services to their communities. Eric's city contracted with their county government for police, fire, and library services. Table 3 provides summary information about each participant's city.

Table 3

Summary Information About Each Participant's City[1]

Participant	Population*	Full-Time Staff **	Square Mileage***	Mean Household Income	Region
Adam	28,000	250	6	$132,800	Northern California
Bev	108,000	530	8	$86,100	Northern California
Charles[2]	59,000	990	26	$90,371	Northern California
David[2]	79,000	570	35	$69,679	Northern California
Eric	178,000	360	57	$79,004	Southern California

[1] Data obtained from each city's Web site on October 1, 2010.
[2] Retired city managers. Data reported is based on the city government they retired from as a city manager.
* Rounded to nearest 1,000; ** rounded to nearest 10; *** rounded to nearest mile.

Career Summary

A brief career summary for each participant in this study follows:

Adam

At the time of the interview in 2010, Adam informed me that he had worked for local government agencies for over 37 years. His first job in local government was as an assistant recreation center director. After serving in that job for 15 months, he became the director of the center. Two years after serving in that capacity, he was promoted to administrative director for athletics, aquatics, outdoor recreation, and community relations. It was while he was serving in that role that he began having more interaction with the City Manager's Office. After being a director for 9 years, he was then appointed

assistant city manager. He served as Assistant and Deputy City Manager for 15 years. A neighboring community then offered him a job as their city manager. Adam accepted the position and had served as the city manager for 10 years.

Bev

At the time of the interview in 2010, Bev told me that she began working for local government agencies 32 years ago. Her first job for a city was as an analyst in a public works department. She was then promoted to an executive assistant to the city manager position in the same city. She served in that capacity for 10 years. She then went to work for another city as the assistant city manager. She did that job for 4 years, and she then accepted a position in a larger, neighboring community as the assistant city manager. While in the assistant city manager role in that city, she had the opportunity to serve as the acting public works director and acting library director. She then became the general manager of a very large public utility company. She served in that capacity for 3 years. After leaving the public utility, she was hired as the city manager by the larger agency that had once employed her as the assistant city manager. She had been in the city manager position for 5 years.

Charles

Charles had been retired for 2 years at the time of our interview in 2010. He started working for local government while still in high school as a junior recreation leader. After graduating from college, Charles returned to Southern California and took a summer job for a city working with youth. At that time, he also volunteered with various human services organizations as he wanted to develop skills in working with human services agencies. After doing that for a year and a half, he became the assistant director

of the Department of Human Services for another city in Southern California. He became the director of the department and remained in that role for 13 years. From that position, he became a city manager of a small Southern California city. After being the city manager of this small city for 3 years, he was offered a city manager position in a larger community in Southern California. He was in that job for 11 years. He then accepted a position as a city manager in a Northern California community, and he served in that role for 4 years, after which he then retired from the profession of city management.

David

David began working for cities after completing graduate school. His first city job was as a program and operations analyst for a Northern California city. He was in that job for 4 years and was then appointed as the fire chief of the same city. He served in that capacity for a little more than a year. He then received a position working as the assistant county manager for a county government outside of California. After being in that position for 6 years, he was offered a city manager position in a Northern California community. He served as city manager of that community for 8 years. He was then offered a city manager position in a larger city in the same region of Northern California. He served as city manager for that agency for 16 years. At the time of our interview, David had been retired for a just over 2 years.

Eric

At the time of our interview in 2010, Eric had been working for city governments for over 27 years. He began working for a city after graduating from college with a degree in economics. His first job for a city was a temporary position working on the city's budget. This turned into a regular position and the job grew to include personnel.

After serving as a budget and personnel officer, Eric was promoted to the deputy city manager and stayed with that city for a total of 7 years. He then went to work for a larger city in Central California as the assistant city manager. He served in that job for 3 years. He was then offered an assistant city position in a city in Southern California. He accepted that position, and after serving in that job for 14 years, he was promoted to city manager in the same city. As of 2010, he had been served as the city manager for 8 years.

Instrumentation

Two semistructured interview instruments (Appendices D and F) were developed for this study that specifically relate to the research questions (Bogdan & Biklen, 2007). Appendix G shows the relationship of the interview questions to the research questions. The questions for the two semistructured interviews were open ended and elicited views and opinions from the participants. The first question for the initial interview started with a "grand-tour question," which asked participants to tell the story of their careers (Dr. Busk, class lecture, 2008). If particulars and details associated with career experiences required probing in order to get information associated with the research questions, additional open-ended questions were asked. Notes were taken during the interviews, and the first interview was recorded on an audiotape recorder.

Between interviews one and two, summaries of the participants' responses were prepared based on the interview notes and audio recordings. The summaries included the critical phrases and comments that the participant used to answer the interview questions that related to the research questions. Prior to the second interview, the participants were given a copy of the summary with general instructions to review it and make any notes on any matters that they would like to correct, modify, or elaborate on (Appendix E). Four of

the respondents made notes on the summary and returned it. The notes were mainly

clarifications as they related to previous job titles, years in a particular position, or other

clarifying information relative to their work history. No substantive information was

changed as it related to the actual research questions. Once the summary was returned by

the four participants, I placed a phone call to each to ask if there was anything else they

would like to add. Additionally, for two participants, Adam and Bev, I had some

additional questions related to their background and a story Adam told related to a

statement he had made about public service motivation. One participant, Charles,

received the summary and asked for an additional meeting to review it. We met at his

home, and he added information relative to his experience in Mexico and how he had

adapted to the position and city he ultimately retired from 2 years ago. I took notes and

reviewed them with Charles, and he agreed that the information as captured was correct.

This second interview with Charles was not recorded. Appendix E contains the interview

questions for the second interview.

Reliability was enhanced through the collection of data over two interviews, the

participants' review of the interview summary, and the multiple readings and analysis of

the text over time.

Role of the Researcher

At the time I conducted this research, I had 14 years of experience working for

local government agencies and 10 years, as a department head reporting directly to

various city managers. This included direct reporting to three city managers and

indirectly reporting to two city managers. Additionally, I had a role as an interim assistant

city manager, which I held for approximately three years. In this role, I had occasion to

serve as the city manager and preside over council meetings and department head meetings.

In addition to the work experience, I have taken doctoral-level course work in research methods and qualitative research, including a previous qualitative research project exploring the career experiences of an assistant director in local government. The purpose of the research was not only to explore my own career, but also to get field experience in conducting interviews and doing qualitative research. Further, my work experience includes the performance of hundreds of job interviews and developing behavioral-based interview questions. These experiences have given me the skills and abilities to conduct this study.

<div align="center">Data Collection</div>

Two 1-on-1 interviews were conducted with each of the five study participants. The first interview took an average of 90 minutes and was done in person. Participants were allowed to pick a location for the first interview where they would feel most comfortable.

The interviews were audiorecorded, and I took notes during the first interview. Following the first interview, a summary of the responses was sent to the participants with a request that they review and correct any misinformation. The second interview took place after they had had a chance to review the summary, and the second interview focused on any material the participants wanted to pursue as well as any aspects of the participants' responses that the researcher found to be either lacking in detail, contradictory, or worth further exploration. The data from the first interview was transcribed, and all information was kept confidential and in a secured setting.

Data Analysis

Data analysis involves organizing the data, breaking the data into manageable units, coding, synthesizing, and searching for patterns (Bogdan & Biklen, 2007). Once data was collected, I read through the interview notes that I had taken and the transcripts from the first interviews. I performed a hand analysis of the qualitative data (Creswell, 2008). This enabled coding the data based on text segments. The following steps were performed in the analysis:

1.   I read through the text data.

2.   I divided the text into segments of information that responded to research question one, two, or both.

3.   I labeled the segments of information with codes that emerged from the data itself and were illustrative of complex adaptive entities.

4.   After 7 days, I repeated the coding without reference to the first analysis.

5.   I resolved any contradictions between the first and second codings through close examination of the text as well as reviewing relative literature on careers as complex adaptive entities referenced in the literature review.

6.   I reduced overlap and redundancy of codes.

7.   I collapsed codes into themes by participant and across all participants.

8.   I examined how the themes of the individuals and the group as a whole provided answers to the research questions, as well as other information that might illuminate the careers of city managers.

CHAPTER IV

FINDINGS

Introduction

As stated in Chapter 1, the purpose of this study was to explore the career paths

of city managers, specifically what attracted these city managers to their chosen careers

and how they adapted in their careers as city managers. This study explored two research

questions:

1.   To what extent do the stories of city managers reveal that their careers may be

characterized as complex adaptive entities, exhibiting the characteristics of (a)

autopoesis, (b) open exchange, (c) networks, (d) fractals, (e) dynamism, (f) phase

transitions, (g) attractors, (h) strange attractors, (i) emergence, (j) connectedness,

and (k) sensitive dependence.

2.   To what extent do city managers express awareness of their careers as

complex adaptive entities or any of the characteristics associated with them,

including (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e)

dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i)

emergence, (j) connectedness, and (k) sensitive dependence.

As previously noted in chapter I of this dissertation, in many U.S. cities, the

responsibility for leading municipal organizations is given to the city manager. The

position was created more than 100 years ago as part of the progressive reform movement

to combat corruption and unethical activity in local government (International

City/County Manager's Association, 2009). In this governance model, which is known as

the council-manager form of government, elected council members hire and retain a city

manager to lead city operations. Similar to the chief executive officer of a private firm, the city manager is responsible for the overall operation of the organization and for such things as preparing the city budget; hiring, motivating, and terminating personnel; serving as the council's chief policy advisor; and making recommendations for new revenue opportunities and fees (International City/County Manager's Association, 2009).

According to the International City/County Manager's Association (2009), individuals traditionally entered the profession of city management by following a public administration generalist career path. Such a path involves working with municipal planning departments, finance, and human resources. The upward trajectory of the career involves entering the profession with a degree in public administration or political science and then moving into an internship position. Nearly 67% of managers in the U.S. have a master's degree in either public or business administration or public policy. From there, individuals often take on analyst positions in operating departments and become acquainted with public finance, capitol improvement projects, human resources, and labor relations. In these positions, they often prepare presentations and work closely with elected officials on policy development and community issues related to running the organization and meeting community needs (International City/County Manager's Association, 2009).

This study used interviews with the study participants to obtain their career narrative. The purpose of the interviews was to obtain data that would address the two research questions. A narrative approach (Savickas, 1993) in which participants were asked to look at the story of their careers was a key component in gathering data. The text obtained in the research was analyzed inductively using qualitative inquiry techniques

(Bogdan & Biklen, 2007). Interpreting the meaning from these interviews was of essential importance in this qualitative approach. The researcher was interested in how individuals make sense of their careers, and therefore, the participant perspective was critical to the intent of the study and the data that was collected.

In this section of the study, I classified patterns of text that illuminated characteristics of complex adaptive entities. It is important to point out that the text used in one characteristic may also have illustrated other characteristics of complex adaptive entities, and therefore, the text could be used more than once in the analysis. I selected text from each participant's career story that best illustrated a characteristic of complexity science that was used in this dissertation. Although other stories may also reflect the characteristic, the stories' application to the characteristic was tenuous and I determined after several reviews and coding the text to not include it in the findings.

The findings are categorized by research question and then one by one, each of the characteristics. Individual comments from the participants that best illustrated the characteristic are included in the findings, and then a summary of common themes that emerged from the data is presented for each characteristic. A summary of findings for each research question is then presented.

Research Question One

To what extent do the stories of city managers reveal that their careers may be characterized as complex adaptive entities, exhibiting the characteristics of (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e) dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i) emergence, (j) connectedness, and (k) sensitive dependence?

Each participant showed evidence of the eleven characteristics of complex adaptive entities that were the focus of this dissertation. The following stories that were shared in the interviews were the best examples of the characteristic shaping the careers of the city managers that participated in this study. They stories were selected by the researcher after reviewing and coding the text.

Autopoesis

In terms of autopoesis, I was looking for stories told by the city managers that showed that they had to adapt to their environment while maintaining themselves in the position of city manager. I was seeking for data that showed they had to adapt to survive in the position while grounded to something that held them in the position and connected them to the city management profession.

Adam

Adam discussed a vision he had had for the delivery of municipal operations that illustrated the characteristic of autopoesis in his career. Adam referred to this delivery model as "shared services." He described shared services as multiple city agencies collaborating together to provide services to their respective communities. Rather than each city in an area having its own police force or fire department, under a shared services model, two or three cities would share one police or fire department and split the cost of the overhead. Adam stated:

> The hope of shared services is that it will allow you to save significant money in a way that allows you to keep people on the front line providing services. I think in these situations you have to work with your council to articulate what the vision is and you have to believe in it. (April 27, 2010)

Adam went on to describe a recent experience with shared services in which he did not have his council support. He brought the council a proposition to work with a

neighboring city on sharing one police chief to oversee the police department for his city

and a neighboring city. The council voted against the contract. Adam reflected on this

experience:

> The vote against shared services was a real low point for me in my career. One of
> the things you have to be as a city manager is resilient. It is one of the things that I
> have been pretty good at, you know, you go to bed, wake up the next day and
> you're moving on again. (April 27, 2010)

Resiliency had allowed Adam to ride the waves of change in his career. He saw the

shared services model as the wave of the future, and his dilemma is getting others on

board with that model. He recounted that even though his city council didn't support a

shared service opportunity, he needed to be resilient and would continue to work on

shared services opportunities. This story illuminated autopoesis in Adam's career. He is

maintaining himself in his career by being resilient. He also realized that he must be

flexible enough to adapt to what the city council wanted in terms of shared services:

> What I have learned is I have to be patient and accepting. I think in any of these
> situations you have to work with your council and keep articulating the vision.
> Ultimately, it is the city council that makes the decision on these things, and I
> have to live with it or just tell them if they don't believe in it, I should not be your
> city manager. I have learned to just be resilient. (April 27, 2010)

> Over the course of his 10 years as city manager, Adam described being more

confident. He stated:

> Many years ago my former boss encouraged me to apply for city manager, but I
> didn't have the confidence. I probably should have done it. It took me several
> years on the job to build my self-confidence, and that is one thing you need in
> these roles. You are up against so much, and everyone is a critic so you have to
> have self-confidence. (April 27, 2010)

Adam stated he is less generous with his critics now that he has been in the job for a

while:

> I got an e-mail from some guy who works in San Francisco and was telling me how to balance our budget. He had a bunch of suggestions that were things we already have implemented. He asked why we haven't involved employees in the budget-balancing process. A few years ago I would have said what a wonderful idea. This time I just wanted to tell him, of course, we did that, who wouldn't. I think it is a combination of being more confident and less generous to those that just criticize us. I just don't automatically respond to the critics like I used to. (April 27, 2010)

Adam indicated that his confidence had grown and that increased confidence had helped him adapt in his career.

*Be*v

Bev described a strong professional connection that seemed to allow her to maintain herself in her career. She stated she learned this from a former mentor:

> A city manager I worked for, who also became a mentor at the time I worked for him, told me that at times there are changes on the council, or you have a big disappointment with them and that it may have nothing to do with you. If you are doing a good job and know you are a good city manager, the rest is just politics. (May 11, 2010)

Bev said that at various points in her career, she has remembered this lesson, and she has stayed grounded in her skills while knowing she would have to adapt to the political climate. This exemplified autopoesis in Bev's career. She has a strong professional connection that allows her to feel confident and grounded in her skills and abilities. It has also aided her in adapting to the political environment that surrounds her career. Bev discussed a situation in one agency in which a new politician wanted to get rid of her:

> The politics of the agency were the biggest disappointment for me. I knew the new mayor wanted to get rid of me, and for some reason, he had to make it a big political thing. I was being characterized as not being a team player. It was because I wouldn't do whatever the mayor said, and so they had to make it political. I knew that I was still a good administrator and had a lot of skills and support from my professional colleagues. (May 11, 2010)

Charles

Charles also shared a story of professional connection being his anchor in what were turbulent political waters in his career. He described a situation in which he had fallen out of favor with the city council. He said this was mainly due to it being a "fit issue" in regard to his style and that of the council and community he worked for at the time. He stated:

> The organization was very process oriented, and you're supposed to make things happen when everybody can say, "No." [This] of course, [is] a very risk-aversive organization. This was a great challenge for me. I think high risk is high payoff. I think the organization challenged me. But having this identity that you're more than a city manager, you're part of this larger profession and that helped me. (April 23, 2010)

Like Adam, Charles also talked about resiliency in his career. He noted that as a city manager, decision-making and power are very diffused, and you have to be both adaptable and resilient:

> This issue of resiliency, which is a key issue for any leader—but particularly for a city manager—is very interesting. It gets difficult, particularly in an [risk-aversive] environment. Again, you operate in a very diffused-power situation; there's a lot of veto power, and the Council is looking to you, the employees are looking to you, the community is looking to you, and you're supposed to make things happen for the good of the community and organization. So, you figure it out and you become more resilient. I knew that even if they fired me, I had a very good reputation as a city manager and that helped me a lot. (April 23, 2010)

Autopoesis Summary

In response to research question one and autopoesis, themes emerged from the text. The stories told by the city managers showed that they have had to adapt to their environment while maintaining themselves through being resilient, confident, and having a strong professional connection. For Adam and Charles, they discussed being resilient as a way to survive in a turbulent political environment and in an environment where

decision-making is diffused. They were aware that they were not the ultimate decision-makers as it related to their leadership roles and identified resiliency as the mechanism that allowed them to survive. Bev and Charles discussed their professional connection and how that has helped them remain confident and manage their way through difficult time. These stories also show that being confident in their skills and professional connection allowed them to adapt and survive in their careers.

Open Exchange

As it related to open exchange, I was looking for data that showed the ongoing flow of interchange and energy in the careers of city managers. The stories were analyzed to see where the city managers and their careers were defined and impacted by an exchange with all the entities and networks that they were part of in their experiences.

Charles

Charles learned in his career how much the external environment influenced the municipal organization for which he worked and his career. He talked about communities that are demanding of their local governments. He stated:

> In demanding communities, the residents expect good government, innovation, and risk taking. The government and staff respond accordingly and create organizations that are more flexible, adaptable, and had cultures that realized high-risk meant high payoff for the community. I thrived in that kind of organization. (April 23, 2010)

He also stated that he once worked for a community that was very critical of its local government and that resulted in a risk-averse government that tended to focus on process opposed to output or deliverables to the community. Charles realized that this exchange with the external environment influenced him as a leader and city manager. He felt he

could make a more valuable contribution in a demanding community, and it was in that type of community he spent what he referred to as "the high point of his career."

David

David also told a story that revealed open exchange influencing his career. The energy and interactions with his environment is what led him to seek a position as city manager. He stated:

> I watched the city manager in my first organization and thought about the job.… You get to deal with lots of different stuff, very varied, not boring, and it made an impact on people's lives if you did it right (April 29, 2010).

This appealed to David, and he decided to aim for a city manager job. David's journey to a city manager position was greatly influenced by the interchange with his environment and exchange with a city manager in that environment.

Eric

There was also evidence of open exchange in a story shared by Eric. He described a situation in which he felt luck was at play. The story also exhibited open exchange in his career:

> I'll give you a perfect example of luck. In, let's see—it must have been the late '80s, I had just won a pretty prestigious award with the League of California Cities. They give the award out once a year to the outstanding assistant city manager of the year. So, it's for all the assistants in California. I was fortunate enough to be awarded that, and afterwards, I thought, "I'm going to grab a beer and celebrate." So I was over in Monterey, so I walked in the bar, sat down, and somebody who I didn't recognize at the end of the bar says, "Hey, are you the guy that just won the award?" "As a matter of fact I am." He says, "Come down here and I will buy you a beer." That is how I met the man that would become my boss and eventual mentor.… The award was hardly the climax, but it was really just the beginning. (May 6, 2010)

This story reflects a chance interaction and interchange that had huge implications for Eric's career. He said he went on to work for the man he met in the bar in two different cities, and eventually, took over as city manager for him when he retired.

Eric told another story that illustrated open exchange in his career as city manager. The story demonstrates the energy and interchange that occurred in Eric's career:

> Sometimes the community you are serving will not be happy no matter what choice you make for them. We are building one of the biggest skateboard parks in the state. You would think the community would be happy, but no, they actually were upset. They were upset because we had to close the current skateboard park to build the bigger one. This job requires a lot of hours, a lot of psychology, and a lot of handholding. Sometimes it is about employing the law of mutual dissatisfaction where nobody walks away really happy. (May 6, 2010)

Eric's story shows that he is in open exchange with his community. He must interact with this community and take care of it the best he can, even if that means employing "mutual dissatisfaction" across the larger community.

Open Exchange Summary

The stories told by city managers demonstrate the open exchange at play in their careers. The narratives demonstrate that the community they serve influences their organization and culture. For Charles, high demand communities were the climax of his career. Eric's story is one of nurturing and helping the community even when he knows they may not be happy. Observation of the environment led David to seek new fitness peaks for his career and fueled his desire to become a city manager.

Networks

The text was reviewed to see how networks influenced and were at play in the careers of city managers. Networks themselves are dynamic and can pull a career in and out of equilibrium. Stories that demonstrated this are included in the findings.

Adam

Adam discussed the importance of support in his career and how he utilized his professional colleagues to get support:

> I don't have an assistant or deputy city manager, so I meet with my city manager colleagues and just vent. I also talk to my former boss a lot for support. He got me interested in going into a city manager role, and he mentored me a lot. He is still my main vehicle for support. Sometimes I just call him and say "hey, this is what I am up against." (April 27, 2010)

Adam also told a story of how important it is to bring people along with you in the role of city manager. He talked about getting things done and the need to have enough "critical mass" with you to move things forward:

> Sometimes I am criticized for wanting so much buy-in. I think I have to bring people along with me and bring enough critical mass to keep things alive. I try to do this to be successful, although there have been times when bringing people along has made things unsuccessful. (April 27, 2010)

When asked for an example of when bringing people along made something unsuccessful, Adam pointed to a shared service opportunity with another community:

> I wanted the union's buy-in, but they were adamantly opposed to it. I was criticized for trying to get their buy-in, and in the end, they made it unsuccessful and influenced the community and city council against the opportunity. (April 27, 2010)

Adam seemed to know the importance of his network and the larger connections that he is part of in his role as city manager. At times, those are connections of support, and at other times, the network seems to move Adam in different directions.

Bev

Bev talked about her external network and how the external network provides her support in her career. She recounted the story of when she was being forced out of a large public agency by the newly elected mayor:

> I had a lot of my colleagues calling me and telling me not to take the attacks personally. My colleagues told me that it was just all politics and that I still have a good reputation. As a matter of fact, it was when I was at lunch with one of my colleagues at the time that he offered me a job and got me out of the situation. (May 11, 2010)

Bev relied on her supportive network at a time when she was under attack by other external forces in her network. She indicated that if it was not for her supportive colleagues, this period would have been much more difficult for her. It was her professional network that supported her and even offered her a new position to get her out of the negative environment she found herself in at the time.

Charles

Charles relied on his network for support as well. He described his professional network and how he has been supported by it in his career:

> Networking with other city managers has given me the advice, support, and knowledge that, even if I get fired by a 3-2 vote, I am part of a larger profession. I will still have a good reputation. (April 23, 2010)

Charles also discussed a community that was very critical of its local government. In this case, the external network created an environment for Charles that was difficult to navigate:

> The community was so critical that the organization was low risk and very process oriented. It was difficult to get things done. (April 23, 2010)

Networks Summary

In their stories about networks, some common themes emerged. First, there is a professional network that city managers tend to go to for support. That external network consists of other city managers or former city managers whom the participants once worked for in their career. The other network that seems to be at play in their careers is the community network. This includes members of the municipal organization and the community they serve. These networks influence the careers of the city managers, at times pulling them in different directions from where they intended to go.

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Fractals

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The text was analyzed to look for evidence of fractals. I was searching for stories that demonstrated how the experiences of the participants represented the larger role of city manager that they would ultimately become as part of their careers.

Bev

Bev viewed her first job for local government as a representation of other roles in the organization.

> The administrative analyst position in public works was a great opportunity to be exposed to a lot of operations because it was a full-service public works department with water, sanitation, streets, fleet management, and everything. So I learned a lot about local government operations, and I also had the opportunity to be the person who was responsible for the budget. They had a lot of grants for engineering and street projects, so I learned the full financial management responsibility. It also allowed me to work closely with the city manager each year when we developed the budget. That exposure led to an opportunity in the city manager's office. (May 11, 2010)

Bev felt that this opportunity would allow her to understand the entire city organization. Bev took this experience to understand the larger organization and the larger position of city manager. This represents the fractal experiences she had in her career.

Charles

Charles also worked in an operation early in his career that mirrored the larger

organization. He also felt this experience benefited him in his career. Charles began

working for a Southern California city developing programs for youth. This included

street corner extravaganzas that involved concerts and dancing to entertain the

adolescents in the community. Charles stated:

> The kids in the community had been getting into trouble, drinking, and doing illegal drugs. The street corner extravaganzas were introduced as a way to entertain the youth and deter them from doing activities that were detrimental to them. (April 23, 2010)

The program then grew, and Charles worked with the kids on a user-operating

business program whereby the youth actually developed business plans and implemented

them to raise money. This included programs to address clean sweep streets, building

maintenance, and a no-fail tutorial service. These programs not only helped the youth,

they served as a fractal of what is involved in running a city for Charles. In developing

the programs for youth, Charles said:

> I learned what it was like to mobilize community groups, develop plans, and implement programs in the community. I learned how to align people and resources to achieve a common, community goal. (April 23, 2010)

The youth programs gave Charles a glimpse of what it would be like to run a

municipality. He was in charge of budgeting, developing work plans, mobilizing

community groups, and producing social programs for the community.

Charles told another story that exhibited the fractal nature of his career. It dealt

with his pursuit of being a city manager. He said that when he started applying for city

manager positions:

nobody hired a parks, recreation, or human services person for that job. The image was a fuzzy-headed social worker" (April 23, 2010).

Charles stated that the reputation of the human services professional was that they did not know anything about finance or politics, two crucial areas in the field of city management. Charles pointed out that nothing could be further from the truth. He stated that as a human services professional, he had been able to stream together 16 different revenue sources to support one program. He also noted that he had been able to do that working with highly political organizations in the community. Charles felt that these experiences qualified him for the role of city manager, and he decided he needed to apply for as many city manager positions as he could and tell the story of how his experiences qualified him for the city manager position.

Fractals Summary

These stories reflect smaller entities (i.e., positions) that resemble a larger entity, which, in this case, is the position of city manager. The experiences that Bev and Charles had in these former roles gave them an understanding of what it would be like to actually be a city manager. They were able to take the fractal nature of those experiences to better understand the larger entity of city manager that would ultimately be part of their careers. The previous positions that the city managers held influenced their career choice and gave them an understanding of the larger, more complex entity that they would eventually lead: a municipal organization.

Dynamism

In looking for dynamism in the career of the participants, I was looking for text that demonstrated the careers of city managers being in a constant exchange of forms, components, and energy.

Bev

Bev told a story about her grand plan that illustrated dynamism in her career. Bev first pursued an occupation as a journalist but got disillusioned with the job. She felt that journalists do not attempt to improve organizations and communities, but rather, journalists are just critical of government institutions. This disillusionment led her to pursue a career in local government. She said she wanted to pursue a career where she could improve organizations and the quality of life for people. She stated:

> I had a grand plan. After graduating with my master's degree in public administration, I was going to get a job in city government as an analyst and work in every department. Eventually, I would pick the department I liked best and become the director of that department. That didn't happen. (May 11, 2010)

Bev went on to explain that in her first position in a city, she worked in the public works department. In that role she was able to work closely with the city manager's office staff, and she had a lot of exposure to the city manager. Within a few years of serving in the public works department, the city manager offered Bev a job in the city manager's office as a senior analyst. As Bev put it, "That kind of blew my grand plan out the window" (May 11, 2010). Bev never worked in the other departments as she had planned. She has since served in the city manager's office in every city she in which has been employed.

Charles

Charles also told a story that reflected dynamism early in his tenure as a city manager. It dealt with what he called "rapid learning" (April 23, 2010). At age 25, Charles became a department head of youth and community services. He stated:

> I was way too young to become a department head, but it did force learning—and I mean rapid learning. (April 23, 2010)

Charles took his previous experience coordinating youth programs and youth-oriented business plans and decided he needed to bring more structure to his new department. He stated:

> The department-needed systems put in place and work plans. It was kind of a grassroots effort, and the entire staff worked with me in developing work plans and procedures. (April 23, 2010)

Charles was adapting to his new role and searching for new fitness peaks with his staff. This was dynamism interacting with Charles' career as Charles and his staff searched for new fitness peaks that would lead to their best chance for survival.

David

David also shared a story that reflected dynamism in a career. He made an unorthodox move in his quest to become a city manager. Once David decided he wanted to be a city manager he said:

> I knew I had to build my portfolio. I had to take on a larger job, and I had to have department heads report to me. (April 29, 2010)

Against the advice of his peers, David took a job as an assistant county administrator outside of California. He stated:

> People thought I was crazy. I was told once you go to work for a county, you won't work for a city again, and once you leave California, you will never get back in. (April 29, 2010)

David decided it was worth the risk. He fashioned the job in the county where he would build his skills and competitiveness for future city manager opportunities. He insisted that some department heads would report to him and that he would get experience in overseeing multiple functions. David also asserted it was worth the risk because he eventually got back to California as a city manager.

Dynamism Summary

These stories reflect dynamism in the careers of city managers. Rapid learning risk-taking, and nondeterministic paths were reflected in the tales of the city managers. Bev's grand plan was "blown out the window" as she moved directly from public works to the city manager's office. Charles felt his best chance for survival in his first department head position was to formalize the department and develop plans for success. The experience led to rapid learning for Charles. David went against the advice of his colleagues and took a risk in his career. These stories exhibit survival, fitness peaks, and the exchange of forms, components, and energy, that is, dynamism.

Phase Transitions

I reviewed the text for stories that represented nonlinear dynamics impacting careers. I was looking for text that showed small changes that had large effects and how phase transitions had shaped and formed the careers of city managers.

Charles

Charles told a story that showed the nonlinearity associated with career. When he first became a city manager, the city's largest revenue producer was a large retail store. The store announced that it was considering relocating to a neighboring community:

> The store was moving just one block over, but it crossed the city limits, and we would lose the store and the largest source of revenue for the city. (April 23, 2010)

It was up to Charles to develop a plan to retain the store within the city limits. He kicked into high gear. He adapted by tapping into the expertise of his redevelopment director and learning as much as he could about real estate and land use decisions. He had only 45 days to develop a plan, so time was crucial. He used the network in the organization to

develop a successful plan that would lead to a new, larger store for the retailer and more

revenue for the city. Charles did this by adapting and using his network to retain the

retailer. In the process, he learned about redevelopment agencies and land use decisions.

Bev

Bev also told a story that reflected phase transitions in her career. As previously

discussed in this study, Bev had become disillusioned with her journalism position.

She decided to pursue a government position. She began working towards a master's

degree in public administration. It was in this experience that she learned of the

opportunities in city government:

> I had a few teachers that were city managers or former city managers. The stories
> they told made me think that is where I can really make a difference. That is when
> I knew I wanted to work for city government. I had enough exposure on Capitol
> Hill to know I didn't want to work for the feds, and I didn't think the state was
> much better. (May 11, 2010)

The exposure Bev had to city managers in her educational pursuits had an impact on her

career. Through this exposure, she decided that working for city government was where

she could best serve society. She stated:

> My father was an educator. He believed you could improve society through
> education. I felt I could improve society, institutions, and the quality of life for
> people by working for local government. (May 11, 2010)

Bev gave another example of phase transitions, which also illustrates her

searching for fitness peaks. She stated the economic downturn that began in 2008 had

limited her city's ability to create public infrastructure and build up the external, physical

environment. She stated that this has made her look inward at the organization:

> I have a commitment to improving the leadership in my organization and developing employees. Right now, things are tough, and it feels like we are dismantling government. I am now motivated more than ever to work on developing the skills of our workforce so we are prepared to meet new challenges. (May 11, 2010)

Bev also stated that she has become more involved with organizations that advance the city management profession. This story reflects Bev's searching for new fitness peaks in her career. She remained committed to improving institutions and organizations, even in the face of an economic downturn that threatened her community. During the phase transition that occurred in her career, she looked at improving her organization so it would be better prepared to deal with future changes.

Phase Transition Summary

These stories depict careers that were adapting and changing shape and form due to small changes in their environments. From a retail chain moving a block over to an economic collapse that threatened the community and organization, the city managers told stories of the nonlinear effects these events had had on their careers and how they adapted to these situations. That adaptation demonstrated individuals searching for new fitness peaks for themselves and their organizations where they would have the best chance for survival.

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Attractors

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As it relates to attractors, I was looking for the point, pendulum, and/or torus attractor at play in the careers of city managers. I wanted to see if there was evidence of them returning to the same point, being stuck between two opposite points, or them going around and around the same point in their careers. Surprisingly, there was little evidence of these attractors at play in their careers. There were two stories told that reflected a

point attractor pushing city managers away from other occupations or industries and

binding them to public service. The stories were told by Adam and Eric and had similar

themes.

Adam

Adam discussed greed motivation and assigned that motivation to private-sector

and for-profit industries:

> I could not be motivated by leading people in a drive to make more money or
> profit. I had a boss that told a "kitty litter" story. It was one in which a sales
> manager for a kitty litter company motivated the sales force by telling them
> selling kitty litter changed the life's of elder people. By having kitty litter, elder
> people could have cats and the companionship that they need. (April 27, 2010)

Although Adam was not casting a doubt on the validity of the story, Adam felt that he

could not be motivated in such an environment. This was evidence of a point-attractor

pushing him away from private sector or for-profit industries. Adam returned to this story

twice in the interview and used it to illustrate why he did not want to work in the other

sectors. Adam seemed bound to his occupation and public service. Adam did not consider

that positions in for-profit organizations may have had motivating and satisfying

characteristics that would have given him a sense of purpose and meaning in his work.

There was another point attractor revealed by Adam. His story also showed that

once he broke through this attractor, new opportunities emerged. The story dealt with

why Adam initially avoided pursuing a job as a city manager.

> I viewed the city manager as the person that had the vision for the community.
> I didn't think I had a vision for the community, and so I shouldn't be a city
> manager. This was reinforced by a city manager I worked for [for] a number of
> years who had a strong vision for the community. He wanted to put high-density,
> high-rise housing in the downtown. I didn't think the community wanted it, but
> the city manager told me that he knew what was best for the community. (April
> 27, 2010)

Once that city manager retired, Adam worked for a new city manager. That individual

shifted Adam's view of the city manager role and helped Adam break through the point

attractor:

> I learned that the city manager didn't have to have a vision for the community.
> The city manager could have a vision for the organization. In this case, the vision
> was to make the organization less bureaucratic and responsive to the community's
> needs. I realized then that I could do that job, and I could establish a vision for the
> organization. (April 27, 2010)

This story not only reflects the point attractor at play in Adam's career, it also shows that

he worked through it by being in open exchange with his environment. He was impacted

by other entities in his environment that supported [him] and then broke down the point

attractor. Once the point attractor had been removed, Adam saw things differently and

new opportunities emerged.

Eric

Eric described a "poverty of ambition" that he assigned to for-profit leaderships

positions:

> Motivation to make more money is not sufficient for me. It is a poverty of
> ambition. I don't think I could really be motivated by selling shoes that will wear
> out or selling computers that will be obsolete in 5 years. (May 6, 2010)

As in Adam's story, Eric viewed "profit" as the sole motivating factor in for-profit

organizations and positions. This is a point attractor that returned him back to the same

point—a job in a for-profit environment would not be satisfying to him and his career. He

does not consider that there may be other factors in a job working for a for-profit

organization that would motivate him or give him a sense of meaning and purpose in his

work.

Attractors Summary

The point attractor was revealed in three stories told by the city managers. In two situations, the point attractor pushed them away from certain environments and occupations. They simply thought that working merely for profit would not fulfill their career objectives or motivational needs. In the third story, Adam broke through the point attractor and new opportunities emerged. Adam was able to redefine how he viewed the role of city manager, and that enticed him to pursue such a position.

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Strange Attractors and Emergence

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In reviewing the text, I was looking for examples of strange attractors that shaped the careers of city managers and led to emergence in their careers. I was looking for stories that showed their careers taking on new shapes and forms than previously seen or experienced.

Adam

Adam described how public service matters to him. This is what attracted him to the profession:

> In public service, you are providing something that really matters. It is not hard to see the obvious connection to people's lives. You provide safety and education, you don't have to stretch it to see the value. (April 27, 2010)

This public service motivation is a strange attractor for Adam that drew him into the profession of city management. Although his career has gone through various transitions and changes, he remained committed to public service because he felt it was meaningful work and that it allowed him to contribute to society in a positive way. It was that strange attractor to public service that allowed for career emergence for Adam.

Bev

Bev told a similar story of what attracted her to public service. She stated:

My father was an educator. He believed you could improve society through education. I felt I could improve society, institutions, and the quality of life for people by working for local government. (May 11, 2010)

This attraction to public service is borne out of a desire to improve organizations and the quality of people's lives. This is evidence of a strange attractor in Bev's career. Through that strange attractor, career emergence occurred. She sought positions in local government where she thought she could best serve her desire to improve organizations and the quality of life. She then sought to be a city manager where she would have an even more significant role in helping organizations and people.

Eric

Eric described his work as legacy building, and that is what attracted him to the position of city manager. He explained that when he first worked for a city, he began to realize how important the work was and that he was helping build legacies in the community:

I mean, being able to build sports centers and community centers; roads and bridges; these are things that are going to way outlast me.… But really, the trees we plant, the roads we build, the parks we build—I mean, these are things that will be lasting not a year or a decade, but many of these things will be around 100 years from now.… And, you know, now that I am getting towards the end of my career as a city manager, I really feel good about the impact I've had on individuals, on families, on communities. You know, there's just a really deep down sense of satisfaction from that. (May 6, 2010)

This legacy-building feature of his work illuminated a strange attractor in Eric's career. He seemed energized by the notion that his work will outlast him and help shape the community for generations to come.

David

David's strange attractor was a desire to improve the way cities were run. It stemmed from his interactions with a large city in the eastern part of the United States. These interactions were part of the job he held with a domestic peace corps. In this role, he was to get services for residents in an impoverished area of the city. He stated:

> Nobody really knew what my job was supposed to be; it was very unorganized. In fact, so unorganized there was no organization and barely— Nobody really knew what I was supposed to do. So when I got there, one guy said I want you to work with gang youth, and another person said help us better get the services from the city.… And it was in that process that I had said to myself, unconsciously at first and then more consciously later, any bozo can run a city better than these idiots. And that just stuck with me. I mean, they were just completely incompetent. I was just stunned about how "incapable" seemed to be in the city structure. So when it ended, I wanted to get some training on cities. So I wanted to go to work for a city. (April 29, 2010)

After serving in the domestic Peace Corps, David attended a prestigious Ivy League school, and upon graduation, he was offered a number of very good opportunities. From working with US senators to a position at the World Bank, David found that he had been invited to participate in a very exclusive network. Yet the positive experience of working in the domestic Peace Corps stayed with David, and a strange attractor was drawing him towards working in local government. The strange attractor emerged due to David's open exchange with his environment. It was that strange attractor that led David to take a job as a program operations analyst in a Northern California city after he had graduated from an elite eastern university and returned to the west coast. That choice, again, led to many opportunities that emerged throughout David's career.

Historic Event told by Three Participants

Three of the participants talked specifically about a historic event that illustrated a strange attractor in their careers. That event was the civil rights movement in the U.S.

during the 1960s. Charles, David, and Eric each mentioned that this event occurred

during their youth, and it had shaped what they wanted to do in their life. Both Charles

and Eric specifically mentioned the influence that President John Kennedy had had on

them and their desire to serve the public. Eric summarized this strange attractor:

> I also grew up and was influenced by John Kennedy—that, you know, "Ask not what your country can do for you but what you can do for your country." And the whole idea of, you know, the Peace Corps and all of that, it was really about public service, making a difference, giving. (May 6, 2010).

This demonstrated that Charles, David, and Eric had been in open exchange early in their

careers, and a strange attractor of public service, making a difference, and caring for

communities emerged.

Strange Attractors Summary

The stories of the city managers reflect strange attractors forming and shaping

their careers. They expressed a desire to have meaning in work, improve communities

and institutions, and a calling towards public service. Eric described a strange attractor of

legacy building and creating communities that will outlast him. Three of the city

managers described how the civil rights era of the 1960s had influenced them and

instilled a value of wanting to serve the public. These strange attractors allowed for

career emergence that led them to the position of city manager.

Connectedness

In numerous stories discussed in the findings section of this dissertation, the

aspect of connectedness was illustrated. Bev's story of her career adapting to the

economic downturn by focusing on the internal organization illustrated connectedness to

the economy. Charles and Bev spoke of their reputations as city managers among their

peers, which showed connectedness to their profession, which was also their network.

This showed connectedness being tied to networks, which corroborated work by

Stackman et al. (2006) and Bloch et al. (2007). In addition to these stories, Eric

commented on his job in a way that shows connectedness in his position. This

connectedness to his job took on a sense of omnipresence. He stated:

> It is really a 24/7 job. And it's so all consuming that, you know, even when I am
> not at work, I am at work. But, I mean, that is one of the coolest things, it is so
> interesting. (May 6, 2010)

He stated that he has been in the business for over 32 years, and he is humbled by how

much he does not know. Eric articulated that he is always learning new things, and if he

were to stay in the business "32 more life times," he still would not know everything.

This story exhibits Eric's connectedness to his position and the constant learning and

adaption that his role as city manager requires.

Connectedness Summary

The careers of city managers show connectedness to the economy, their

professional networks, and to their internal interests and adaptability. During poor

external economic conditions, Bev decided to adapt by developing the organization she

works for and the employees that serve the organization. When political and external

threats have confronted city managers, they have stayed connected to their professional

colleagues for support and adaptation while maintaining their connectedness to their

professional connection. Eric discussed staying connected to the actual position, and he

characterized his position as being all consuming. These stories exhibit connectedness in

the careers of city managers.

Sensitive Dependence

I reviewed the text to look for evidence of sensitive dependence. I analyzed the

stories of the city managers to see what evidence there was of small, random events

having sudden and significant changes in their careers.

Charles

Charles told a story that illustrates sensitive dependence in his career. It goes back

to when he was a young man:

> When I was about 12 years old, I attended a city council meeting with my mother. She was outraged that the police department had recently come to an American Legion Stadium in town and interrupted a wedding reception while in pursuit of someone smoking or possessing marijuana. The wedding was that of an immigrant couple from Mexico who had relatives come from Mexico and other parts of the United States. While in pursuit of the suspect, the police had pushed people to the ground and made the reception party clear the stadium. My mother was outraged by the treatment of the wedding guests and wanted to speak to the city council about the event. (April 23, 2010)

When the city council did not respond to Charles' mom, Charles decided to get up and

make a few comments, too. This experience left an indelible print on Charles' mind. Like

his mother, he wants to work towards what he views as a just society. There was a

segment of the community that was outraged by representatives of their local

government, and that outrage sparked a series of events that shaped Charles' career.

Charles became a recreation leader for a city at the age of 14. After serving in that

role and finishing high school, Charles went to an Ivy League school to obtain a

bachelor's degree. It was the late 1960s and the era of the civil rights movement in the

United States. Charles' had received a scholarship for his undergraduate studies, which

required him to do public service work in another country. He then went to a Latin

American country and served as a community organizer in a small colonial town in the

outskirts of the country's capitol. He worked with a number of residents and various

institutions to set up cooperatives for the colonial town. This included a medical

dispensary, credit union, and store. He also worked with the *bandillas*, who he described

as the guys who hung out at the street corner smoking cigarettes. He recruited them to

help set up the cooperatives. This experience profoundly influenced Charles' career and

was an example of sensitive dependence in Charles' career. He talked about how this

experience made him want to do more than just be involved in recreation programs in his

career:

> I wanted to move more into human services because I didn't just want to do recreation…. I joined [a] free clinic as a volunteer coordinator to expand my skill set. To get more experience working with disadvantaged communities, I joined a board of directors that developed programs for the disadvantaged. This helped me sell myself in the human services. I felt this more significant in terms of helping people. So gang work, child development, and family support: that is what I wanted to do. Those values to that work were instilled in me by my mother and also by experience in [Latin American] country. (April 23, 2010)

Charles felt that in this experience in the Latin America country, he was helping

people, and that motivated him to want to do more of that kind of work throughout his

career. During his interview, three times he mentioned that he either changed jobs or

occupational focus because he wanted to help people like he did when he was in the Latin

American country. As a matter of fact, it was that desire, borne out of his experience in

Latin America that compelled Charles to move towards a career in human services.

David

David told a story about getting a job offer from another agency while being

employed in his first city job. That offer led to major changes in David's career:

> I told the city manager that he had an offer from another agency. The city manager told David he didn't want him to leave and asked what he could do to retain him. David said he wanted to be a department head. David had not yet

served as a division head, a level typically held prior to becoming the lead over an operating department. David then wrote a paper for the city manager entitled, *If God Wanted a Civilian Fire Chief, She Would Have Appointed One.* (April 29, 2010)

David was then appointed as fire chief for the subsequent 16 months. This opportunity emerged because David had been offered a position in a different agency. This sensitive dependence led to new opportunities in David's career.

Sensitive Dependence Summary

The above stories exhibit how the potential for small changes can bring about major outcomes. For Charles, an experience in a Latin American country had a tremendous impact on his career. He felt he was actually helping people through that experience, and that experience largely impacted his career path and choices. David had an opportunity to take a position in a different agency, which led to an unprecedented opportunity in the agency he worked for at the time. These experiences brought about significant changes in their careers.

<div align="center">*Summary of Findings for Research Question One*</div>

Research question one asked the extent to which the stories of city managers revealed that their careers maybe characterized as complex adaptive entities, showing various characteristics attributed to complex adaptive entities. The findings showed that the careers of the participating city managers did reflect the complex nature of career and the careers exhibited the various characteristics of complex adaptive entities that were the focus of this study. Moreover, certain themes emerged that were associated with the careers of the city managers as complex adaptive entities. Table 4 includes a list of participants and concepts associated with complex adaptive entities that I culled from their stories.

Table 4

Concepts Culled From Participants Related to Characteristics of Complex Adaptive Entities

Characteristic	Participants				
	Adam	Bev	Charles	David	Eric
Autopoesis	–resilience –confidence –adaptation	–professional connection	–professional connection –resilience		
Open Exchange			–risk aversion	–observation	–luck –psychologist to community
Networks	–professional colleagues	–support	–advice and knowledge		–mentors
Fractals		–learning	–work assignments		
Dynamism	–collapsed into emergence*	–career plans	–rapid learning		
Phase Transition		–educators –role models	–learning		
Attractors					–point attractor— greed
Strange Attractors and Emergence	–point attract- tor—for profit and vision for community	–improve society	–historic event	–improve cities –historic event	–legacy building –historic event
Connectedness	–collapsed into networks*		–helping people		–all-consum- ing job
Sensitive Dependence				–risk taking	

* Supports Stackman et al., 2006, and Bloch et al., 2007.

The most common characteristics that emerged across participants were

adaptation, fitness peaks, strange attractors, open exchange, fractals and networks. Each

of the participants told stories that exhibited these characteristics to a large extent.

Adaptation is evident in each story. Each of the participants talked about challenging

times in their careers and went on to talk about the opportunities that presented

themselves in these times. These stories were evidence of fitness peaks in their careers.

The city managers were drawn to public service largely to help society and improve

institutions. These serve as strange attractors. Once the participants began working for

city government, they told stories of open exchange with the environment that led to

them seeking the position of city manager. The city managers talked about positions they

had the reflected the city manager function which represents the fractal nature of their

careers. Finally, the city managers discussed how networks play into their careers. At

times these are supportive networks and other times they are external networks moving

them towards the edge of chaos. Their stories also supported the formulation that

networks are collapsed with connectedness and dynamism is collapsed with emergence

(Stackman et al., 2006; Bloch et al., 2007).

<div align="center">Research Question Two</div>

To what extent do city managers express awareness of their careers as

complex adaptive entities or any of the characteristics associated with them,

including (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e)

dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i)

emergence, (j) connectedness, and (k) sensitive dependence?

The city managers did not express much of an awareness of their careers as

complex adaptive entities or any of the characteristics associated with them. Only five

stories were shared that demonstrated some awareness of their careers as complex

adaptive entities and the characteristics associated with them. Those characteristics and stories are described below.

Autopoesis

As assistant city manager, Bev had the opportunity to serve as an acting city manager on two different occasions. Both times she was in the role for about nine months, and she came to the realization that she could do the job of city manager. Her bigger concern was doing it in the right environment. Bev stated:

> Over the course of doing the job twice, I learned that I could do it and I enjoyed it. I liked the diversity of work and variety of issues in dealing with the various department heads. I liked developing relationships with the business community and interactions with the community. I liked leading groups in organizations with my contemporaries. But I needed to do it in the right environment…. Where I was at the time had a very difficult political structure, and I didn't want to do it there. (May 11, 2010)

She did not feel that the current city she worked in was the right organization for her to lead. However, she also was aware that she had the actual skills to the job. Her skills are what regulated or maintained her in her career but she knew she had to adapt by moving to a different city to lead. This demonstrated autopoesis. Bev was maintaining her career, but realized it needed to change components if she was going to excel and lead a municipal organization. The political environment was not right for Bev; she had an awareness of it, and she wanted to change it for her career to reach new fitness peaks.

Open Exchange

Charles felt that his desire to become a city manager had a direct connection to his having worked for three city managers when he was a department head in the different cities. He felt they were poor role models, and that experience made him want to be a city manager and be supportive of staff and his executive team. He stated:

> One city manager was very isolated; all three of them only cared about being the city manager. They didn't care a lot about what we ended up doing; they just loved being in charge. They didn't get they were not engaging the employee, and you never got a sense that they cared.… As a department head you would want to go to them and say, "I've got this big problem," and they would say, "Well, fix it." So, I vowed if I became a city manager I was not going to be like that. (April 23, 2010)

This demonstrated that Charles was aware of this open exchange with his environment. He observed entities in that environment and made choices based on that exchange.

Fractals

David seemed to have an awareness of the fractal nature of his role as city manager. The story also reflected that David had an awareness of nonlinear dynamics in his career:

> I think it is quite relevant as a strategy for people who are thinking strategically, and so I think you have to incubate and help this organism grow, but at some point, there has to be a critical mass, and there will begin to be a tipping point.… I think that is true about social movements, and try[ing] to create communities is a social movement. As a city manager, there are four roles we play: consciousness raising, convener, catalyst, and facilitator. Those are "enabling" roles, not really "doing" roles. Councils and staff need to know that and keep it in the forefront. (April 29, 2010)

This exhibited David's awareness of the power of fractals. He demonstrated an awareness that smaller components represent larger entities and lead to the emergence of new opportunities. He also understood the various components of the city manager position that made up the larger entity of the job. His comments also reflected an awareness of nonlinear dynamics and the notion that small changes can bring about large effects.

Dynamism

David also seemed to understand chaotic systems. He stated that if you look at organizations as systems, they are not always in balance; that they are in chaotic states,

and through those states, patterns emerge. He said he used this philosophy when he began

his community building pursuits.

> If you look at nature, what you really want to say is, "We are implanting an organism into an environment, and if you do it right, it will reproduce." That is the concept I followed with our community building efforts. (April 29, 2010)

David went on to explain how he had no plan when it came to community building—all

he knew is that he wanted to bring people in the community together and have them feel

a sense of belonging. He planted the organism by developing a citizen's academy that

brought residents together in the city to learn how the city works. From there, he let the

group form and self-organize around different ideas they had to build the community. As

a result, the group formed an emergency response program and a community builder's

speaker series. Neighborhood liaisons were formed, and the community building efforts

began forming neighborhood coalitions. As David stated, "One thing led to another."

Phase Transition

Charles also was aware of how he had adapted in his career. He talked about his

maturation as a leader and how that was in response to being what he referred to as the

"doldrums":

> The doldrums is a natural phase in anybody's career, and I got to the point where I was feeling like I really wasn't making the kind of contribution that I wanted. I had just lost my wife, and I was getting healthy again, and for my kids, I need to provide stability so I could just not move on to another city. So, I made a decision to stay and to respond to this phase of my career, I reconceptualized my role as leader. That meant I contributed in a different way. I got more professionally involved, and I did more training and writing.… I sort of developed a new sense of what it meant to be a leader. I got less operationally focused.… This was my maturation as a leader. I decided my most important job was to grow more leaders. The council didn't always like that and felt at times I didn't have all the answers, but I felt it was worth the risk. (April 23, 2010)

Summary of Findings From Research Question Two

The city managers that participated in this study did not express much of an awareness of their careers as complex adaptive entities or any of the characteristics associated with complex adaptive entities. One city manager had an awareness that she possessed the skills to do the job but needed to change the work environment to be successful. This showed an awareness of autopoesis. Another city manager had observed poor leaders in his environment, and this open exchange shaped and formed his career. David seemed to have an awareness of his career as a complex adaptive entity, and he exhibited an awareness of fractals and dynamism in his career. Charles discussed his maturation as a leader, which exhibited some awareness of phase transitions in career. Other than those examples, there was little evidence supporting the participants' awareness of their careers as complex adaptive entities.

Findings Summary

The narratives of the five city managers illustrated the complex nature of career. The findings show some common patterns and themes. These patterns and themes reflected many characteristics associated with complex adaptive entities. The most common themes that that emerged across participants dealt with adaptation, fitness peaks, strange attractors, open exchange, fractals and networks. In terms of the first research question, all the characteristics associated with complex adaptive entities were exhibited in the careers of the city managers.

Complex adaptive entities have the ability to maintain themselves, although, over time, they may change their components and shape. Several of the city managers who participated in the study talked about what anchored them in their careers. These anchors

included wanting to (a) serve the public, (b) create a legacy that would impact many future generations, (c) identify with the larger profession, and (d) improve the quality of life for people. These elements served as strange attractors for the participants, and they also served as the maintenance functions for the individuals as they adapted in their careers. Some talked about reconceptualizing their careers and roles as leaders. They referred to times when city resources were limited or when the community did not have high demand, and during these periods, they looked inward and grew and developed others as a way to improve their organizations and communities. This showed career connectedness to both the internal and external environment. It also showed the participants' desire to search for new fitness peaks in their careers, even in the face of challenge and uncertainty.

The participants exhibited states of open exchange with their environments. This brought about large changes that resulted from seemingly small events. Their career stories exhibited nonlinear dynamics, sensitive dependence, and dynamism. One city manager entered public service because of an early experience he had shared with his mother at a city council meeting. Another entered the field because she wanted to improve the quality of life for people as well as improve public-serving organizations. She thought she could do this through journalism but realized that working within the system would better serve her values and calling. That led to opportunities in various agencies where she was able to learn to adapt to the environment and "political waters."

The participants played various roles throughout their careers that served as fractals for the role of city manager. From leading small departments to community groups, these experiences contained elements involved in leading a municipal

organization. Likewise, the role of city manager was a fractal of the individuals who served in the roles. They were able to serve in the capacity and use their role as a way to express their connection of wanting to help and serve the public and improve institutions and organizations.

The city managers also demonstrated connectedness to both their communities and their profession. They knew they existed as part of a larger network and relied on that network for their very existence. They relied on professional colleagues and officials in times of need and used their network as sounding a board and support mechanism. They also felt very connected to their roles, and one participant admitted to being consumed by his position and the work he did for his community.

City managers adapted to their environment and sought new fitness peaks throughout their careers. They also changed their components in order to do so and made choices and decisions that impacted both their own survival and their career advancement. There was evidence of dynamism, sensitive dependence, attractors, phase transitions, and other characteristics associated with complex adaptive entities in their stories. The findings showed that the individuals had a profound desire to help both individuals and organizations, and this desire ultimately led them to the city manager profession. Their desire to make a contribution to the wellbeing of others and public institutions was, in essence, their strange attractor.

The second research question dealt with the participants' awareness of their careers as complex adaptive entities. There was little evidence that the city managers had this awareness. There was some knowledge by some participants of autopoesis, open exchange, fractals, dynamism, and phase transitions, but it was limited. Although not

expressed in terms associated with complex adaptive entities, the participants had an awareness of their own internal changes throughout their career. Regarding adaptation, participants talked about reconceptualizing their roles as city managers at different stages of their careers, growing more confident, and being resilient. One talked about the "doldrums" stage and what he did to adapt and adjust in his career. Others talked about what they did in challenging times and how they used networks for support and guidance. These few examples provided the only indications that city managers experienced their careers as complex adaptive entities.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter includes a summary of the study and its findings, a discussion of the findings both in terms of the theoretical foundation and the literature review, as well as conclusions and recommendations.

Summary

This section summarizes the statement of the problem, the purpose of the study, the methodology, the theoretical foundation, the research questions, and the findings.

Statement of the Problem

A large population of workers in all sectors of the economy is aging. Moreover, the advanced age in both the national and the international workforce has some experts predicting a labor shortage across the board over the next 20 years (Frisby, 2003; Toossi, 2007; Young, 2003). Some sectors have a higher percentage of older workers, and thus, are more vulnerable to this labor shortage. One such sector is government. These factors are further exacerbated by the emerging global economy, which has moved the talent competition to an international stage (Jorgensen & Taylor, 2007). Even with the economic downturn that began in 2008 and the high unemployment rates that resulted from that downturn, competition for qualified and talented workers is expected to be great.

The risk of losing a talented workforce is emerging as a critical issue for local governments, which was underscored in a study commissioned by the International City/County Manager's Association (Frisby, 2003). In the study, the potential exodus of

city managers from local government was called a "quiet crisis." The study attributed a

variety of factors to this quiet crisis; it included the imminent retirement of the "baby

boomer" generation, the competition for a finite group of skilled candidates, and the

attitudes of the younger workforce, which at the time of this study did not look favorably

on government jobs.

Although there is an awareness of the aging workforce and the prospective worker

exodus from government employment, there is inadequate research on why individuals

choose a career in government and why they stay in those professions. I was surprised

that I was unable to find any study that specifically addressed these issues at the

leadership level of local government. In many local government organizations, the city

manager is the leader of the organization; yet, to date, no studies have explored what

aspects of the job have historically attracted individuals to the role and how they have

adapted to remain in the position of city manager.

Purpose

The purpose of this study was to explore the career paths of city managers,

specifically what attracted these city managers to their chosen careers and how they

adapted in their careers as city managers.

Methodology

A qualitative research design was utilized in this study. Career narratives

(Savickas, 1993) were obtained from city managers in municipal agencies. Through

open-ended interviews, participants were prompted to tell the story of their experiences

as city managers, which enabled me to identify the events and experiences that have most

influenced and shaped their careers. The process helped me seek out the uniqueness of

each person's career experience while also identifying patterns of themes within the collective career stories of those who were interviewed as part of the research.

Theoretical Foundation: Complexity Science

Complexity science examines complex adaptive entities and their ability to self-organize, network, and adapt to survive and retain life in their environment. Complex adaptive entities respond to changes in their environment by attempting, through adaptation, to achieve a better fit. This is referred to as the "search for fitness peaks" (Bloch, 2005). Complex adaptive entities are generally spontaneous, disorderly, nonlinear, and changeable.

This study examined the leadership careers of city managers in the context of complex adaptive entities. In this context, the dynamic aspect of the city managers' careers was revealed, as well as the small changes that may have had large impacts on their careers. The nonlinearity of their careers shed new light on what sustained them in their positions.

Research Questions

This study explored the following two research questions:

1. To what extent do the stories of city managers reveal that their careers may be characterized as complex adaptive entities, exhibiting the characteristics of (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e) dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i) emergence, (j) connectedness, and (k) sensitive dependence.

2.   To what extent do city managers express awareness of their careers as

complex adaptive entities or any of the characteristics associated with them,

including (a) autopoesis, (b) open exchange, (c) networks, (d) fractals, (e)

dynamism, (f) phase transitions, (g) attractors, (h) strange attractors, (i)

emergence, (j) connectedness, and (k) sensitive dependence.

Findings

Research Question One

The first research question asked to what extent the stories of city managers

reveal that their careers may be characterized as complex adaptive entities, showing

characteristics associated with complex adaptive entities. The findings showed that the

stories of the participating city managers' exhibited the complex nature of career. The

stories of their careers exhibited autopoesis, open exchange, networks, fractals,

dynamism, phase transitions, attractors, strange attractors, emergence, connectedness, and

sensitive dependence.

The city managers discussed a strong sense of professional connection and

resiliency that helped them adapt to the many difficulties they encountered during the

course of their careers. They also discussed taking on assignments early in their careers

that were similar to the duties associated with the city manager position. Those

experiences are reflective of the fractal nature of career.

The participants also sought the position of city manager after being in open

exchange with their environment. They all had a strong commitment to public service,

which served as a strange attractor in their careers. In these stories, common themes

emerged among all the participants in the areas of adaptation, fitness peaks, strange

attractors, open exchange, fractals, and networks. Each of the participants told stories that significantly exhibited these characteristics.

Additionally, the city managers discussed situations in their careers that at first appeared to take them away from a predetermined career path. These events led to major career changes and eventually led to their taking the job of city manager. One participant observed city managers in his environment whom he felt were poor leaders, and this led him to want to do a better job, both as a leader and as one who would develop the staff. Another participant observed what he called "bozos" running a city, and he, too, was inspired to improve the city government.

The careers of the participants showed signs of strange attractors that eventually pulled them in the direction of a career in public service. The strange attractors included wanting to improve organizations, enhancing the quality of life for people, and creating legacies in their communities. The stories of the city managers showed that their careers were complex adaptive entities that were in open exchange in their environments, and they were also seeking fitness peaks.

Research Question Two

The second research question asked to what extent participants were aware that their careers acted as complex adaptive entities and the characteristics associated with complex adaptive entities. The findings show that there was little evidence to show that the participants had any awareness of their careers acting as complex adaptive entities. One city manager was cognizant that she possessed the skills to do the job but needed to change the environments around her to be successful. This shows an awareness of autopoesis. Another city manager observed poor leaders in his environment, and this

open exchange shaped and formed his career. Another participant did seem to have an awareness of his career as a complex adaptive entity, and he exhibited an awareness of fractals and dynamism in his career. Finally, one city manager who participated in the study discussed his maturation as a leader, and this exhibited some awareness of phase transitions in career. Other than those examples, there was little evidence supporting the participants' awareness of their careers as complex adaptive entities.

Discussion

This section summarizes the themes that were found in the stories of the city managers. The themes are presented as they relate to complexity science and also as they relate to previous studies from the literature review.

Themes: Complexity Science

The participants had unique stories and experiences that shaped and influenced their careers. Within their unique narratives, several themes emerged among all participants. Those themes are presented below, and they have been interpreted through the lens of complexity science:

1. *Adaptation*. The participants' careers changed, evolved, and adapted. The participants had a strong professional connection, were resilient, and had a commitment to public service that anchored them throughout their career adaptation.

2. *Fitness peaks.* The participants exhibited a sense of commitment, motivation, and satisfaction in their careers as city managers, and they sought new fitness peaks for themselves and their organizations throughout their careers.

3.   *Strange attractors*. The participants were drawn to their profession by strange attractors that included public service, improving quality of life, helping people, building communities, and creating legacies beyond one's career.

4.   *Open exchange*. The city managers who participated in this study did not have predetermined, linear career paths that led them to the role of city manager. Rather, their decision to seek the role of city manager was influenced by the interactions and interchanges they had with entities in their environments. These exchanges and interactions informed their careers desires and decisions to become city managers. This was evidence of open exchange in the careers of the city managers.

5.   *Fractals.* The participants had previous work experiences that served as fractals of the larger role of city manager. These tasks gave the city managers an awareness of and appreciation for the position of city manager and the confidence that they could someday do the job of city manager.

6.   *Networks*. The participants were influenced by their networks throughout their careers. Within those networks were civic-minded parents and historic public figures who sought to create a better and more just society through public service. The participants also had networks of support throughout their careers that aided them in turbulent, highly political periods in their careers and also strengthened their connection to the city management profession.

Theme One: Adaptation

The participants' careers were spontaneous, disorderly, nonlinear, and changeable (Bloch, 2005). There was evidence of dynamism, phase transitions, connectedness, autopoesis, sensitive dependence, and nonlinear dynamics in their careers. From a chance

encounter at a pub to a single conversation with a colleague, the careers of the participants were continually adapting to their environments. For Adam, an example of the adaptation occurred when he broke through the point attractor that was pushing him away from the position of city manager. Once he realized he did not necessarily have to have a vision for the community, he viewed the role in a new light, and career emergence occurred. When Bev first went to work for a city government, she had an elaborate plan that included working in every department. She later received a job offer in the city manager's office, and her plan never came to fruition. Eventually, the series of unplanned events helped catapult her to the top of a municipal organization. David had negative interactions with city government, and those exchanges led to a desire in him to work for cities and improve their operations. His career path was one of strange turns and events that included an assignment as a civilian fire chief and also took him out of the state of California where for a time he worked for a county government. This shows dynamism in David's career as well as his desire to seek new fitness peaks in his career.

These are stories of internal processes and spontaneous dynamics in career. The stories were examples of connectedness being linked to networks and dynamism being combined with emergence. This corroborated the work of Stackman et al. (2006) and Bloch et al. (2007). The process is neither predictable nor elaborately planned (Kaufmann, 1995). Although the stories have an element of structure to them, they also contain elements of surprise and unexpected events that shaped how their careers evolved. As Bloch (2005) noted, through the complexity process of autopoesis, people continually reinvent their careers and move freely between the many roles identified in the career path. This was exhibited in the stories of the participants.

Theme Two: Fitness Peaks

The participants expressed a belief that they were helping people, communities, and organizations in their careers. As factors changed in their careers, they adapted to reach new fitness peaks whereby they would be able to continue to help people, communities, and their organizations. Charles discussed becoming a department head at a very young age and how he adapted by employing rapid learning and formalizing processes and procedures in his department. Bev discussed an economic crisis that had impacted her community and organization. She responded by focusing on the municipal organization and developing the skills of the staff that served the city. Eric talked with great pride about the work he has done for the community—from skate parks to community centers—that will outlast his service as city manager for decades to come.

These stories show the careers of city managers acting as complex adaptive entities attempting to reach new fitness peaks. Complex adaptive entities respond to changes in their environment by attempting, through adaptation, to achieve a better fit. This is the search for fitness peaks (Bloch, 2005). In these stories, the participants had to adapt and retain life in their environment. They also searched for a better fit for themselves and for those within their organizations and communities. They sought to improve the environment for themselves and other entities in their environment. The participants had a strong desire to continue to improve society, even in times of adversity. In describing complexity science and chaos theory, Kaufmann (1995) stated, "Evolution is a story of organisms adapting by genetic changes, seeking to improve their fitness. Biologists have long harbored images of fitness landscapes, where the peak represents

high fitness" (p. 26). The participants in this study continually adapted to seek new fitness peaks.

Theme Three: Strange Attractors

The participants expressed values that worked as strange attractors in their careers. They sought out positions that would satisfy their calling to improve society, institutions, and the quality of life of the people in their communities. The participants spoke of events, both big and small, that influenced their careers. New opportunities emerged from these experiences that exhibited characteristics of strange attractors at play in their careers.

Serving as a reporter on Capitol Hill, Bev realized she could not improve institutions as she had hoped as a journalist. She became disillusioned with journalism as her chosen profession. She decided to seek a position with city government, and it was in that experience that she began to fulfill her desire to improve organizations and people's quality of life. Adam described public service as something that has true value, and he was motivated by seeing the connection of his work to people's lives. Eric talked about improving the physical characteristics of his community and how those improvements would outlast his time as city manager. This was legacy building for Eric, which served as his strange attractor and both pulled him towards public service and kept him satisfied in his career.

When the participants had career changes thrust upon them, these strange attractors remained at play, and as a result, new opportunities continued to emerge. Bev was dealing with tough budget times in her agency, and she adapted by focusing on developing the employees in her agency for the future. Eric discussed being a

psychologist of sorts and employing the law of mutual dissatisfaction. Bloch (2005) discussed how, in these transitions, career is characterized by the search for the best that each person can imagine for her- or himself. In these stories, the participants were in search for the best they could be for themselves and the agencies and communities they served. These strange attractors led to career emergence.

Theme Four: Open Exchange

Not one of the participants sought to become a city manager in the early stages of his or her career. The participants were drawn to public service by the strange attractors of helping people, society, and institutions. Once they began working for local government, they exhibited open exchange with their environments. The participants observed others in the role of city manager and began forming opinions of the position. One participant was struck by the varied duties of the position, while another participant was dismayed by the detachment he sensed of the city manager towards the rest of the organization. It was through this open exchange that career emergence occurred for the participants, and they each decided to pursue a city management profession.

In discussing careers, Bloch (2005) described careers as requiring living bodies to function and those bodies being in continuing exchange with all the entities of that body. This exchange was evident in the careers of city managers. This exchange led to career changes that were not predetermined by the participants in the study. These career changes were influenced by both strange attractors and the open exchange experienced by the participants.

Theme Five: Fractals

The stories told by city managers represent the fractal nature of their careers. The participants took on tasks that had been assigned to them that reflected many of the duties of the city manager. These assignments gave the participants a better understanding of the city manager position, and it also gave the participants the confidence that they could perform well in a city manager position. One city manager had had negative experiences with a city government, and this glimpse into the entity led to a desire for the participant to learn more about the entity itself and improve it. Lorenz (1993) described fractals as dimensions, that when magnified, resemble the whole and the entire system. This was evident in the stories of the city managers.

Theme Six: Networks

All the participants had networks of support that helped them throughout their careers. The networks of support were largely professional colleagues who served or had served as city managers. The participants used these networks of support for advice, knowledge, and as sounding boards. The participants discussed utilizing their networks of support during highly stressful periods in their careers. This was often due to the political environment in their respective agencies. The participants also likened networks to the community and organizations they served. A highly demanding citizenry was viewed as enabling better city governance, while a highly critical citizenry was viewed as creating a risk-averse city government. One participant also remarked on having enough "critical mass" to get things done. To effectively navigate in the city manager position, participants seemed to have a belief that you must utilize your professional network and connection for survival, understand the kind of community network you are working

with, and identify the stakeholders that you must bring with you to effectuate organizational change. This study supported previous research by Stackman et al. (2006) and Bloch et al. (2007) that examined networks and self-organizing entities.

These networks are both cooperative and competitive in nature. The supportive network of colleagues is a cooperative network that helped the participants navigate through difficult waters. The supportive networks gave the city managers the knowledge and advice that was needed to effectively manage through difficult times. The community network was more challenging and had an impact on both the city manager and the city government that they served. The community network sometimes enabled effective city governance and sometimes hindered the city government's ability to get things done. This, in turn, impacted the city managers' work and their view of their roles in these environments. There were also networks within the organizations that exercise influence on the city managers and their career paths. These networks sometimes move things in a different direction than what the city managers had hoped.

Bloch (2005) discussed how open exchange and networks impact career and lead to change. She referred to these open exchanges and networks as phase transitions between order and chaos. Bloch explained how sometimes these career changes are actively sought after, and at other times, they are simply thrust upon the individual. Both the political structure and community influences appeared to be thrust on the city managers in this study. In order to survive, the participants turned to other networks to survive and seek new fitness peaks. They also described a sense of resiliency embedded in them that allowed them to survive.

Themes Summary: Complexity Science

There were six themes identified in this study, all of which reflect the complex adaptive nature of careers. The participants were very adept at changing their shape and form to be effective in their leadership roles. They also were able to adapt to difficult situations not only as a means of survival within their positions, but to improve their "fitness" in a future state. This seemed to be borne out of the strange attractors that had originally drawn them to public service. Those strange attractors included the desire to improve institutions and their constituents' quality of life, as well as to create legacies for the community and future generation's benefit. The participants were very responsive to the open exchange occurring in their environments. They appeared to know the importance of observing and learning from other entities in their environments, even if that meant learning what not to do or how not to lead.

The participants also had "fractal" career experiences that allowed them to understand and prepare them for the larger role of city manager. These were not predetermined assignments on the road to becoming a city manager, but rather, chance opportunities that reflected the larger entity of the city manager position. All of the participants relied on networks to survive. They spoke of these networks of support whenever they were recounting a difficult experience. These networks gave them a strong professional connection, which carried them through difficult periods. The participants also spoke of other networks that pulled them in various directions in their careers. The power of these networks was very evident in the participants' stories.

Themes: Literature Review

The following section relates the themes in this study with the previous research covered in the literature review. The section covers two categories of the literature review that included studies supported by this dissertation: strategies to deal with changing workforce demographics and strategies to deal with the careers of city managers.

Theme One: Strategies to Deal With Changing Workforce Demographics

Jorgensen and Taylor (2008) found numerous issues associated with the dwindling workforce. They also identified attributes workers look for in employment. Those attributes included greater autonomy, organic structures, teamwork, participation, diversity, and problem solving. The narratives of the city managers illuminated careers that included many of these attributes. The city managers discussed situations where they employed rapid learning and organized teams to deal with significant issues facing their organizations and cities.

They also discussed a variety of problems that they dealt with in their role as city manager. Those included problems associated with the political environment, community needs, and city finances. In terms of organic structures, there was a bit of a paradox revealed in their stories: Although they worked in organizations with a very formal structure and hierarchy, their career paths were nonlinear and did not follow a predetermined path aligned with a formal organizational structure.

Callanan and Greenhaus (2008) researched the attitudes and opinions that people have of older workers, and they examined the methods used to retain older workers in the labor force. The researchers asserted that retaining older workers was one effective approach in dealing with an impending labor shortage. They provided several strategies

to retain older workers. One such strategy was to create a hassle-free and nurturing work environment. They described this as a work environment that emphasizes less tangible factors, such as the degree of balance between job and personal life, job challenge, and the opportunity to develop social networks.

The narratives of the city managers showed careers replete with job challenges and social networks. The city managers described very challenging issues and problems that they had dealt with in their careers. Moreover, they each had developed social networks that they tapped into when facing these problems. They also used these social networks as sounding boards in their careers. In terms of balance between job and personal life, the city managers did not describe these two aspects of their career as mutually exclusive or divided. They described their job as being part of them and something they carried with them in nearly all aspects of their lives. This did not seem to be a burden for the city managers, but rather, something that showed their passion for their work.

Theme Two: Careers of City Managers

Hassett and Watson (2002) conducted a study of city managers who had been in their positions for many years. Specifically, they identified 146 city managers who had served in the role in the same community for a minimum of 20 years. They sought to determine which factors led to their long service. The city managers completed a survey in which they were asked to evaluate the extent to which various factors had impacted their careers. The findings showed that factors related to higher tenure were (a) adaptability in a political environment, (b) active participation in the community, and (c) maintenance of values that anchor the city manager.

The career narratives provided by the participants in this study show that two of these factors—adaptability in the political environment and maintenance of values that anchor the city manager—were important to the participants. They each talked about techniques they used to adapt to the political environment. These included being resilient, maintaining a professional connection, and being confident. In terms of values, the city managers held steadfast to their commitment to serve society and improve organizations and communities.

Although this study did not examine seniority or tenure in the role of city manager, it did seek to understand how city managers adapt in their roles and which strange attractors drew them to the position. The findings associated with this study support the notion that adaptability to the political environment—as well as being anchored in the values that brought them to public service—were key components in the careers of city managers.

McCabe et al. (2008) examined turnover among city managers and the relationship between turnover and political and economic change. They were interested in identifying whether changes in the city council members and economic development in a community, or lack thereof, increased turnover of city managers. They performed an empirical analysis that showed that political changes tend to increase the chance of a city manager departing by 15%, while changes in short-term per capita income increase the likelihood of the city manager departing by only 2%. The participants in this study discussed the impact of political changes on their role as city manager. In fact, one participant did leave a leadership position in an agency due to the political changes and the election of a new mayor; however, the participants did not discuss changes in per

capita income, so that aspect of McCabe et al.'s, research was not supported or refuted in this study.

Themes Summary: Literature Review

The purpose of this current research differed from previous studies discussed in the literature review. Nonetheless, some of the themes from this current study supported conclusions drawn in the studies presented in the literature review. The city managers interviewed in this study held positions that involved a high degree of problem solving and team work to resolve problems and achieve goals. They had challenges throughout their careers, and they were influenced and aided in their careers by a variety of professional networks. They also had to adapt to changing political tides. These aspects of their career were aligned with previous research related to workforce retention strategies and careers of city managers.

Conclusions

The careers of the city managers illustrated the complex nature of their career. Bloch (2005) stated that, "the original idea that career development is a natural, internal process is borne out by the acceptance of career as a complex adaptive entity" (p. 199). The stories of adaptation told by the city managers are consistent with this view of career as a complex adaptive entity.

The themes that emerged in the study dealt with strange attractors, open exchange, fitness peaks, fractals, and networks. The participants continually interacted with their environments, and those interactions changed and shaped their careers. Networks and connectedness were inextricably linked and supported previous studies (Stackman et al., 2006; Bloch et al., 2007). All of the participants seemed to be drawn to

public service by a desire to help people and society. A majority of the participants were

influenced at a young age both by major current events in the United States that occurred

in the 1960s, as well as more insignificant events that took place in the local communities

where they either lived or worked early in their careers. The participants were also

influenced by their parents' values and interests, as these values and interests related to

helping society and communities. Those parental influences were part of the participants'

early networks and those networks were shaping and influencing the career paths of the

participants from a very early age. All of these factors influenced their career paths.

The participants had little to no awareness of their careers acting as complex

adaptive entities or the characteristics associated with complex adaptive entities.

Although the participants in this study discussed internal and external changes that

occurred throughout their careers, they had little to no awareness of the complex nature

of their careers and the adaptation that was occurring in their careers. They also had an

appreciation for unplanned events in their career paths that ultimately changed their

careers, but they had no awareness of the nonlinearity of career and the phase transitions

that were occurring. They did discuss luck in the their careers. Two examples that were

classified as luck in their careers was Eric's encounter with a professional colleague at a

bar and Bev's interaction with a former boss over lunch that led to a new opportunity.

There were three key factors I learned in this study. First, all the city managers

had a very strong commitment to public service. They valued communities and

institutions dedicated to communities and this is what drew them to public service and the

city management profession. Second, I learned the value of complexity science in

interpreting the data. By using complexity science as my theoretical foundation, I was

able to see and make observations that I may have otherwise missed. For example, in looking at what drew individuals to the city management profession, I identified public service as a strange attractor. If I had not had an understanding of complexity science, I would have thought of public service as a motivator. Third, I learned that qualitative research is a very iterative process that involves the flow of information to be interpreted and reinterpreted until meaningful patterns could be identified. I had to go through the text several times until I found patterns that could be used for this dissertation. The effects of this on the position of city manager was a deeper understanding of what drew individuals to the position and how they adapted in the position.

<div align="center">Recommendations</div>

This section provides recommendations from this research as it relates to the practice of city management and municipal organizations and educating leaders, as well as recommendations for further study.

<div align="center">*For Practice*</div>

The literature review revealed that not much is known about what attracts individuals to a career in city management and how individuals in the role of city manager have adapted to the demands and changes in their environment. This study showed a strange attractor of public service that drew individuals to the field. Survival mechanisms that were identified included adapting to changing political environments, being resilient, and utilizing supportive networks. This is new information that professional organizations committed to the city management profession could use to attract and develop leaders to city manager positions. It could be used in leadership

development programs by professional organizations and in programs designed to prepare individuals for leadership positions in local government agencies.

The study showed that the position of city manager was heavily involved in problem solving, working with teams, and dealing with a variety of complex issues. Based on previous research, these attributes of the position are highly sought after by a large contingent of the workforce. These characteristics of the job could be used in human resources programs as they relate to attracting and retaining leaders to the position. This data could be used by professional organizations that advance the city management profession. The data could be used by professional city managers when they do lectures and discussions to university students and/or others considering a career in public service or government. The data could also be incorporated in any of the recruitment tools that agencies use when doing outreach to college and universities.

For Education of Leaders

This study utilized complexity science to gain a better understanding of what attracts leaders to a specific position and how they have adapted to survive in the position. Few studies have used complexity science to examine careers and career development, and this study offers needed attention to this subject. The studies that have used complexity science include Bloch (2005) and Bright and Pryor (2005). Bloch explored careers as complex adaptive entities and related characteristics of complex adaptive entities to career. Bright and Pryor identified a prerequisite of this approach to career, which was to accept that career development was subject to a range of influences, which are continually changing at different paces and to different degrees. This was evident in this study, and additional use of the theory in career development research is

needed. The findings and conclusions drawn from the interviews show the power of complexity science in social research and in career development. These types of studies will illuminate small events that have large effects on career and may otherwise be discounted in quantitative research methods.

The research shows that the career journeys of the participants varied and were nonlinear, and that each participant had different experiences that prepared them for the role of city manager. These experiences represented the fractal nature of career. Moreover, these experiences represented characteristics associated with the larger role of city manager. This information would be useful in developing leadership programs that prepare emerging leaders of organizations. The data suggested that there are a variety of positions and roles in an organization that require a set of core leadership competencies. Leadership development programs that focus on these competencies may be valuable in preparing future leaders. Some of these competencies include the ability to adapt in a highly political environment and how to develop and foster supportive relationships.

Another theme that emerged from the study dealt with the power of networks. The city managers discussed the importance of professional networks in their careers. They also recounted stories that illustrated how these networks had helped them to pull their careers in and out of equilibrium. Additional research on networks and the power and influence they have on leaders is warranted.

For Further Study

It would be valuable to get the perspective of elected officials on how they view the city manager position and what adaptation they have seen, or would like to see, individuals in the position. This perspective may give aspiring city managers better

insight into the expectation of elected officials as it relates to the role of city manager, and it would provide a more thorough picture of the traits, behaviors, or characteristics that elected officials seek from a city manager.

This study did not measure job satisfaction. Through the stories of the city managers and the themes that emerged, it became evident that, overall, the participants expressed satisfaction in their careers. Additional research could be conducted that examines job satisfaction in light of the body of research and theory on this topic.

An additional study that educated the city managers on complexity science and then asked them to describe their career experiences in terms associated with complexity science would be valuable. It would have the potential to have participants view their own careers in a new light and analyze it from a different perspective.

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APPENDIXES

Appendix A

E-mail to City Managers

Dear (name of city manager):

I am writing to ask your help with a study that I am carrying out for my doctorate at the University of San Francisco. I have been involved for the last 15 years with city government and I am interested in the careers of City Managers. This is an important topic because as we are aware, there is a potential exodus of leaders from municipal government.

You have been identified as someone who meets the criteria to serve as a participant in the study. The criteria for participations are that (a) in the last 3 years, you have served as a city manager in a city with a population between 25,000 and 200,000, (b) you served in this capacity for a minimum of 3 consecutive years. I would like to interview you twice to hear your career story, your career path, and experiences. The first interview would be for approximately 90 minutes, and then a second shorter follow-up interview would last no more than 45 minutes and would be conducted a few weeks after the first interview.

All the information that I will collect will be kept confidential and I will use pseudonyms for you and the cities for which you work or have worked. We will meet at a location that is most convenient for you. Please contact me by _____ and let me know if you would be interested in participating in this study. We can then schedule a time to meet.

Thank you,

Bob Bell

Appendix B

Informed Consent Form
University of San Francisco
Consent to be a Research Subject

<u>Purpose and Background</u>

Robert Bell, a graduate student in the School of Education at the University of San Francisco, is conducting a study on the careers of city managers. The researcher is interested in exploring what attracts individuals to the profession and what retains them in the role of city manager.

I understand that I am being asked to be a participant in this study because I serve or have served as a city manager for at least 3 consecutive years. I have also served as city manager within the 3-year period preceding participation in this study. The municipal organization that I serve or served as city manager for at least 3 consecutive years had a population between 25,000 and 200,000.

<u>Procedure</u>

If I agree to be a participant in this study, the following will occur:

1. I will participate in an interview during which I will be asked about my career path and experiences as a city manager. The interview will be audio recorded and notes will also be taken during the interview.

2. I will participate in a follow-up interview during which I may be asked follow-up questions from the first interview and review a written summary of the first summary to add any clarification or elaborate on any points related to my career and experience as a city manager.

3. The interviews will be audiotaped using a digital recorder. The audio files will be transferred to a computer. The computer and the audio-tapes will be kept in a secure locked location. The interviews will be scheduled at a time and place that is convenient for me.

<u>Risks and/or Discomforts</u>

1. It is possible that some of the questions may make me uncomfortable, but I am free to decline to answer any questions I do not wish to answer or withdraw from the study at any time.

2. Participation in research may mean a loss of confidentiality. Pseudonyms will be used for both my college and myself in all material regarding this study.

Benefits

While there is no direct benefit to me from participating in this study, the anticipated benefit of this study is a better understanding of the factors that attract individuals to the role of city manager and the experiences that individuals encounter as city manager. This includes how city managers have had to adapt and change in their leadership roles.

Costs/Financial Considerations

There will be no cost to me as a result of taking part in this study, nor will I be reimbursed for my participation in this study.

Questions

If I have any questions, I understand that I may contact Robert Bell at 650-465-6032 or at bob2263@comcast.net. If I have further questions or do not wish to contact Robert Bell directly, I may contact the Institutional Review Board for the Protection of Human Subjects(IRBPHS) at the University of San Francisco, which is concerned with the protection of volunteers on research projects. I can reach them at IRBPHS@usfca.edu or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consent

I have been given a copy of the "Researcher Subject's Bill of Rights," and I have been given a copy of this consent form for my records.

Participation in this research is voluntary. I am free to decline to be in this study, or to withdraw from it at any time.

My signature below indicates that I agree to participate in this study.

_____

Subject's Signature   Date of Signature

_____

Signature of Person Obtaining Consent   Date of Signature

Appendix C

Research Subjects' Bill of Rights

Research subjects can expect:

1. To be informed of the extent to which confidentiality of records identifying the subject will be maintained and of the possibility that specified individuals, internal and external regulatory agencies, or study sponsors may inspect information in the medical record specifically related to participation in the clinical trial.

2. To be informed of any benefits that may reasonably be expected from the research.

3. To be informed of any reasonably foreseeable discomforts or risks.

4. To be informed of appropriate alternative procedures or courses of treatment that might be of benefit to the subject.

5. To be informed of the procedures to be followed during the course of participation, especially those that are experimental in nature.

6. To be informed that he or she may decide not to participate (as participation is purely voluntary), and that declining to participate will not compromise access to services and will not result in penalty or loss of benefits to which the subject is otherwise entitled.

7. To be informed about compensation and medical treatment if a research-related injury occurs and where further information may be obtained when participating in research involving more than minimal risk.

8. To be informed of whom to contact for answers to pertinent questions about the research, about the research subjects' rights and whom to contact in the event of a research-related injury to the subject.

9. To be informed of anticipated circumstances under which the investigator without regard to the subject's consent may terminate the subject's participation.

10. To be informed of any additional costs to the subject that may result from participation in the research.

11. To be informed of the consequences of a subjects' decision to withdraw from the research and procedures for orderly termination of participation by the subject.

12. To be informed that significant new findings developed during the course of the research that may relate to the subject's willingness to continue participation will be provided to the subject.

13. To be informed of the approximate number of subjects involved in the study.

14. To be informed of what the study is trying to find out;

15. To be informed of what will happen to me and whether any of the procedures, drugs, or devices are different from what would be used in standard practice;

16. To be informed about the frequent and/or important risks, side effects, or discomforts of the things that will happen to me for research purposes;

17. To be informed whether I can expect any benefit from participating, and, if so, what the benefit might be;

18. To be informed of the other choices I have and how they may be better or worse than being in the study; To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study;

19. To be informed of what sort of medical or psychological treatment is available if any complications arise;

20. To refuse to participate at all or to change my mind about participation after the study is started; if I were to make such a decision, it will not affect my right to receive the care or privileges I would receive if I were not in the study;

21. To receive a copy of the signed and dated consent form; and

22. To be free of pressure when considering whether I wish to agree to be in the study. If I have other questions, I should ask the researcher or the research assistant. In addition, I may contact the Institutional Review Board for the Protection of Human Subjects (IRBPHS), which is concerned with protection of volunteers in research projects. I may reach the IRBPHS by calling (415) 422-6091, by electronic mail at IRBPHS@usfca.edu, or by writing to USF IRBPHS, Department of Counseling Psychology, Education Building, 2130 Fulton Street, San Francisco, CA 94117-1080.

Appendix D

Instrument 1: Initial Interview Questions

Grand Tour Question:

1. Please relate to me the story of how you became the city manager.

The remaining prompts will be asked to the extent that they were not covered in the participant's response to the grand tour question:

2. What attracted you to the field of city management?

3. Since you have become city manager, tell me two or three high points and low points in your career? How did you handle these ups and downs?

4. Let's talk about one of those high points and low points. What did you find particularly challenging? How did you handle it?

5.   Taking just one of the low points (and then one of the high points), what factors do you think were at play?

6. Were there any unexpected results or effects in these two experiences?

7. Did you ever feel that luck came into play in these experiences? How about any other experiences in your career?

8. In what ways have you personally changed in your career as city manager?

9. Did you ever turn to others for help in your career as city manager? If so, to whom and how did you reach out?

Appendix E

Instructions to Participants Regarding Interview Summary

Attached please find a summary narrative based on our first interview questions. Please look it over and feel free to make notes on any responses that you would like to revise or elaborate on in our second and final interview that will be scheduled shortly. Thank you.

Appendix F

Instrument 2: Follow-up Interview Questions

1. Was there anything in the interview summary that you would like to discuss?

2. When I looked over the summary, I was curious about _____. Could you please tell me more about that area?

Appendix G

Relationship of Interview Questions to Research Questions

Research Questions   Interview Questions

1.To what extent do the stories of   Please relate to me the
city managers reveal that their careers   story of how you became
may be characterized as complex adaptive   a city manager.
entities, exhibiting the characteristics
of (a) autopoesis, (b) open exchange,   What attracted you to the
(c) networks, (d) fractals, (e) dynamism,   field of city management?
(f) phase transitions, (g) attractors,
(h) strange attractors, (i) emergence,   Since you have become
(j) connectedness, and (k) sensitive dependence. city manager, tell me two
                                                 or three high points and
                                                 low points in your career.
                                                 What did you find
                                                 particularly challenging?

                                                 Let's talk about one of those
                                                 high points and low points.
                                                 What did you find
                                                 particularly challenging?
                                                 How did you handle it?

                                                 Taking just one of the low
                                                 Points (and then one of the
                                                 high points), what factors do
                                                 you think were at play?

To what extent do city managers express   Were there any unexpected
awareness of their careers as complex   results or effects in these
adaptive entities or any of the characteristics two experiences?
associated with them, including (a) autopoesis,
(b) open exchange, (c) networks, (d) fractals,   Did you ever feel that luck
(e) dynamism, (f) phase transitions, (g) attractors, came into play in these
(h) strange attractors, (i) emergence,   experiences? How about
(j) connectedness, and (k) sensitive dependence. any other experiences?

                                                 In what ways have you
                                                  changed in your
                                                 career as city manager?

                                                 Did you ever turn to others
                                                 for help? To who & how?