

Public Sector Organizational Change:  
A Study of the Relationship between Work Space and  
Collaboration  
As An Indicator of Culture Change

Cynthia Quick Burns

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Public Administration

School of Public Affairs

University of Baltimore  
Baltimore, Maryland

July, 2015

Public Sector Organizational Change:  
A Study of the Relationship between Work Space and  
Collaboration  
as an Indicator of Culture Change

A Dissertation

Submitted to  
Yale Gordon College of Liberal Arts,  
University of Baltimore  
In partial fulfillment of the requirements for the degree  
of

Doctor of Public Administration

by

Cynthia Quick Burns

---

Dr. Lenneal Henderson

---

Dr. Lorenda Naylor

---

Dr. Ed Gibson

School of Public Affairs  
University of Baltimore  
Baltimore, Maryland  
July, 2015

## ACKNOWLEDGMENTS

I have met many people that have piqued my curiosity and contributed to my life-long love of learning. In particular, I would like to acknowledge two outstanding women who taught me that many rules are really just guidelines, Mrs. Elizabeth Quick and Dr. Emily L. Burns. Secondly, I thank Mr. Lloyd Rowland and Mr. Mike Rodrigue for the opportunities to explore the boundaries of those guidelines.

I am truly grateful to my committee members. Through your kindness of spirit, generosity of time, and scholarly guidance, I have exceeded my dreams in reaching this academic milestone.

To the most wonderful family in the world, thank you. To my husband and the love of my life, Dave, thank you for the gift of time and space; time is one of life's most precious commodities and you gave generously. To Sam and Erika, you are my greatest inspiration and each day I am more proud of who you are becoming. Your support and encouragement lifted my spirits and prodded me to keep moving forward. I hope I can continue to inspire you to be life-long learners, knowing that there is always more to explore, new people to meet, and creative ways to make a positive impact.

## ABSTRACT

Public Sector Organizational Change:  
A Study of the Relationship between Work Space and  
Collaboration  
as an Indicator of Culture Change

Cynthia Quick Burns

In this mixed methods study, logistics regression analysis indicates a causal relationship between collaboration and work space; hermeneutics and content analysis revealed Congressional interest in inter-agency collaboration, yet lacked compelling evidence of a relationship between the variables of interest. The literature review exposed a broad expanse of theories on organization change and its many components. The perspective of change in this study is organizational culture, with a focus on one factor, collaboration. This research included analysis of secondary data from the annual OPM Federal Employee Viewpoint Survey and Congressional documents. Bivariate regression analysis revealed that work space and collaboration have a causal relationship and that managers' support of collaboration indicates a stronger effect than the information sharing behavior of co-workers. Implications for future research are discussed.

## TABLE OF CONTENTS

INTRODUCTION .....	1
REVIEW OF THE LITERATURE .....	9
Introduction.....	9
Organizational Change .....	10
Content .....	12
Context .....	22
Process .....	29
Criterion .....	34
Organizational Culture.....	40
What is Organizational Culture?.....	42
Key Contemporary Contributors .....	47
Paradigms .....	54
Public versus Private .....	58
Role of Leaders .....	59
Can Culture Be Changed?.....	62
Can Culture Be Measured?.....	66
Future Trends .....	69
Collaboration .....	71
Culture and Collaboration .....	73
Collaboration Defined .....	77
Why Collaborate? .....	81
Levels of Collaboration .....	85
Collaboration in Use: Benefits and Challenges.....	92
Major Debate: Is Collaboration the Panacea?.....	97

Work Space.....	100
Evolution of Work Space .....	101
Values and Design .....	102
Changing Paradigms .....	104
Work Space and Culture .....	106
Measures .....	112
Summary.....	114
Conclusion.....	117
Deficiencies in Past Research.....	120
METHODOLOGY.....	122
Research Question.....	122
Research Design.....	124
Quantitative Methodology .....	126
Qualitative Methodology.....	131
Mixing.....	134
RESULTS.....	137
Results of the Quantitative Analysis.....	137
Data.....	137
Data Characterization.....	140
Descriptive Statistical Analysis.....	143
Inferential Statistical Analysis.....	145
Results of the Qualitative Analysis.....	146
Data.....	147
Data Characterization.....	151

Data Analysis.....	152
Mixing.....	166
DISCUSSION.....	170
APPENDICES	
A: Fedview Questions.....	188
B: Fedview Participants.....	192
C: Congressional Committees.....	195
D: Senate Committee Reports.....	196
E: House of Representatives Reports.....	201
REFERENCES.....	206

**LIST OF FIGURES**

1. Organization Change.....	12
2. Organization Change (Content).....	13
3. Organization Change (Context).....	23
4. Organization Change (Process).....	30
5. Organization Change (Criterion).....	34
6. A Model of Organization Performance and Change.....	75
7. The Fan of Options.....	77



**LIST OF TABLES**

1. Agency Participation.....	140
2. Descriptive Statistics.....	143
3. Congressional Report Summary.....	148
4. Congressional Reports in Second Cycle.....	153
5. Results of Content Analysis (Collaboration).....	154
6. Results of Content Analysis (Work Space).....	157
7. Results of Hearing Content Analysis.....	160

## INTRODUCTION

Public administrators operate in institutions and institutional failures have profound effects and impacts on society. As such, there have been numerous administrative reforms passed in an attempt to address government failures (Government Performance and Results Act of 1993, P.L. 103-62; Homeland Security Act of 2002, P.L. 107-296; Intelligence Reform and Terrorism Prevention Act of 2004, P.L. 108-458). Public managers seeking to prevent, or respond to, government failures through organizational change encounter significant obstacles, reorganizations that require an act of Congress, and inflexible, centralized decision-making processes.

Collaboration is emerging as a promising topic for change research, particularly in the public sector. Collaboration is a work style that involves people pooling resources and decision making to produce a product or service (Linden 2003). The expansive continuum of collaborative efforts, from national security, to local service delivery, offers significant implications as an area of study and recent events have demonstrated the imperative for collaboration as a key tool of public administration.

Examples of government failures due to lack of collaboration are numerous and impact a range of government areas from defense, to emergency management to health care. Some of these government failures have resulted in fatalities. On September 11, 2001, four planes from Boston, Washington, and New York were hijacked by terrorists and crashed into the World Trade Center in New York City, the Pentagon, and a field in Pennsylvania. On that day, nearly 3000 people, on the ground and in the planes, were killed in the surprise terrorist attack (National Commission on Terrorist Attack Upon the United States 2004). Four years later, on August 29, 2005, Hurricane Katrina, a category 3 hurricane, made landfall in Louisiana (Butts, Acton, and Marcum 2012) resulting in the evacuation of over one million people and the death of 1300 (Leitner, M. Barnett, Kent, and T. Barnett 2011; Cigler 2007). In 2014, The Department of Veterans Affairs (VA) was alleged to have systematically delayed treatment that resulted in 40 deaths at the VA hospital in Phoenix, AZ (Martin 2014). These events were tragic and many factors contributed to the outcomes. One factor that contributed to these dire consequences was the failure to collaborate and as illustrated by these examples, the lack of government collaboration can be deadly.

These three instances of government failure reflect a federal bureaucracy in crisis, i.e. a failure to collaborate. Following the 9/11 terrorist attacks, Congress legislated organizational structure changes to address some of the shortcomings exposed by the attacks. The Department of Homeland Security (DHS) was established in the Homeland Security Act of 2002 (P.L. 107-296 2002), and the intelligence community was reorganized with the establishment of Director of National Intelligence (DNI) in the Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458 2004). Following the reports of the allegations of delays in veteran care leading to premature deaths, the Secretary of the Veterans Affairs announced "the largest restructuring in the department's history" (Wax-Thibodeaux 2014). In the public sector, organization change is a common crisis response and, external pressures and events, such as the 9/11 attacks, Hurricane Katrina, and the VA crisis, are used to create a platform for change (Fernandez and Rainey 2006; Sastry 1997). In the case of the DNI and DHS, the change was legislated; in the case of the VA, the reorganization was announced by Robert McDonald, the Secretary of the VA (confirmed by Congress in July 2014 following the resignation of VA Secretary Eric Shinseki in May 2014) (Statement by the President 2014).

However, organizational change is not limited to realignments of organization charts and expanding inquiries on other avenues of organizational change are promising.

This research is intended as an investigation of organizational change, one aspect of organization theory, and a topic in which researchers seek a "deeper understanding of the dynamics of change" (Armenakis and Bedeian 1999, 311). In this study, organizational change is defined as the purposeful modification of a system, or components of the system, to achieve improvement (Reichers, Wanous, and Austin 1997; Pettigrew, Woodman, and Cameron 2001; Cummings and Worley 2009). The literature on organization change reviewed in this study will be subdivided and explored as the four categories of content, context, process and criterion. Following the review of the literature regarding organizational change, the focus will sharpen, specifically, on the study of content, or the types of change. Experts subdivide the content theme into structure (as seen with the reorganizations of DNI, DHS, and VA), process, and culture. The second theme addresses process changes (as a type of change) and includes changes in procedures. The third theme of change under the content category is culture change. This type of change involves the character of an organization (Selznick 1957). While

this topical division of culture change is useful for organizing literature it is less clear in practice and, of the four themes, it is particularly difficult for public managers to implement.

The intent of this study is to explore one factor of culture change, collaboration, and its operationalization by public managers. According to Linden (2003), collaboration may lead to integration of products and services, presumably to counter stove pipes as evidenced by the responses to the 9/11 attacks and Hurricane Katrina. Collaboration has emerged as both a process and a culture issue. For both DNI and DHS, one goal of the new organization structures was to eliminate the stove pipes and to enable cross-discipline efforts. Underlying and influencing the change in process was the existence of existing cultures from the antecedent organizations that were carried into the newly formed organizations. For example, in the case of the establishment of the DNI, the culture of the CIA (one component of the new DNI) was influenced by compartmentalization. Compartmentalization is a physical separation of operational units, established in the design of its site in Langley, VA in the 1950s (Friedman 2013). The facility design instantiated 'need-to-know'; an imperative to protect intelligence sources and

methods by limiting access to sensitive information to the smallest number of people. Under the new DNI structure, intelligence officers needed to overcome the need-to-know mindset in order to change processes for handling and sharing intelligence information. This shift implied new cultural values requiring stakeholders and participants to understand that information sharing is valued under the new DNI construct; it is not only an acceptable way in which work should be accomplished, it is also an expected way to improve the contribution of intelligence to national security.

One area in which public managers have attempted to influence collaborative behaviors is through modification of the physical space in which work is accomplished. Peterson and Beard (2004) confirm that the layout of the physical work space should enable the successful achievement of organizational objectives. Through work space arrangement, collaboration is enabled by changing the environment, i.e. less individual space and more common space. The open environments allow collaborations that lead to shared understanding, provide learning and teaching opportunities, feed knowledge flow, and enable creative problem solving (Parkin et al. 2011). In the last decade, the General Services Administration (GSA) has redirected

its efforts from solely facility management to work space management that supports organizational objectives (Kaczmarczyk and Murtough 2002). In her study, Khademian (2002) suggested that it is nearly impossible for public managers to change organizational culture; however, her research indicates that changing program commitments may lead to changes in cultural roots. Her connection between current commitments and culture provides a framework for implementing operational changes to change behaviors, i.e. invest in work spaces that increase collaboration.

This study of work space and collaboration represents one dimension of the concept of culture change in the public sector. This research is intended as an academic effort with operationalization by practitioners in mind. As events have demonstrated, the public sector is not averse to organization change. On the other hand, effecting change beyond the surface is difficult. Exposing a connection between an observable artifact (Schein 1992), such as work space, and underlying values and assumptions expressed as collaborative behavior merits attention. Public administrators may find that local commitments of work space design may lead to successful collaboration-- which may contribute to deterring one terrorist attack,



saving lives via emergency management, or treating veterans with appropriate patient scheduling procedures.

As you will see in the following chapter, there is a wide range of approaches in the literature that represent a variety of perspectives on organizational change; however, there is a lack of validation of a connection between collaboration and work space. Thus, it is prudent to explore the relationship of these two variables to gain a greater understanding. The additional insight gained through this endeavor may be applied by public administrators, to national defense, to emergency management, and to health care initiatives. Organizational change is a central concept for public administrators who are consistently striving to improve performance. We are not there yet. We need to change things, and in order to do this, we need to continuously seek to better understand change.

## REVIEW OF THE LITERATURE

### INTRODUCTION

The purpose of this chapter is to identify and review literature relevant to the working research question, *is there a relationship between work space design and collaboration?*

This literature review captures the broad concept of organization change, narrows to changing organizational culture, and specifically, delves into collaboration as one aspect of an organization's culture as a target of change. Literature addressing the physical work environment is reviewed, leading to a discussion of work space design. The criteria for selection were the value towards identifying key concepts and theories as well as indicators of methods for data collection and analysis. The resources pursued for this literature review included academic, theoretical, commercial, and policy literature.

The literature review will include a presentation of the key perspectives presented about organizational change and culture, collaboration, and work space. The material will be reviewed for its research methodologies and resultant evidence used to support the authors'

observations, constructions, theories, models, and findings. The literature review will also include emerging issues in the literature about the key concepts.

The purpose of this research is to explore the viability of organizational culture change and the evidence of success. Thus, this literature review emphasizes organization culture as the research area. The research starts with organization change as the overarching subject, and then narrows to organization culture, then onto collaboration as one indicator of an organization's culture. Lastly, the review turns to the independent variable of this study, work space.

#### *ORGANIZATIONAL CHANGE*

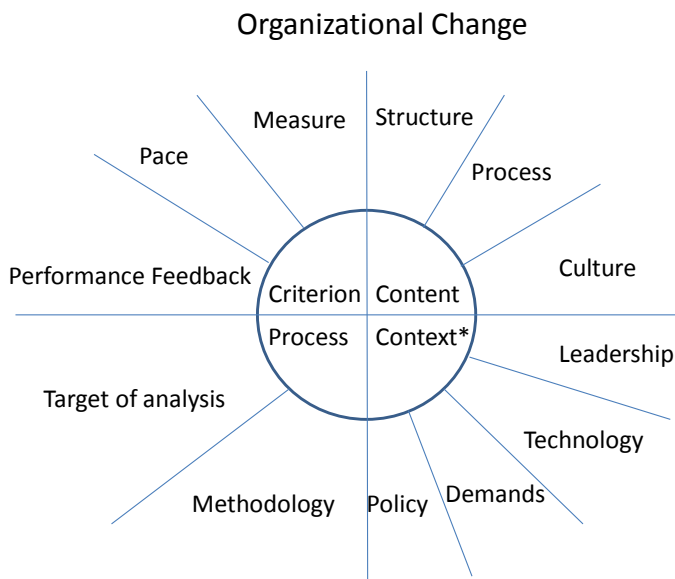
Creating public value is the domain of public administrators (Moore 1995). Often times the value is questioned and the goal becomes improvement on the delivery of public goods and services. One approach to achieving these improvements is by modifying the system, or components of the system, i.e. organization change.

Organizations change in response to, and in anticipation of, internal and external environmental shifts. The change itself may be continuous or episodic. Regardless of the catalyst, or the nature of the change, or

the process elected to make the change, the literature is consistent that the desired result of the change is some form of organizational improvement, i.e. increased efficiency and effectiveness (Armenakis and Bedeian 1999; Damanpour 1991; McHugh 1997), strategic realignments to changes in external environments (Beer and Eisenstat 1996; Gresov, Haveman, and Oliva 1993; Kotter 1995; Oakland and Tanner 2007; Orlikowski 1996), reinvention, transformation, or reformation (Fernandez and Rainey 2006; Reichers et al. 1997). In short, organizational change is the purposeful modification of a system, or its parts, to achieve improvement (Reichers et al. 1997; Pettigrew, Woodman, and Cameron 2001; Cummings and Worley 2009). Quinn and Cameron's study asserts that organization change is predictable (1983); this construct introduces the viability of purposive organization change, the focus of this study. In order to proceed to the variables of interest in this research, collaboration and work space, this literature review begins with the theories of organizational change.

This section of the literature review is organized about the themes identified by Armenakis and Bedeian (1999). The criteria for the selection of material in this section are the relevance of the information to the themes of content, context, process, and criterion in

organizational change. The following diagram provides a visual map of these keys topics:



\*Internal and External Environments

Figure 1. Organization Change

### *CONTENT*

The first theme, content, addresses types of organization change. The type of change indicates the target of change; these targets comprise the factors of organization change (Armenakis and Bedeian 1999). The target of change initiatives may be structure, process, and culture, either individually or collectively. The type of change may be based on the extent of the change; significant organizational change may be identified as

strategic or transformational (Armenakis and Bedeian 1999; Burke and Litwin 1992; Cummings and Worley 2009). Less significant change may be labeled as operational, transactional, or component change (Rainey 2009). Change initiatives may focus on individuals or on groups (Barney 2004; Cummings and Worley 2009). The type of change may be described as short term (episodic) versus long term (continuous) (Pettigrew, Woodman, and Cameron 2001). The type of organization change will inform the process to be utilized for the change effort.

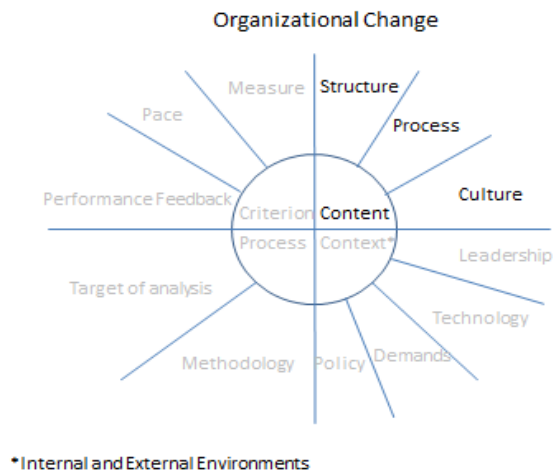


Figure 2. Organization Change (Content)

The types of change are described through the lens of the targets of change, structure, process, and culture (Figure 2). **Structural organization change seeks realignments, of work, of people that accomplish the work,**

and of the space where people perform their work.

Structural change via reorganization is a common action in the public sector (Maynard-Moody, Stull, and Mitchell 1986). Structural change may reflect a change in priority to realign resources to the most important activity. An example of this is the establishment of the Director of National Intelligence following the terrorist attacks on September 11, 2001 (U. S. Government Accountability Office 2004). The purpose of this restructuring was to increase oversight of the performance of national intelligence activities and specifically to increase information sharing. Through a realignment of national intelligence resources, policy makers emphasized the importance of cross-agency intelligence production. Structural change is also implemented as a response, e.g. the Department of Veterans Affairs announced a restructuring to remedy systemic errors. These errors were exposed during a "nationwide scandal" of treatment delays to veterans (Wax-Thibodeaux 2014, A25).

The second type of change in the content theme is process, as in, how things are done (this is different than the change process itself discussed later in this study). An example of a process change is the change in the compensation model for federal employees from the general

schedule to pay banding. The general schedule has been in place for over sixty years, while pay banding began in the 1980s following the enactment of the Civil Service Reform Act of 1978, P.L. 95-454 (Ricucci 2008). In the general schedule system, rules for pay increases are fairly standardized and rigid. Pay increases are based on seniority and satisfactory performance in the job position. Employees may also move up in the pay schedule through promotion to another position. In the pay banding systems most commonly implemented, pay decisions are based on performance assessments. Pay decisions in the pay banding systems require more supervisory involvement and managerial deliberation. The National Security Personnel System (NSPS) was an attempt by the Department of Defense to create flexibility in personnel management systems using pay banding. In this example, after seven years, the NSPS was repealed due to a failure in the process design (Parker 2009); the Defense Intelligence Agency and the National Security Agency reverted to the general schedule while the National Geospatial-Intelligence Agency retained its pay banding program initiated in 1999 (Thompson 2010).

The third type of change in the content theme of organization change is culture. Change initiatives centered on organization culture attempt to change, in the



broadest sense, an organization's character (Selznick 1957). An expansive review of the literature on organization culture change will be provided in a subsequent section.

Three primary types of organization change are structural, process, and culture. Each of these types of change may be cross-referenced by the perspective of the change to include, the target of change, the scope of change, and the window of time of the change.

*Target of Change.* The target of change may be an individual or a group (and its variants) (Barney 2004; Cummings and Worley 2009). The literature on individuals in change is often psychologically based. The interest is on the effect of change on individuals and how best to motivate individuals during change. Theory on individual motivation gained research interest in the mid-twentieth century with Maslow (1943) and McGregor (1957) and continues with today's scholars interested in employee readiness for change, resistance to change, and cynicism towards change (Burke and Litwin 1992; Oakland and Tanner 2007; Pettigrew 1987; Reichers, Wanous, and Austin 1997). The literature also explores the qualities and competencies of individual leaders to effect change. There is general consensus that organizational change can only be successful

with strong leaders perceived by employees as capable and trustworthy (Latta 2009; Ott 1989; Paglis and Green 2002; P21 Framework Definitions 2009). Closely related to the leaders' ability to effect change are individual employees' openness and willingness to change. Some influences on an individual's reaction and reception is the individual's role within the organization, age, length of service, and the individual source of motivation (Wallace, Hunt, and Richards 1999).

Change at the group level seeks to affect a collection of individuals with a common bond such as technology, process, location, or customer base. A change initiative at the organization level is an initiative that affects multiple groups or components. The literature makes a distinction between group and organization change as organization climate and culture. Wallace, Hunt, and Richards (1999) distinguish organization climate as being within the control of managers while culture is beyond their control. Jung et al. (2009) addresses the climate and culture divergence as a research methodology debate indicating the distinction is reflected by a quantitative approach to study climate and a qualitative approach to study culture. In this study, the use of survey data on organizational climate melds these concepts; the questions

of interest may be construed as being beyond managers' control yet the survey itself provides the data for the quantitative analysis.

*Scope.* Similar to the levels of analysis between individuals, and groups, organization change types may be sorted by the level of scope, i.e. transactional, operational, transformative, or strategic.

Transactional organization changes are often associated with individuals, operational changes target groups, and transformation and strategic changes target organizations and industries. Strategic changes are "nontrivial" and are made in response to an organization's environment (Fox-Wolfgramm, Boal, and Hunt 1998, 90). As part of strategic planning, an organization may identify an emerging threat to, or opportunity for, its success in the future. These changes are intended to enable an organization to survive and thrive within the forecasted environment.

Similarly, the literature also describes scope of change as a first or second order change. The first order change is internal, while second order change is radical, strategically reorienting, or transformational (Fox-Wolfgramm, Boal, and Hunt 1998). Golembiewski, Billingsley, and Yeager (1976) distinguish the types of

change as alpha, beta, and gamma. Alpha changes are similar to first order changes and represent a "change in condition" (140), beta changes result from shifts in indicators or intervals, while gamma changes are comparable to second order changes or "change in state" (140). Gondo and Amis (2013) provides a matrix of change in terms of acceptance and level of conscious reflection leading to changes in the practice (similar to alpha) and changes to the organization (similar to gamma). Organizational culture change is a second order or gamma change. Kotter (1995) defined transformational changes as "fundamental changes" (59); his Harvard Business Review article describes eight errors made in corporate transformational change effort. The eighth error is failing to address organizational culture as a part of the change initiative. Following the climate and culture distinction, the Burke and Litwin model (1992) indicates that transformational change affects culture.

*Time.* The last perspective of organization change in the content theme is time. Time, as a dimension of development administration, was the topic of a conference sponsored by the American Society for Public Administration at the University of California, Berkeley, in 1965. The conference agenda was used as a guide for creating a

compilation of essays written by participants and released in 1970. In one of the essays, Gunnell (1970) addresses the confusion of the meaning of development administration ranging from the usefulness of Western administrative practices to developing nations, to administration of changing policies or objectives. For the purpose of this study, the essay concepts inform the literature regarding the impact of time to organization change. Ilchman (1970) provides an historical view of time and how the perspective of time has changed from the beginning of time to its application in contemporary administration. Ilchman aligns one shift in the view of time to the transition from agriculture time to industrial time, as in, from a cyclical seasonal view to a linear concept of time. This shift was particularly relevant to the work force as a resource to be managed (Gunnell 1970). One three part frame for structuring the management of time is provided by Moore (Gunnell 1970; Ilchman 1970). In this construct, time has three components identified as synchronization, sequence, and rate, where synchronization involves coordinating concurrent activities, sequencing involves linear arrangements of events, and rate addresses how often events occur in a specified time period. These three fundamental components of development administration time are critical

for administrators seeking to implement plans and programs for development (i.e. organization change). As the type of change is developed with structural, processual, and cultural dimensions, the means for implementation must be arrayed in a temporal framework, meaning managing development time through synchronization, sequence, and rate, in a manner that is achievable in the target organization.

In more contemporary applications of organizational change, the duration of the change may be continuous or episodic. Continuous change occurs when the movement from one state to another is evolutionary. This type of change allows modification of the change initiative as it is implemented. The incremental nature of continuous change allows participants the opportunity to adjust; conversely, the slow nature of continuous change initiatives allows time for the "forces for maintaining the status quo" to gather and organize (Cummings and Worley 2009, 131). Episodic change is indicative of one event and is the change that often follows a disaster event. The disaster may be a result of any number of triggers, an act of nature, an act of man, or an act of the market. In any case, the change initiative is a reaction to the event and is typically a short duration effort.

In summary, the first theme of organization change literature is content. This theme encompasses the "substance" of organizational changes (Armenakis and Bedeian 1999, 295). The literature review exposes the views of academics and practitioners in the three types of organizational change: structure, process, and culture. The types of change were then addressed from three perspectives. The first view is the target of the change (individual, group, organization), the second view is the scope of change (transactional, operational, transformational, and strategic), and the third view addressed the time frame of change, either continuous or episodic. We now move to the second theme, context.

#### *CONTEXT*

The second theme of organization change is context. Change is contextual in that it occurs within an environment. Thus the research on change context explores the reason for change. Context is additive to the complexity previously addressed in the content theme. Each type of change has an effect, or is affected by, the context of the change. This section describes four considerations of context: leadership, technology, demands, and policy.



Figure 3. Organization Change (Context)

Researchers have identified drivers for change, also known as change imperatives, as changes in regulations or policies, emerging technology, changes in customer and stakeholder demand, and leadership changes (Armenakis and Bedeian 1999, Oakland and Tanner 2007, Rainey 2009). In particular, public managers use external pressures and events to create a platform for change (Fernandez and Rainey 2006; Sastry 1997). Three types of pressure, that leads to change are coercive, mimetic and normative (Fox-Wolfgramm, Boal, and Hunt 1998). Coercive adaption occurs when changes are mandated, e.g. the establishment of the Director for National Intelligence in the Intelligence



Reform and Terrorism Prevention Act of 2004 (P. L. 108-136 2003). Mimetic pressures lead organizations to mimic the processes of others that are perceived to be successful, e.g. The Government Accountability Office adopted human resource practices from the private sector (Ostroff 2006). Lastly, normative pressures lead organizations to follow institutional patterns, e.g. The National Park Service (NPS). The NPS mission of preserving national treasures for future generations has endured since 1916 while its bureaucracy has adapted to a myriad of change, such as the increase of visitors from one million in 1920 to 275 million in 2008 and the 1996 legislative change requiring Senate confirmation of the selection of the NPS Director (Goodsell 2011).

Both internal and external environments may provide imperatives for organizational change. Internally, the context of an organization in its life cycle may suggest the imperative for change (Quinn and Cameron 1983). Their research provides a four-stage summarized model from the literature on organization life cycles. The first stage, entrepreneurial, captures the initiation of an organization characterized by a proliferation of ideas, and gathering resources with minimal planning. The second stage, collectivity, is identified by the sense of mission and the

extra effort to satisfy this mission, organized informally. In the third stage, formalization and control begin to emerge with rules, structure, and procedures. The last stage, elaboration of structure, reflects an outward perspective to expand, adapt, and renew. This four stage summary model portrays a linear view of organizations as they mature over time and suggests how each phase sets a context for change.

*Policy.* Contextually, a change in policies or regulations affects an organization's mandates or strategy to achieve their definition of success. An example of a change in policy that affected a strategy change in the federal sector is The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT Act). This law was enacted 45 days after the terrorist attacks on September 11, 2001 (Pub. L. 107-56 2001). This Act, in response to a horrific tragedy, provided the context for changes in the intelligence community. The policy allowed for changes in collection authority, the relationships between the government and businesses that access information, and in the organization structure. Additionally, a policy driven change may lead to a structural change (Beer and Eisenstat

1996) as indicated by the reorganization of the Intelligence Community enabled by the US PATRIOT Act.

*Technology.* The second driver for change is emergent technology. New technologies have changed nearly every aspect of daily life—we acquire our news from our hand held devices, we work from digital inboxes and we collaborate globally in real time domains. As an example of a technologically driven change, the early advent of emergent computer processing power in the 1980s enabled the federal government to transition from the art of cartography to the science of digital map production. The new technologies changed not only the process for making maps but also led to a restructuring of federal organizations that used the same digital satellite imagery (The Advent of the National Geospatial-Intelligence Agency 2011). As the technologies have continued to evolve since the 1980s, geographic information about the earth that was limited to government organizations is now available to the public through pocket-sized phones and in-car navigation systems. This miniaturization of technology has also influenced work space. Advances in virtual technologies have migrated clunky storage devices to back rooms, or off-site data centers, and wireless technologies have freed workers from their desks and enabled work portability and worker

mobility. The changes in technology have also altered the concept of space. Work space is no longer limited to the immediate area surrounding an employee but it is extended to working in the virtual space. Employees now collaborate on line, in real time with colleagues in different sites and different time zones. The evolution of work space beyond one's physical space shifts employees' perspectives. Ideas and conceptualizations can expand from the localized area of influence to a global, strategic perspective.

*Demands.* Changing customer and stakeholder demands is the third category of organization change context. Customer driven change is evidenced by changes in product sales in multiple industries: healthier food, safer cars, and more portable technology. Change in customer demand is a key principle of economics, i.e. supply and demand. Stakeholder demands are particularly relevant in the public sector. The USA PATRIOT Act is an example of change driven by stakeholders. In the post 9/11 threat environment, U.S. citizens, as stakeholders, were willing to rebalance individual privacy and security (National Commission on Terrorist Attack Upon the United States 2004). Changes in stakeholder expectations led to a change in focus of the U.S. Centers for Disease Control and Prevention (CDC) from studying diseases to disease prevention (Goodsell 2011).

The number and breadth of stakeholders for public organizations tends to be larger than for private organizations (Ostroff 2006) and both internal and external stakeholders have notable influence with regard to change.

*Leadership.* In addition to changes in policy, technology, and stakeholder demands driving organization change, leaders may provide the imperative for change. The literature reveals two dimensions of leadership and change. The first is that leadership is a critical factor in organizational change. The second, a tangential factor, is that leaders must not only lead change, they must change; leaders that don't adapt to the changing environment will be unable to affect successful change initiatives (Lipman-Blumen 1996; Peters and Savoie 1994). The literature is consistent about the importance of leadership in organizational change (Sanger 2008). Leaders must communicate the compelling reason to change, they must engender credibility to lead change, and they must demonstrate the change. It is up to leaders to convince the stakeholders that change is necessary. In a case study of the New York Department of Finance, Sanger (2008) concludes that leaders must not only lead and implement the change but they must also empower employees to be participants and key players in change. Ostroff (2006)

identifies two leader characteristics that jeopardize change in the public sector. First, bureaucrats are rule followers, they are taught to "respect barriers" (147). Second, government employees are skeptical of appointed leaders' commitment to change. In the public sector, managers use external pressures and events to create a platform for change (Fernandez and Rainey 2006; Sastry 1997).

This literature review on organizational change is articulated from the four perspectives of content, context, process and criterion. In content, the type of change, the literature was organized by structure, process, and culture. For context, the environment of change, the literature discussed the key drivers of change, policy, technology, stakeholders, and leaders. The discussion now proceeds to the third theme, process.

#### *PROCESS*

The literature on content and context provides the types and motivators for organization change. The third line of inquiry about organizational change is on the processes through which change is implemented. The literature on organization change process self-divides into two areas of interest, the target of change and change

methodology. The target of change refers to the object of the intended change, as in, the level of analysis. The literature on change methodology addresses how to design and implement change.



Figure 4. Organization Change (Process)

*Target of Analysis.* In a discussion on process change, it is necessary to understand the target of the intended change. The target may be individuals (employees, managers, or leaders) or the target may be various constructs of groupings (team, organizations, or industries). The process for organization change is a factor of the target, i.e. the process of changing individuals is different than the process for changing groups. The literature on individuals as the level of

analysis is traditionally based on the theories of psychology (Barney 2004). An analysis of individual motivation to change, readiness for change, and cynicism about change will inform change leaders about the change design. Of particular interest for public administration is the study of public service motivation (PSM); studies have shown that compensation models that may be effective in the private sector may not be effective for public employees (Rainey 2009). Group dynamics are the domain of sociologists (Barney 2004). When the level of analysis is groups, then change processes must reflect the activities and personalities of the targeted groups. Following along on a spectrum of the level of analysis, organizational analysis increases the complexity as it must address individuals and groups as well as the organization. Holistic organization change processes requires a different level of commitment and engagement than with groups and individuals. Organizational history, stability, success and senior leadership must be factored into the change process (Quinn and Cameron 1983; Armenakis and Bedeian 1999; Sastry 1997; Burke and Litwin 1992; Reichers, Wanous, and Austin 1997; Beer and Eisenstat 1996). The literature also addresses some commonalities regarding the level of analysis. A key finding is that there is a need for



processes that recognize both an individual's and an organization's openness and readiness for change (Walinga 2008; Wanberg and Banas 2000).

*Methodology.* The methods of change are generally prescriptive and may be comprised of steps or phases that must be adhered to in order to successfully change (Kotter 1995, 2002; Fernandez and Rainey 2006; Oakland and Tanner 2007). Kotter has had commercial success with an eight step change process: increase urgency, build the guiding team, get the vision right, communicate for buy-in, empower action, create short-term wins, don't let up, and make change stick. Of particular interest in this study is the last step, make change stick, as this step incorporates culture change. Over time, Kotter changed the wording of the eight steps and concludes that transformation failure may be attributed to "not anchoring changes in the corporation's culture" (1995, 67), an indication of the growing attention to culture's effect on transformational change. In a second example of prescriptive methodology, Sanger (2008) reports on the six stages of implementation used by the New York City Department of Finance. In this effort, the Finance Department was assisted by consultants to: design, build SMART cards (objectives) and provide

training, collect data, implement, train managers, and continue development.

A third prescription is provided specifically for the public sector. Ostroff (2006) summarizes change efforts at the Occupational Safety and Health Administration, the Government Accounting Office, and U.S. Special Operations Command. Using these three organizations as positive examples, Ostroff (2006) offers principles that "characterize successful public-change efforts and can achieve the desired results" (142). These simply worded principles are: 1. improve performance against agency mission, 2. win over stakeholders, 3. create a roadmap, 4. take a comprehensive approach, and 5. be a leader, not a bureaucrat. This is a daunting recipe, given Ostroff's assessment that most public leaders have about two years to follow these principles. Contrary to the prescription approach to organization change, Orlikowski (1996) suggests that an improvisational change may be more effective than overly structured change processes. The methodology for culture change may be prescriptive, yet, one of the current trends is the low success rate of sustained culture change (Sanger 2008). Oakland and Tanner (2007) report success rates in the ten to thirty percent range. Studies indicate

that processes and efforts to change culture take time, five to fifteen years of sustained commitment (National Performance Review 1993; Sanger 2008).

### *CRITERION*

The last theme of organization change, in addition to content, context, and process, is criterion for the measure of change. The literature on criterion encompasses the research on the effectiveness of organizational change. The literature on criterion, or measure of organization change, migrates to three categories, the measurement of change, the pace of change, and the performance feedback on the change effort.



Figure 5. Organization Change (Criterion)

*Measurement.* Due to the multi-disciplinary nature of organization change initiatives, measurement of change tends towards the dominant theoretical area. The majority of research has been conducted as case studies and limited quantitative research based on small population surveys (Fernandez and Rainey 2006; Armenakis and Bedeian 1999; Pettigrew 1987). The measurement of organization change also suggests a divergence between the private and public sectors. Measurement in the private sector is measurable in financial terms, e.g. profit, stock holder value, return on investment. Measurement, writ large, in the public sector has been difficult; measurement of organization change is quite elusive. Goodsell (2011) describes organization change in public agencies and provides a rubric with which to measure public agencies' "mission mystique" (2). Using a nine attribute model he assigns scores to six cases and identifies characteristics that have allowed these six agencies to survive and thrive in organization change. Organizational change that is implemented to achieve an articulated, desired result may be more readily assessed as a binary outcome, i.e. it did, or did not have the effect.

*Pace.* The second area within the criterion theme is the pace of change. In this view, time is a variable to the effect of change, either episodic or continuous. An example of an episodic change is the National Security Personnel System (NSPS) designed to migrate civil servants from the general schedule compensation model to a pay-banding model (National Defense Reauthorization Act for Fiscal Year 2004, U.S. Public Law 108-136 2003). In this example, enactment of legislation provided the episode to which measurement of the targeted structural change could be accomplished. However, in this instance, the extensive nature of the change may not have been appropriate for an episodic implementation, or perhaps the implementers had not adequately assessed the significance of the change to the workforce. The GAO (Monitoring of Safeguards and Addressing Employee Perceptions are Key to Implementing a Civilian Performance Management System in DoD 2009) reported inadequacies in the DoD performance reports and due to this inability to provide performance measures of the NSPS processes and results, the NSPS was repealed in the 2010 National Defense Authorization Act (Parker 2009). The rejections of this change initiative may be attributable to the pace of change; perhaps a continuous

pace would have allowed time and opportunity for the implementers to gain acceptance by the constituencies.

In contrast, organizational change initiatives seeking to achieve effects across a spectrum, over time, are more difficult to measure. This type of change seeks continuous or evolutionary results and is often pursued by government services, e.g. less homelessness and improved reading and math scores. These types of changes are often embedded in 'wicked problems' that require cross-organizational efforts. According to Kettl (2006), these difficult problems are the crux of the boundary issue inherent in public administration specifically the issue of accountability, i.e. holding agencies accountable for results.

The effect of the pace of change is multi-dimensional as an intentional factor in design change or as an unintended effect. Study of the performance of a change initiative may be conducted as before and after research, longitudinally, or in stasis. Kotter (1996), focusing on the private sector, reports that it takes 5-7 years for major organization change. The National Performance Review states that culture change requires 5-15 years of sustained commitment while the average length of appointment for public leaders is two years (Ostroff 2006). Whether

organizational change is intended to be short or long term, transformative or incremental, consideration of pace of change as a criterion is warranted.

*Performance Feedback.* The third area of consideration with criterion is with performance feedback. Performance feedback informs decisions on resources (Cummings and Worley 2009). The pace of change influences the ability to assess the effectiveness of change in that accountability is enabled by stability not by change (Quinn and Cameron 1983). Sastry (1997) recommends that performance measurement should be suspended during organization change to garner the support of operational managers who are accountable for operational performance during disruptive change efforts. Contrary to the research that discourages measurement of organizational change is a study published in 1991. In this study, Damanpour (1991) conducted a meta-analysis on organizational innovation where innovations are described as new ideas and behaviors and innovation is a "means of changing an organization" (556). Through statistical analysis of specified organizational variables and multiple innovations, the Damanpour findings indicate a notable relationship between innovation and the organization type, the type and scope of the innovation, and the stage of implementation. The type of organizations

(manufacturing, service, profit, and non-profit) influenced the results with the correlations indicating that in one context standardization enables innovation and in another, innovation is inhibited. Damanpour's analysis is suggestive that organizational change is a viable field for performance feedback, i.e. was the organizational change effective?

Obstacles to successful change are identified throughout the literature and are applied to a cross section of the four research themes, content, context, process, and criterion. The literature review reveals barriers to success to include change management competence (Cummings and Worley 2009; Dull 2010; Gardner 2008; Paglis and Green 2002; P21 Framework Definitions 2009; Reichers, Wanous, and Austin 1997 ), cynicism with the organization and the leaders (Dean, Brandes, and Dharwadkar 1998; Reichers, Wanous, and Austin 1997), resistance to change (Fox-Wolfgramm, Boal, and Hunt 1998), and mismatches and incongruence (i.e. between the organization personality and the change strategy) (Fox-Wolfgramm, Boal, and Hunt 1998; Rainey 2009; Sastry 1997). Some obstacles that are specific to government organizations include incongruity with limited short term appointments, technical experts, inflexible doctrine, important constituencies (Ostroff



2006; Pettigrew, Woodman, and Cameron 2001), and failure to address culture (Burke and Litwin 1992; Cummings and Worley 2009, Dean, Brandes, and Dharwadkar 1998, Jung et al. 2009; Kotter 1995; Oakland and Tanner 2007; McConnell 2007; US GAO 2004). Peters and Savoie (1994) conclude that government is a monopoly so it has no incentive to change.

In summary, the four themes of organization change are content, context, process, and criterion. In a broad context, there is ample literature available for both theoretical research and practical application of content, context, and process. The literature describes types of organizational change, cause for organizational change, and methods and procedures to be used for organizational change designs. However, there is a gap in the research on criterion, i.e., the lack of measurable results; this is particularly evident in the public sector. Given the four themes of organizational change, we are now able to proceed to the substance of organizational culture.

#### *ORGANIZATIONAL CULTURE*

The relevance of organizational culture, as an emergent area for academic research in organizational theory, increased in the 1980s (Ott 1989). The theories of organizational culture explore human behavior individually,

with others, and in groups and these theories have foundations in anthropology, sociology, and psychology. (Barney 2004; Gagliardi 1986).

Public sector organizational culture theory is a branch of public administration theory. Chester Barnard (1938) was one of the earliest authors to reflect that the public administration orthodoxy of the scientific method (Taylor 1912) did not fully capture the organization. Barnard defined an organization as a "system of consciously coordinated activities or forces of two or more persons" (Barnard 1938, 73); a sociological system based on cooperation, which includes personality and social elements. *The Functions of the Executive* became a practical guide for the human side of administration such that one cannot "understand an organization or how it works from its organization chart" (121).

In the middle of the 20<sup>th</sup> century, organizational theory continued to expand beyond scientific methods, to a consideration of the workers themselves. Maslow (1943) introduced a framework for understanding workers' motivations, i.e. the hierarchy of needs (physiologic, safety, love, esteem, and self-actualization). These needs must be met in order, that is, basic needs must be met

before a person can achieve self-actualization. McGregor (1957) provided Theory Y; a counter to the traditional Theory X that man is lazy. According to McGregor (1957), organizational theory must explore the social sciences as a means to improve "materialistic achievements" and to move "one step closer to the "good society"" (163). Theory Y suggests that man is internally motivated to work. Of particular interest are people's egoistic needs of self-esteem and reputation-needs that McGregor believes are "rarely satisfied" (160). Decades later, Simon (1997) changed the lens on the human debate from how to manage people to the managers themselves. While earlier theorists explored concepts of improving worker performance through motivation, Simon's theory of bounded rationality ascribed organizational success to the managers. In addition to the influence of the workers on organizational success, the limitations of the managers' capabilities relating to intuition, judgment, and creativity also influences organizational success.

#### *WHAT IS ORGANIZATIONAL CULTURE?*

Definitions of organizational culture coalesce around the idea that there is something that influences organizational performance beyond the formulas constructed

by rationalists and economists (Jelnick, Smircich, and Hirsch 1983; Riccucci 2001). The earlier debate between the rational theorists and the humanists hinted at the concept, that there were underlying issues that affected an organization's ability to define and repeat the 'one best way'.

Organization culture is a multi-dimension construct that includes psychology, sociology, anthropology, and organizational theories. Psychology provides a critical view into individuals in culture change. Armenakis and Bedeian (1999) specifically assert that "organizations depend on human direction to succeed" (307). Individual contributions (positive and negative) are indicated as critical to organizational culture change from top to bottom and these same individuals are often the target of change activities. As the target of change, it is not unexpected that employees are often threatened by change. To assuage these fears, efforts to justify the need for change and to provide training on how to change are directed at the employee level. Individual resistance to change, leading to collective resistance to change, often leads to culture change failure. On the other hand, the ability to capture enthusiasm in employees as change agents and managers often contributes to success. Wanberg and

Banas (2000) specifically studied the impact of change on individuals and provide recommendations for managers to consider during change implementation. For example, managers should ensure employees' fear of diminished job performance after change are addressed through additional training and that employees' resistance to change can be mitigated through inclusion in the change process.

The sociological view of organizational culture is concerned with how people interact in groups. The research explores how group norms and values cause, or are affected by, a group's culture. Ouchi (1981) introduced Theory Z to describe the Japanese approach to management as demonstrated by Japanese car manufacturers in the 1970s. Theory Z was named as the next logical step to the McGregor (1957) theory of motivation, categorized as Theory X and Theory Y. During the 1970s, the cost of high quality Japanese automobiles was less than the cost of U.S. manufactured cars. The U.S. automobile industry, out of necessity, investigated the Japanese business model. What they found is a team approach in the Japanese factories. The impact of the Ouchi's research is that it widened the aperture of the management lens beyond individuals to groups (Barney 2004). Anthropological paradigms are useful in culture change theory. Organizations may be conceived

of as modern versions of tribes and organizational behavior can be studied through this anthropologic lens. The anthropologic roots of organization culture in research are visible in comparative management, corporate culture, organizational cognition, organizational symbolism, and unconscious processes (Smircich 1983). The value of crossing disciplines of anthropology and organization cultures is pursued with the "aim is to understand the "natives" in their own terms and to understand the varieties of native behavior" (Jelinek 1983, 332). Through a study of organization employees as members of a clan, researchers can observe individual behavior in relation to others. This approach is different in that it avoids the inherent structure and management in organizations. Wilkins and Ouchi (1983) studied the relationship of organizational culture and performance from an anthropologic view. They concluded that clan forms of control may enable or impede performance depending on the ambiguity of the "transactional conditions" of the organization (447). By applying an understanding of clan behavior to the social context within organizations, managers will have a greater appreciation of the organization's ability to change.

Sociologic and anthropologic theories share symbology as an important factor in organization culture. "Symbols are objects, acts, relationships, or linguistic formations that stand ambiguously for a multiplicity of meanings, evoke emotions, and impel men to action" (A. Pettigrew 1979, 574) and symbols serve as the path for organizations to establish themselves. Through an understanding of symbols, organizations create images. These images have power as signification, domination, and legitimation (Jelnick, Smircich, and Hirsch, 1983). Signification refers to use of symbols to communicate to members that which the organization holds to be important. For example, the U.S. Supreme Court Building portrays significant tenets in its architecture to include the scales of justice to signify impartiality. Symbols in organizations also communicate power (as a form of domination). The symbolic value of office space has been used to communicate organizational power. The allocation of space has been employed as a method to designate positional power and status within an organization (Zalesny and Farace 1987). Legitimation through symbology reinforces the meanings expressed by these same symbols. In order to change organizational culture, the symbols that express the culture must be understood.

To understand the theory of organizational culture change, one must recognize the variability in the approaches—to understand the organization's needs and to understand the people within the organization—both as individuals and how they relate to each other through formal and informal structures. Ott (1989) describes this view of organizations as the organizational culture perspective, "a frame of reference for the way one looks at, attempts to understand, and works with organizations" (1). While early public administration theory does not specifically address organization culture change, it is an underlying theme that is weaved through the writings of Barnard (1938), Taylor (1912), and Maslow (1943). The early theorists provided a solid foundation upon which the late twentieth century researchers continued to build and expand theory.

#### *KEY CONTEMPORARY CONTRIBUTORS*

There are many contributors to the theory of organizational culture change. The following discussion focuses on key contemporary contributors, Philip Selznick, Edgar Schein, Andrew Pettigrew, and Anne Khademian.



Selznick (1949, 1957) provided a framework for culture through the expression of commitments. Selznick's theory began as part of his study of the Tennessee Valley Authority in the 1940s (Selznick 1949). In *Leadership in Administration* Selznick (1957) provides an executive level approach to leading in the post-World War II era, using primarily military organizations as explanatory examples. Within this work, of particular interest to organizational culture change theory is a discussion of organizational character. (As described, organizational character is similar to organizational culture.) Selznick (1957) offers that this organizational character is formed from the "elaboration of commitments" (40). The commitments represent the values of the organization reflected in the ways the organization managers act. There are two categories of commitments. The first is internal commitment which provides specificity of broad organizational goals. The second category of commitment is external pressures. These institutional commitments are accepted voluntarily or involuntarily. Involuntariness reflects commitments that are accepted to avoid risk negative consequences. Through the acceptance of these established commitments, the character of the organization becomes firm. Selznick addresses the impact of these

permanent commitments to attempts at organizational change. Specifically, Selznick (1957) cautions leaders that "set beliefs create problems for the leader who undertakes to move in new directions" (96). The set beliefs are one of six elements that create social structure within an organization; the other five are: assigned roles, internal interest groups, social stratification, participation, and dependency. While Selznick (1957) may have been ahead of many theorists in consideration of values as commitments, his discussion of "elite autonomy and culture viability" (121) may have contributed to decades of resistance to change. It is his opinion that it is incumbent on the elites in the organization to protect values; he specifically defines elites as those charged with protecting social values. Selznick (1957) advises that it is critical to sustain protection of the "autonomy of culture-bearing elites" (122).

Schein (1992) is recognized for his conceptualization of the levels of organizational culture and is credited with establishing a "theoretical framework for understanding organizational culture" (Khademian 2002, 18). Schein (1992) describes culture in the context of levels of analysis, distinguished by the ability to observe. The

three levels of culture are "artifacts, espoused values and basic underlying assumptions" (Schein 1992, 17). Artifacts represent the "visible organizational structures and processes" (17) of an organization's culture such as uniforms, and flags. Schein cautions that while the artifacts are clearly visible, they may be difficult to understand.

Values and beliefs represent normative behavior, i.e. what organizational members believe ought, or ought not, to happen. To build upon the value concept, Wallace, Hunt and Richards (1999) provide a list of twelve distinct values evident in organizations: power, elitism, reward, effectiveness, efficiency, economy, fairness, teamwork, law and order, defense, competitiveness, and opportunity. The value dilemma arises when individuals hold different perspectives on values, e.g. power should be shared or power should be centralized. The explication of these values is not intended as an assumption that scholars agree that values matter; some argue that managers have personal values of what ought to be and others suggest that administration "should be value-free" (Wallace, Hunt, and Richards 1999, 549).

The least observable level of the culture represents the deepest form of culture, the basic assumptions. Basic assumptions provide guidelines for employees on "how to perceive, think and feel" (Cummings and Worley 2009, 521). Schein's framework considers changes to basic assumptions as challenging because they are ingrained in routine behavior and therefore, difficult to observe and therefore difficult to identify for change.

Pettigrew provides an anthropological perspective of organizational culture change. Pettigrew's research is focused on the origin of organizational culture and how it is developed over time. Pettigrew has had a "long-term research interest in the longitudinal-processual study of organizations" (A. Pettigrew 1979, 570). In this view, his temporal research explored a collection of organizing ideas like "symbol, language, social drama, and ritual that highlight organizing" (Jelinek, Smircich, and Hirsch 1983, 331). Culture, in the anthropologic view, is the system of publicly and collectively accepted meanings operating for a given group at a given time; "this system of terms, forms, categories, and images interprets a people's own situation to themselves" (A. Pettigrew 1979, 574). Pettigrew (1979) conducted a longitudinal study of a British boy's school

over nearly fifty years and explored the impacts of dramas on groups and leaders and how they convey purpose which leads to evolution of cultures over time. In this mixed methods study, Pettigrew explored how creating organizational culture is a continuous process. Using retrospective and current interviews and questionnaires, his focus was on how cultures are created and how they change over time. In particular, Pettigrew studied how changes in headmasters and dramas affected the school environment. Pettigrew (1979) suggests that symbols, languages, ideologies, beliefs, rituals, and myths are used to express and sustain values. In this way, organizations and leaders develop a cultural frame that establishes which expressions are legitimate and which are not.

Pettigrew (1979) also uses the construct of commitment mechanisms in his study by extending the concept of commitment to individuals within groups. He identifies sacrifices and investments as commitments that individuals may make in response to organizational leadership. Relating to change, Pettigrew (1979) highlights the necessity for individuals to leave behind previous commitments in order to accept new commitments. Part of the appeal of a personal commitment is an expectation to share in organization's future growth. Over time, the

collection of individuals' commitments, especially in a new organization, evolve into organizational commitments.

Khademian (2002) provided a pragmatic lens for organizational culture change based on Selznick's commitment theory. The value of her contribution is that it is targeted specifically for the public sector. Khademian (2002) expanded on Selznick's commitment theory to develop the relevance of cultural roots to culture change in public organizations and elaborated upon Schein's levels as indicating accessibility rather than observability.

Khademian also builds on Selznick (1957) and expands on the concept that change may occur through "the elaboration of commitments—ways of acting and responding that can be changed, if at all, only at the risk of severe internal crisis" (Selznick 1957, 40; Khademian 2002, 13). She relates organizational commitment to culture roots. Khademian argues that "if managers want to change culture, they must focus on the roots of culture and manage the way in which task, resources, and environment are integrated" (47). The cultural roots framework consists of the assumptions that culture results from the tasks, resources, and environment and that culture is not managed by public

managers. Khademian's theory recognizes the differences between public and private organizations and provides a feasible approach based on public leaders' constraints.

While there are many contributors to organizational culture change theory, Selznick, Schein, Pettigrew, and Khademian are highlighted for their unique contributions. Schein provides a strategic orientation of how culture imbues itself within organizations. Pettigrew's long term view of culture development indicates that changing culture may also be a long term initiative. Through the use of the construct of leadership behavior as commitments, Selznick provides a uniquely tangible view of traditional organizational theory. Khademian is highlighted as a major contributor for providing an actionable framework specifically devised for use in the public sector.

#### *PARADIGMS*

Organizational culture change theory is comprised of many perspectives. It is the multidimensional aspect of the subject that creates a rich environment for research. As Sun Tzu (1963) characterizes the strategies of war as nearly limitless where "primary colours are only five in number but their combinations are so infinite that one

cannot visualize them all" (91), the diversity and combination of views on organizational culture are nearly limitless. Like the primary colors, the components of many study disciplines can be combined in various ways to create paradigms in organizational culture change theory. The following discussion covers a few of the more prevalent theoretical perspectives.

The positivist paradigm has potentially been the most influential on developing and constraining organizational culture change theory in public administration. The positivist focus on efficiency, hierarchy, and quantification of the best method left little room for the influence of other values. The omnipresence of the scientific method has deterred inquiry on how culture change contributes to public administration theory. Due to the very nature of culture as theorized by Schein (1992), it is difficult to conceive of empirical studies of culture in terms of production efficiency. Researchers continue to contrive ways to legitimize culture change theory through inquiries that recast perspectives. Jelinek, Smircich and Hirsch (1983) described the dilemma in that researchers continue to look for ways to capture the human aspects of organizational culture "beyond the merely rational or



economic" methods (331). This is also identified indirectly by Riccucci (2001) as an issue--"the conviction surrounding the notion that a proposition has meaning only if it can be empirically assessed seems somewhat myopic" (174). Culture change theory often includes values and beliefs as critical factors. However, public administration theory is often approached as logical, while "moral and value statements are merely emotive" (174). Armenakis and Bedeian (1999) conclude that "unanticipated side effects in affective outcomes can undermine - even defeat - an intended change" (308). In the context of culture change, the positivist paradigm will be undermined by not addressing the human side of a change program.

A post-bureaucratic paradigm has emerged which addresses a government that provides value rather than efficiency. Sanger (2008) concludes that the shift from traditional hierarchy and authorities to flexible structures and empowerment requires a change in bureaucratic culture. The movement from traditional bureaucracy to new bureaucracy is a theme often repeated. Whether the new bureaucracy is New Public Management (NPM) or reinvented government, researchers disparage the early twentieth century model. According to Hood (1991), the

precepts of NPM must be in line with the safety culture within government bureaucracies. Hood asserts that there are three values in public management characterized as sigma, theta and lambda. Sigma values represent public administration that is resource bound, i.e. success means tasks match resources. Theta values represent fairness in honesty in administration and include appeals processes and reporting. Lambda-type values ensure resiliency with back-up systems and plans for contingencies as seen in emergency management and national security programs. It is these three characterizations that contribute to the culture of public service which NPM seeks to modify. The 1993 National Performance Review (The National Performance Review 1993) attributes the state of government to inflexible hierarchies, and risk aversion. The NPR solution contains four parts: cut red tape, put customer first, empower employees, and cut back to basics. The third characteristic of empowering employees specifically addresses the need to change the culture that currently constrains federal employees from providing better government.

*PUBLIC VERSUS PRIVATE*

The primary debate in organizational culture theory revolves around the viability of changing culture, particularly in the public sector. Within the theory relevant to this study is an effort to identify the characteristics of the culture of the public sector, and exploring the efficacy of expanding organizational culture change theory within public administration.

During the 1940s, public administration theory was diverging on the dichotomy between politics and public administration (Wilson 1887). As part of that mid-twentieth century deliberation, Appleby (1945) asserted that "government is different" (119). What he may not have anticipated is that this argument would be fodder for a totally different debate. Today, Appleby's "government is different" philosophy can be used to differentiate public and private organizations' ability to change their culture.

Perry and Rainey (1988) contributed a survey of research on the differences between public and private organizations. This foundational research facilitates an understanding of the nature of an organization's culture. According to Perry and Rainey (1988), the literature on the private-public differentiation in organizational theory

began to increase in the 1980s, about the same time as organizational culture theory (Ott 1989). Two observations were reported, first that organizational theory had not been adequately applied to the public sector, and second, that existing organizational theory made no distinction between public and private organizations. The failure to separate the theory was evident in "environments, constraints, incentives and culture" (Perry and Rainey 1988, 182). Referring to the observability levels of culture (Schein 1992), it is not surprising to find that failure to acknowledge the distinctive characteristics of government organizations is a gap in public administration theory.

#### *ROLE OF LEADERS*

Leaders play a key role as both change agents and as the target of change. Research on organizational culture change is rife with literature on the role of leadership in change and methods of change and leaders are repeatedly described as the key to successful change. Leadership as a major factor in culture change can trace its roots as far back as the Barnard (1938) discussion on the risk of selection of leaders. In practice, leaders should not be selected wholly on their technical experience, rather

executives must be able to guide the "cooperative system as a 'whole'" (Barnard 1938, 289). Kotter (1995) combines both leadership and processes to describe how leaders fail in change by not fully addressing the eight steps to transformation. Leaders are necessary to establish a vision and to create momentum through inspiration (Oakland and Tanner 2007). Sanger (2008) writes specifically to public leadership. Due to short tenure of leadership assignments, changing culture "is a tall order" (625), but it is not impossible. Through leadership, organizational transformation is accomplished by getting employees to do what needs to be done (Sanger 2008).

The importance of culture, in terms of demanding leader's time and attention, tends to diverge as it relates to the private and public sectors. In the private sector, there is a plethora of literature that is prescriptive rather than theoretical. The literature on changing corporate culture tends toward change as a means to improve market share. Private organizations with a profit motive measure performance via financial instruments, e.g. return on investment and share value. In the merger between IBM and Pricewaterhouse Coopers Consulting, valued at \$3.5 billion, a melding of cultures was necessary to ensure best practices were selected for the new company (Moulton Reger

2006). In contrast to the public sector literature, leaders in the private sector are imbued with the authority, power and resources to incentivize cultural changes. These allow the private sectors leaders to replace the change resistors, employ organization development consultants (Rainey 2009), and to offer monetary incentives for compliance.

In the public sector, the literature tends to be grounded in public administration theory in terms of the limitations of public managers and the nature of the civil service (Pettigrew 1987; Khademian 2002). Leaders in public organizations are limited in their ability to influence, much less change, the symbols, values, and underlying assumptions within their organizations. This differentiation was characterized by Perry and Rainey (1988) as necessary due to the nature of public organizations as being "highly bureaucratized", with "more elaborate hierarchies" that "become rigid over time" (186). In a study of a state welfare office, Lurie and Riccucci (2003) established a differentiation between superficial structural and process changes (artifacts) and changes in values, and subsequently, their impact on the effectiveness of changing an organization's personality. The focus of this study was the transition from the Aid to Families With

Dependent Children (AFDC) to the Temporary Assistance to Needy Families (TANF) and the intent to change the "culture of welfare agencies from eligibility-compliance to self-sufficiency" (654). This change required employees to change their relationship with those on welfare, i.e. from recipients of benefits that need to be vetted to clients that need to be assisted. Lurie and Riccucci concluded that the observed culture change consisted of changes in structure and process to the workers while true cultural transformation requires a much deeper effort to change beliefs and underlying assumptions.

Others offer explanations for the challenge for public administrators' ability to effect culture change such as the authority of external stakeholder over public administrators as experienced by Mulrine (2010) in the United States Marine Corps' challenge of implementing the policy on permitting gays to serve in the military.

#### *CAN CULTURE BE CHANGED?*

It depends. Setting aside the discussion on the differences between the public and private sector, the literature regarding organizational culture change can be characterized using the concept provided by Schein (1992). Changing artifacts and symbols may lead to culture change.

These types of changes provide visual cues of change, however, they may be perceived as shallow. The second layer of the model, values and beliefs, is more difficult to observe, and thus changing these is more difficult than changing artifacts. Smola and Sutton (2002) and Tolbize (2008) discuss the effect of generational values.

Employees that are members of the baby boomer generation have different values than the millennial generation, currently representing 16% of the Federal workforce (U.S. Office of Personnel Management 2014). If culture change requires value changes, then leaders must understand the existing values, identify the desired values, and then embark on the path to change. Wallace, Hunt, and Richards (1999) state that "organizational culture can and should be managed" (548) and identify values that can be changed while acknowledging that some demographic values cannot.

Changing the least observable layer of an organization's culture, basic underlying assumptions, is a significant challenge. These assumptions have anthropologic roots according to Pettigrew (1979) and Wilkins and Ouchi (1983). The research reveals the role of social context and the origins of the organization such that these underlying constructs serve as the foundation for values and symbols.



The ability of leaders to change culture is an on-going debate. Khademian (2002) acknowledges this in her study and describes the debate as between advocates and skeptics. Advocates are Chester Barnard (1938) acolytes and endorse the concept that organizations have personalities. According to Khademian, advocates are often consultants seeking to assist managers with assessing an organizational personality and then using it as an integrating tool to better the organization. Advocates emphasize the importance of leadership in organizational culture change. The advocates believe that changing culture is an appropriate approach to organization improvement and that leaders can implement culture change (Khademian 2002). While external influences and limited authority of public managers restrict their ability to implement change, there are instances where public managers used the external pressures to create the platform for change (Fernandez and Rainey 2006).

The skeptic's argument is that public leaders cannot influence Barnard's cooperative system and therefore, they cannot change the culture; they do not have the authority, influence, or time required for successful culture change (Khademian 2002). Skeptics are grounded by Selznick's

concept of commitments (1949), as "the means by which organizations navigate uncertain environments" (Khademian 2002, 26). Skeptics are also aligned with Pettigrew (1987) and view culture as evolutionary and that which changes over time. Skeptics ascribe to systems of meaning that are adapted and influence by the external environment; these external changes influence how things are done. Skeptics believe that the primary external influence on the public sector is the political environment. The skepticism is endorsed by Ott (1989) who posits whether culture can be changed by leadership practices.

Ostroff (2006) identifies obstacles to public sector reforms. First, leaders are chosen for their expertise or political connections, not for their reputation for change. Second, appointments are limited to about two years. Third, operating rules are focused on wrongdoing, with penalties for failure almost "always greater than the rewards for exceptional performance" (Ostroff 2006, 142) and lastly, extensive constituencies that include friends and foes.

*CAN CULTURE CHANGE BE MEASURED?*

In the late 20<sup>th</sup> century, performance improvement provided an incentive for additional inquiries into organization culture change. Competition in the globalizing marketplace may have contributed to the interest and exposure in culture change as a means to an end in the profit sector. In comparison, public organizations continue to pursue culture change in response to the national search for performance measures for creating public value.

The evidence on the viability of measuring culture change in a meaningful way leads to mixed conclusions. For profit organizations measure performance via financial instruments, e.g. return on investment, share value, etc. while most public organizations do not have a profit motive. Public organizations' mission and objectives may be "impossible" and are complicated by client legitimacy, constituencies, public opinion, and agency reputation (Hargrove 1990). Regardless, policy makers have acknowledged the value of measuring performance of government organizations as demonstrated by enactment of the Government Performance and Results Act (P. L. 103-62 1993) and The National Performance Review (1993).

Waldo (1984) challenged the scientific perspective as it related to the "idiosyncrasies" of people and asserted that the established techniques of science are inapplicable to thinking and valuing human beings" (166). Ott (1989) states outright that a fundamental part of culture change, underlying assumptions, cannot be measured. Khademain (2002) asserts that culture is not managed by public managers; this implies that it will not be measured. Despite these declarations, researchers have begun to identify indicators of culture change. For example, Toblize (2008) identified employee retention as an indicator that alignment of employee and organizational values is an important measure during organizational change. Some researchers express concern about the success rate of change efforts, only 10-30% according to Oakland and Tanner (2007). Sanger (2008) also notes the low rate of sustained culture change. Public administrators are handicapped from the onset of change efforts by employee cynicism, Reichers, Wanous, and Austin (1997) report that 25-40% of employees have a cynical reaction to change announcements. There is some positive data that indicates that when leaders do embark on change, inclusive change efforts result in a 22% success rate difference than those efforts directed from above.

It is only recently that researchers have returned to the public administration paradigm of scientific management to explore the effect of culture on organizational performance, i.e. efficiency as well as the efficiency of culture change itself. This trend will manifest itself in both exploration of empirical techniques to improve government accountability and attempts at performance measurement of governance and government programs. Unfortunately, according to Riccucci (2001), research on culture continues to frustrate quantitative analysis. Fernandez and Rainey (2006) encourage empirically based research on the impact of change on public organizational performance and also endorse empirical research on the effect on individual employees. Until the bureaucratic culture can be changed, performance management advocates will be stymied (Sanger 2008). And, until culture change impacts can be measured, public managers will face resistance to the long-term commitment required to successfully change cultures. Some are even more skeptical in that performance measurement is another trend that is giving rise to more bureaucratic specialists (Hood 1991).

*FUTURE TRENDS*

The literature on organization culture indicates that the relevant body of knowledge will continue to expand and evolve. Organizational culture change theory will continue to develop due to its potential to create value for both public and private organizations. In particular, as public institutions continue to transition into the post-bureaucratic form, pressure will build to provide proof of value. Nearly thirty years ago Waldo (1984) discussed values in the context of efficiency; this same discussion of ends and means will continue to play in the realm of organizational culture change theory. Through an understanding of artifacts, values, and assumptions, organizations are more likely to decide on the appropriate means to get to the desired end.

As the recession continues to pressure public administrators to prove value, demand will increase for methods. As new public administration changes the government role from service provider to facilitator of out-sourcing and partnering relationships, government employee roles will also change. These visible changes of reorganizing and recasting of job roles are the visible changes; the underlying changes of employee behaviors will

continue to be a challenge to the traditional bureaucratic hierarchy. The demographics of the current government workforce will complicate this change. The baby boom generation is nearing and entering retirement, being replaced by Generation X and Y (the millennials). This is relevant because values are created within generations, "defined as an identifiable group that shares birth years, age, location, and significant life events at critical developmental stages" (Smola and Sutton 2002, 363). The 'boomers' were born between the 1940s and 1960s. Their values include respect for authority, hard work and loyalty to the employer (Tolbize 2008). The Xers and Yers are entering the workforce with different values; born in the late 1960s and beyond, they value independence, constant feedback and a balance between work and life (Tolbize 2008), similar to the values described earlier as autonomy, good communication, and quality of life. So certainly, this changing of the guard will have an effect on the values of both those providing and those receiving government services. Tolbize (2008) reports that organizations should seek to understand the relationship between company and employee values; employee retention is higher during organizational change if the values are consistent. Wallace, Hunt, and Richards (1999) indicate

that some contributors to organizational culture cannot be influenced by managers. In addition to demographics including "age, sex, length of service and educational attainment" (550), managers may not be able to influence generational values. While managers may or may not be able to change values, it is prudent to understand the values of the next generation of public administrators and those they serve.

Organizational culture in the simplest terms is how work gets done. It is a multi-dimensional construct that draws from psychology, sociology, and anthropology. This human side of organizations has been obliquely present in classic public administration theory for nearly a century. The contemporary contributors, Selznick, Schein, Pettigrew, and Khademian, explored the concepts of observability and accessibility as a way to approach the facets of culture; commitments were also used as a way to explicate and influence organizational cultures. From this discussion, we proceed to one facet of culture, collaboration.

#### *COLLABORATION*

This section of the literature review continues the deeper exploration into organization change, through organization culture, to one particular aspect of



organization culture which is collaboration. Briefly defined, collaboration is a behavior and a practice that occurs when more than one person works on an activity or task, i.e. co-labor. The linkage between culture and collaboration is identified in the literature both directly and indirectly. In the previous section, culture is described through many lenses; with a slight adjustment, these lenses also provide some insight to collaboration. Schein (1992) described culture in terms of observability of artifacts, values and assumptions. Selznick (1957) describes cultures as beliefs, roles, interest groups, social stratification, participation, and dependency. Smircich (1983) characterized culture as cognition, symbolism, and unconscious process. Khademian (2002) views culture as the way work is done, informally, symbolically, and subtly. Each of these scholars of culture is describing facets of human behaviors within organizations. At this point, this literature review exposes the research and debates about one of these facets of human behavior, collaboration. The literature presented here on collaboration is organized as follows: culture and collaboration, collaboration defined, why collaborate, levels of collaboration (individuals, groups, and industries), benefits and challenges, and major debate.

*CULTURE AND COLLABORATION*

Collaboration is both a reflection of organizational culture and is a contributor to organizational culture. As a reflection, the Burke and Litwin theoretical model (1992) indicates culture as causal in that it influences collaboration as a process. Likewise, researchers indicate that changing collaboration can influence culture (Ibarra and Hansen 2011; McAfee 2006).

Collaboration is one way that work gets done, and is a component of an organization's culture (Abele 2011). In a federal workforce diversity and inclusion initiative, collaboration is cited as a cultural attribute that enables individuals to fully contribute to the work of the organization (The President, EO 13583). Collaborative behaviors are an indicator of organizational culture, i.e. in environments where the culture is open and empowering, collaboration is more likely to occur (Ibarra 2011). Collaboration, as a factor of culture is indicated in a study on collaboration through the exploitation of available technologies (McAfee 2006). In this case study of an investment bank in Europe, the management was interested in an increase in the use of collaborative technology. The targets of the effort were the subset of employees primarily involved in knowledge work. This study

explored the relationship between changes in the use of collaborative technology as a response to a change in leadership. One of the study's conclusions is that collaboration could only expand in a culture of trust and robust interactions. These behaviors are influenced by the success criteria discussed by Adler et al. (2011) and the GAO (2009), that is, that there is adequate infrastructure to support the culture and that the organizational culture is receptive to collaboration.

If, in the simplest terms, culture is the way things get done, then there is merit in an exploration of one of the ways things can be done. The linkage between culture and the way things get done is addressed in the literature and the Burke and Litwin (1992) model provides a useful guide for exploring these linkages. In this model, the factors that are presented are grouped as transformational or transactional. The factors that are deemed as behavioral as a result of pressures from the environment are considered transformational. The factors that are related to the work climate address the results of motivations and performance.

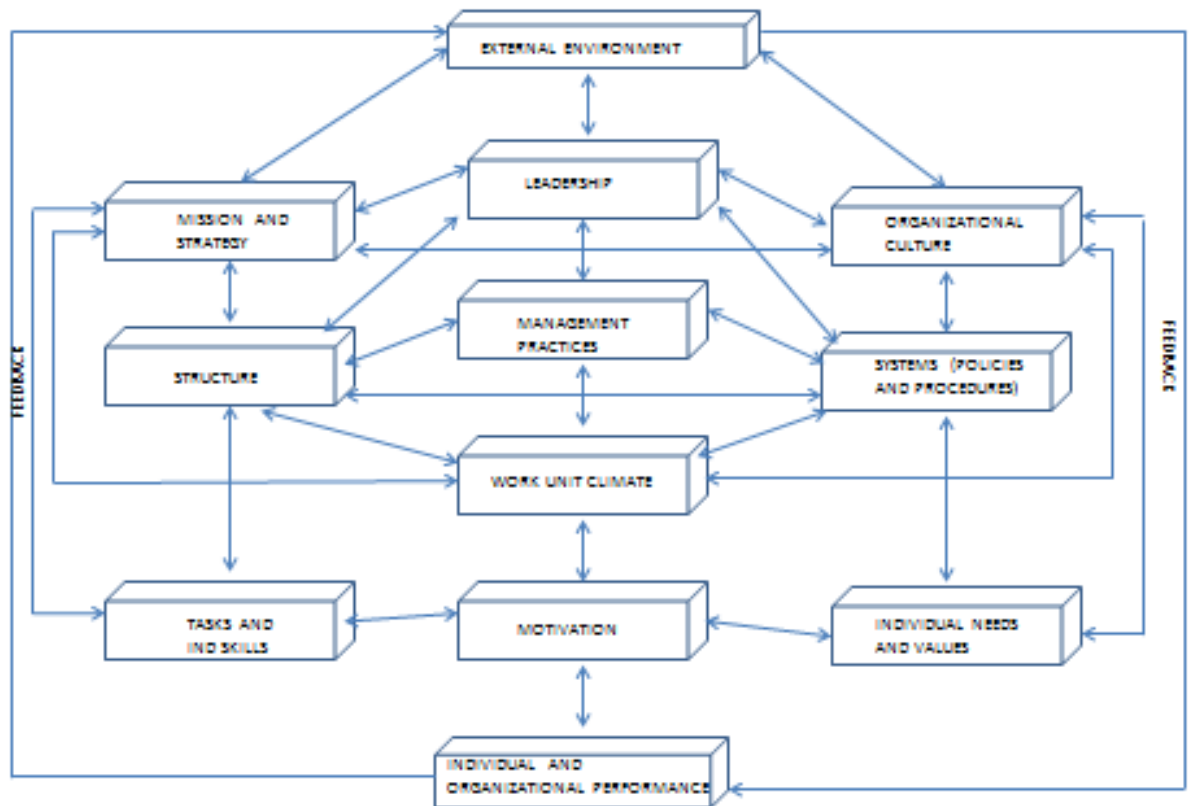


Figure 6. A Model of Organization Performance and Change (Burke and Litwin 1992, 528)

While the primary intent of this model is to portray organization change and performance, it offers a useful view for consideration of the complexity of organization change, culture, and contributing variables. More importantly, the model demonstrates the complexity of interactions of organizational behavior, both at the strategic and operational levels. In this theoretical

proposition, organizational culture occurs at the strategic or transformational level and the variables of culture occur at the operational and transactional levels.

Additionally, Burke and Litwin (1992) propose that the level of analysis for culture is the organization and the analysis of individual perceptions and work units is a study of climate. The separation of climate and culture as research areas are not entirely distinct; researchers have melded levels of organization research through the implementation of aggregate climate research to characterize organizational settings, i.e. to garner an "understanding of how individuals in general impute meaning to environments, and especially, how individuals will respond to environments" (Joyce 1984, 722). The significance of aggregation is the opportunity to evaluate the relationship of transactional variables (the way things get done) as an influence on strategic considerations, i.e. culture.

The evidence of the relationship of culture and collaboration is also suggested by "The 'Fan' of Options" (Gagliardi 1986, 127).

### The Fan of Options

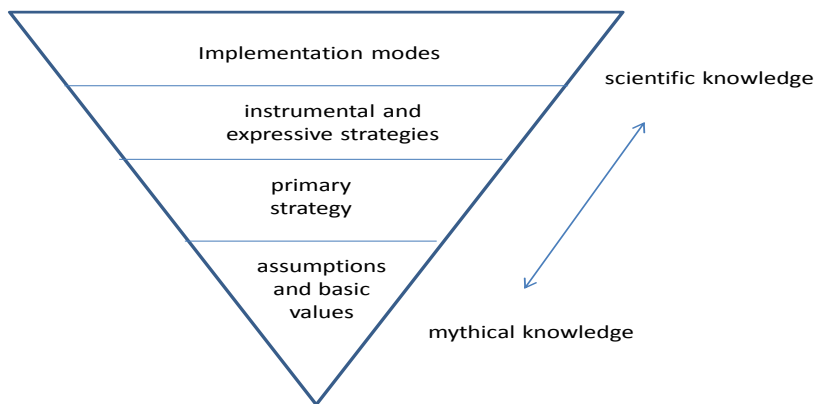


Figure 7. The Fan of Options (Gagliardi 1986, 127)

This portrayal links the assumptions and values of culture with change initiatives that target behaviors and practices. As reinforced by McAfee (2006), Gagliardi (1986) emphasized the need for congruency; attempts to change culture or behaviors and practices independently, and without respect for the alignment, are likely to fail.

#### *COLLABORATION DEFINED*

Linden (2003) provides a robust definition of collaboration as "when people from different organizations (or units within the same organization) produce something

through shared effort, resources and decision making and then take joint ownership of the final product or service” (9). Implied in this definition is the necessity of a shared purpose or shared goals. GAO defines collaboration broadly and provides that it is similar to cooperation, coordination, integration, and networking (U.S. Government Accountability Office 2009). Conversely, Agranoff (2006) offers a more narrow definition, supported by McGuire (2006), that collaboration is a process that is necessary because problems exceed the capability of one organization. The literature suggests collaboration has a unique dimension in that the activity is more tightly woven than those offered by GAO as synonymous. A more apt distinction may be akin to the difference between a team and a group. Teams work together to produce a deliverable, whereas group members work independently and then integrate the individual work into a group product or service (Heerwagen et al. 2004). The broader terminology used by GAO is encountered in the literature. The meanings, generally speaking, are that networking is a system connected by nodes and coordination involves communicating independent action in order to advance one view. Cooperation is used to advance separate results in a mutually beneficial manner.

Collaboration is the activity of working with others for a shared purpose. Clearly, this is not a new dynamic for either corporations or the government. However, the word collaboration, in practice, has emerged as an acknowledgement that complexity in the world requires a more fulsome solution than one person or group can provide. Collaboration provides a subtle distinction that other practices have overlooked. It is not unrealistic to think that these subtleties may be construed as artificial from previous approaches; however, this paper will provide an explanation of collaboration in a way that differentiates it from other behaviors.

The literature defines collaboration as having multiple dimensions. The literature is consistent on the first dimension of definitions, that it requires more than one person. The second dimension of definitions is the view that the goal of collaboration is some form of output (Heerwagen et al. 2004) or transfer of knowledge (Steiner 2005). The third dimension is the necessity of interaction and communication for collaboration. In this vein the literature tends to split on the environment in which the interaction occurs, i.e. physical and virtual; this study focuses on collaboration and the physical environment. The



temporal dimension of interaction and communication is also a consideration for collaboration in that brief and longer term interactions service different collaborative purposes.

Informal collaborations lead to shared understanding, provide learning and teaching opportunities, feed knowledge flow, and enable creative problem solving (Parkin 2011). According to Fayard and Weeks (2011), unplanned, chance encounters promote cooperation and innovation. Collaboration, in the form of informal interaction, may be the water cooler conversations or it may involve individual awareness. Heerwagen et al. (2004) include awareness as one "social dimension of collaborative knowledge work" (512). An aware employee is able to gather information peripherally that enables processing and sharing either immediately or at some future opportunity. Longer term, deliberate collaborations are intentional and designed for disciplined activities by more than one person. Adler, Heckscher, and Prusak (2011) assert that long term collaborative enterprises are more difficult to sustain over time and thus, are "rare in corporate hierarchies" (201). Both formal and informal collaborations aid in the maintenance of existing relationships and may also lead to

new relationships. These relationships may lead to increased flow of knowledge and information.

#### *WHY COLLABORATE?*

The purposes of collaboration are multi-fold. As a primary purpose, collaborations are arranged to create an output or solve a known problem. In government, collaborations may be necessary to solve a problem and may also be used to characterize a problem. Agranoff (2006) captures this sentiment by describing public problems as "nettlesome" (59). The problems encountered by government organizations and their partners cross service provider boundaries and include families in crisis, urban decline, drug misuse, underperforming schools, inadequate transportation, and security threats (R. M. Linden 2002). These challenges and others provide the key purpose for public administrators' desire to collaborate, to provide "better service, value, and outcome for customers, stakeholders, and communities" (6).

Collaboration is driven by shared purposes and goals which results in knowledge sharing, maximizing scarce resources, and increasing efficiency (Benkler 2011). Sharing knowledge is in itself a cultural attribute.

Organizational behaviors may value knowledge-as-power and members are inclined to keep and use knowledge gained for their own purposes. An existing or desired culture may expect employees to share knowledge. The dispersal of information may be formal as with training programs or it may be informal such as through exposure to discussions and presentations. Sharing knowledge may also be refined as information exchange only or information exchange that enhances the participants' capabilities to meet client demand (McGuire 2006).

Maximizing scarce resources is more likely to occur when there are limited amounts of time and money. To maximize return on scarce resources, they are spent in a way that contributes to achieving multiple work objectives rather than spending resources separately for each task. In order to solve a problem, limited resources may preclude one entity from independently solving a problem or exploiting an opportunity in a successful way. If scarce resources are combined then more options become available. In this description, scarce resources may include both dollars and skills. At a conference hosted by the U.S. GAO in 2012, the Comptroller General of the United States, Gene Dodaro (Dodaro 2012), described the resource constrained

environment that drives more partnerships and collaboration; he includes the increase in debt as a percentage of Gross Domestic Product, the number of people turning 65 on a daily basis, the number of workers contributing to Social Security, state and local expenditures, and the state of funded pensions.

Increasing efficiency results when more output is produced using less resources (de Lancer Julnes 2009); collaboration may contribute to developing and implementing process improvements that improve efficiency. In his GAO presentation, Mr. Dodaro indicated that, in the changing environment, collaboration is necessary to prevent duplication, overlap, and fragmentation in government programs, i.e. inefficiency. The Fund for Our Economic Future (2013) is an example of a regional collaboration formed to maximize economic opportunities in Northeast Ohio by pooling funds available from academia, government, businesses, and nonprofits. From 2004 to 2011, the collaboration led to job growth, unemployment reduced to below the national average, and over \$2 billion in capital investments. At the local level, law enforcement in Albemarle County, VA, enlisted other local public workers to increase surveillance in a high crime area. In this

collaboration, the additional 'eyes' of utility workers and postal workers multiplied the resources available to cover the 740 square mile jurisdiction.

Collaboration may lead to better governance through inter-organizational performance (U.S. Government Accountability Office 2009). When collaborations in public service fail to produce output or provide services, the results can be deadly. The failed response to Hurricane Katrina in 2005 is perhaps one of the most tragic failures of government to collaborate (at all levels) in order to serve the public. The inability to work across agencies to alleviate the suffering of so many citizens resulted in the Post-Katrina Emergency Management Reform Act of 2006 (P.L. 109-295). The primacy of this legislated policy was to create a collaborative disaster response system of tribal, local, state, regional, and national capabilities (Dodaro 2012). Beyond implementation in emergency management to government, writ large, the GAO is consistent in its conclusions that collaboration is recommended both for good public policy and for policy implementation (Dodaro 2012). While GAO recommends collaboration as a practical matter, McGuire reports a dearth in research that has measured the

impact of collaboration; yet there remains a general assumption that collaboration is a worthwhile endeavor.

#### *LEVELS OF COLLABORATION*

The lens on the scope of collaboration literature is adjustable; collaborating is multifaceted and reflects the characteristics of individuals, organizations, and industries. Collaboration, as a cultural dimension, is a behavioral aspect of individuals' motivations. It is influenced by artifacts, values, and assumptions (Schein 1992). Artifacts inform individuals about opportunities to collaborate; for example, a shared coffee pantry invites informal conversations. Collaboration within organizations occurs on an individual level as well across groups. Organizational collaboration may be the way work gets done or may be directed to achieve a specific objective. Industry, or inter-agency, collaboration occurs when a problem or opportunity requires the contribution of multiple organizations. As described previously, the purpose of a collaborative effort informs the needs for participation.

*Individuals and Collaboration.* Individual values affect one's receptiveness for collaboration and brings

into consideration theories of self-interest and motivations. Selfish behavior may constrain collaborative behavior due to participants' perceptions of willingness to fully engage in, and commit to a shared purpose. The study of economics provides a similar situation known as the prisoner's dilemma. In this scenario, individuals will be better off if they cooperate, but they don't trust the other participants to cooperate. Trust, in collaboration, is the calculation of how committed others are to the shared purpose (Adler, Heckscher, and Prusak 2011). Individual values are often more difficult to identify as a dimension of collaboration, and personal and professional values become intertwined. As an example, an employee may embrace loyalty as a personal value. However, in practice, loyalties to an organization or person may influence an employee's willingness to collaborate if their willingness may be perceived as disloyal (Adler 2011). In addition to loyalty, Benkler (2011) identifies authenticity, empathy, fairness, and diversity as necessary for collaborative systems.

While values are the second layer of observables in Schein's culture model (1992), the third layer contains the most difficult components of culture to observe, basic

underlying assumptions. As a means of understanding the inclination for collaborative behaviors, it is often necessary to explore underlying assumptions that affect motivations. Individuals may have extrinsic or intrinsic motivations. According to Goodsell (2011) in a study of government organizations, employees with an "inner commitment to a cause" are intrinsically motivated (19). In contrast, extrinsically motivated employees value monetary compensation and status. If a person receives monetary rewards for individual accomplishment and is extrinsically motivated, then group participation will be subordinated to individual effort (Benkler 2011). While extrinsic motivations may be observable, intrinsic motivations are more difficult to identify and are characterized by Goodsell as "the black box" (2011, 19). Individuals in collaborations will exhibit the behaviors identified by many psychology and organization theories, such as competitiveness. Collaboration, as an attribute of organizational culture, leads to individual employees becoming motivated by the "collective mission" resulting from group projects (Adler, Heckscher, and Prusak 2011). In a complementary view, Linden (2002) discusses employee motivation from three dimensions: achievement, affiliation, and power. These three motivations will not



prevent collaborations; however, they must be addressed in collaborative arrangements. Because collaboration has emerged in public administration as an avenue to improve inter-personal performance (The President 2011) it is important to understand the implications of culture on collaboration initiatives.

In addition to the consideration of all individuals, successful collaboration requires leaders and managers that understand the value of connectedness and serve as a catalyst to facilitate collaboration (Lipman-Blumen 1996; Ibarra and Hansen 2011; McGuire 2006). In the study of an investment bank in Europe cited previously, McAfee (2006) concluded that managers can and do influence how employees accept or reject collaborative behaviors. The study also determined that management control is undermined by interactive computer platforms, and that employees must feel safe engaging in free form exchanges on-line, such as blogs and wiki sites. As a collaborative leader, managers must demonstrate the organizational value of knowledge sharing that leads to collaboration (Ibarra and Hansen 2011; McAfee 2006). This type of leadership diverges from the traditional model of a power structure. The traditional model of organization vests increased authority

as one advances upward in the hierarchy. In collaboration, leaders must earn and acquire power through influence and demonstrated value that often accumulates over time (R. M. Linden 2002). The current literature also suggests that collaboration skills are not new for public administrators and are aligned with the classic functions of chief executives elucidated by Gulick (1937) as POSDCORB (planning, organizing, staffing, directing, co-ordinating, reporting, and budgeting). Collaboration involves as emphasis on specific functions; these are renamed in 21st century language as "activation, framing, mobilizing, and synthesizing" (McGuire 2006, 37).

*Groups and Collaboration.* Adding to the complexity of individuals in collaboration is the dynamic created by individuals in groups. Adler, Heckscher, and Prusak (2011) named this phenomenon "collaborative communities" (96). The success of these communities depends on four factors, a shared purpose, an ethic of contribution, enabling processes, and a supportive infrastructure. Clearly, there is an implied linkage between individuals' values and the organizational setting. In order to arrive at a shared purpose, each member must have trust which is necessary to achieve cohesion. An ethic of contribution to a group again requires an individual willingness to suppress

selfishness for the good of the group. Enabling processes are necessary for a collaborative group to be successful. These processes allow the building blocks for the successful system (Benkler 2011). Organizational traditions must allow collaborative behaviors. Likewise they must be rewarded, and procedures must allow for cross-communications necessary for collaboration. The fourth success factor of collaborative communities is a supportive infrastructure. Organizations that operate in a traditional, vertical hierarchy are less conducive to cross pollination than are more flexible organizing structures for approval channels, permissions, etc. McGuire (2006) concludes that the type of structure should support the type of task that is driving the collaboration and in some instances a combination of structure is warranted, e.g. in emergency management.

The participants in the collaborative communities must be comfortable with the work style in their work cultures. There are challenges for this level of interdependence; processes that operate beyond the management chain challenge the control of that same chain. If group members are not empowered to operate within the group then the effectiveness of the group will be compromised.

*Industries and Collaboration.* One of the earliest examples of collaboration occurred in the field of medical instrumentation. In the late 1970s, Andreas Gruentzig used emerging video conferencing capabilities to lead a live demonstration course (Abele 2011). A surgery involving the use a balloon catheter was performed; and a view of this surgery was transmitted live. Participants were invited to ask questions about the procedures used and to offer suggestions during the surgery. Through this ground breaking collaborative technique, the new balloon catheterization techniques became accessible on a global basis.

In another example of collaboration in the private sector, Marc Benioff used software technology to invite the all the employees of the company to an executive offsite (Ibarra and Hansen 2011). Through virtualization, employees were invited to attend, observe, and interactively participate. Through this collaboration, the CEO exhibited the new corporate culture of transparency by empowering employees to fully engage in the software company's future.

As the view of collaboration is expanded, research has expanded to inter-organizational studies of government

organizations. The GAO has taken an acute interest in interagency collaboration (US GAO-09-904SP 2009). A search of the word 'collaboration' on the US GAO web site yielded 6481 results in GAO publications ( US GAO n.d.). Through its research, it too has identified conditions necessary for collaboration to succeed. The first condition, overarching strategy, is clearly aligned with the group condition of shared purpose. The second condition is collaborative structures, processes, and funding. This confirms Adler's conditions for collaborative communities and introduces funding as necessary for successful collaboration. The third lesson identified by GAO is work force management to include compensation and training. As with groups, organizations must support the desired behaviors with assignment opportunities, skills development, and compensatory rewards.

#### *COLLABORATION IN USE: BENEFITS AND CHALLENGES*

The study of collaboration from a management perspective has recently emerged (Agranoff 2006; Kettl 2006). This review of research on collaboration has identified some benefits as well as challenges with collaboration; Linden (2002) calls this the "collaboration dilemma" (xvi). The dilemma is the imperative for

governmental organizations to seek opportunities to collaborate; yet, many organizations continue to operate on their own. This collaboration dilemma is compounded by the serious consequences of failure that leads towards risk adverse solutions.

The benefits of collaborations are aligned with the purposes of collaboration, some of which have already been discussed (knowledge sharing, maximizing scarce resources, and efficiency). From a broader view, collaboration is one way to address changes in an organization's external environment. Through the proliferation of virtual networking, organizations are exposed to the proliferation of competitors, innovation, and information. Through collaborations, organizations bring more capabilities to bear on each partners' objectives. In 1990, Hargrove and Glidewell (1990) labeled public management jobs as impossible based on four dimensions, legitimacy of clients, conflict among constituencies, public confidence in authority, and agency myth. In a hierarchical structure, these problems may in fact have been impossible to overcome; the sense is that, with collaborations, public managers may achieve some success. Linden (2002) extols the success of the Baltimore Child Advocacy Center (CAC).

The mission of the Center is to protect children from sexual abuse and to punish the perpetrators. The Center is staffed by the police department, the state attorney's office, social services, and the health department. Over a ten year period, as a result of the collaboration, both confession rates and arrest rates increased without the victim's testimony; for example in 1988, there were 27 arrests and in 1999, there were more than 95 arrests. In Linden's study of public and nonprofit collaborations, he identified over twenty cases in which collaboration had a positive impact.

The challenges identified in the literature reflect a similarity to the challenges identified with organization change in general and with culture change specifically. In the Baltimore CAC example, the professional cultures of the police and the social workers proved to be a difficult hurdle. The police officers were trained to be tough, fact based, and arrest centric. The social workers pursued understanding of the emotional dimensions of the situations and with a goal to rehabilitate the families. Two key conditions for successful outcomes in Baltimore that are identified for successful organizational and culture changes are support from the department directors and a

legislated mandate. Particularly relevant for this study is the identification of co-location of the collaborators as a critical contributor to success (R. M. Linden 2002).

The GAO report on Interagency Collaboration (US GAO 09-904SP) cites information sharing and integration [for national security purposes] as necessary to improve government collaboration. Integration of funding is a particularly difficult challenge for public agencies. Budget inflexibility and specific funding language can be inhibiting when collaborations expose mutually beneficial opportunities. Underlying these challenges is the necessity to develop trust; McGuire (2006) reports a lack of consensus on an approach for public managers to create trust. He also reports that trust building for government managers is complicated by the tools of bureaucracy, such as the requirement for formal contracts.

Government managers are encouraged to work collaboratively across agencies; however, their internal work responsibilities demand the majority of their efforts, spending only 15-20% of their time working collaboratively (Agranoff 2006). Motivating and incentivizing collaboration will continue to be a challenge until personnel systems incorporate this type of work activity.



Rewards and compensations are historically individually based processes where employees are evaluated and promoted on an individual basis. And, as long as managers are evaluated on their individual contributions, it is not likely that their collaboration efforts will increase substantially.

Accountability is also a challenge with collaborations. By definition, collaborators share responsibility and accountability for success and failures, a uniquely difficult problem in public service where the problems themselves are complex and ill-defined. Unfortunately, constituents and stakeholders expect results to meet their expectations. When collaborations are formed there may be conflicts in those "fragmented" (R. M. Linden 2002) stakeholders' expectations. Using the Baltimore CAC example, the Police Commissioner and State's Attorney may seek increases in arrests and convictions while the Social Services and the Health Department may seek reductions in repeat clients. Managing internal and external expectations when accountability is shared across organizations requires strong negotiating and communications skills from the collaboration advocates. Linden (2002) summarizes the challenges to collaboration as

systemic problems, such as diffused accountability, difference in values such as arrest or rehabilitation, distrust about motives and commitment, and communication problems. In addition to these operational challenges, Kettl (2006) is concerned with the enduring strategic challenges with governmental collaborations. The three-branch, U.S. government model is defined by, and dependent on, boundaries. These boundaries, designed to disperse power, are the same boundaries that hinder collaborative efforts to cross boundaries. As a corollary, the three branches in this system are administered by clearly defined boundaries of "mission, resources, capacity, responsibility, and accountability" (Kettl 2006, 10), in and of themselves identified as challenges to collaboration.

*MAJOR DEBATE: IS COLLABORATION THE PANACEA?*

One of the assumptions identified in the literature "is that collaboration is a positive factor to be pursued by managers" (Kettl 2006, 39). What if this is not true? Some students can remember a time when a team or group assignment was received with groans of dismay in the classroom. This negative reaction to working with others often had a deeper emotional source. In 2012, Susan Cain

released *Quiet: The Power of Introverts in a World That Can't Stop Talking*; this book was named a New York Times Bestseller (Cain 2012). This book presents the case that introverts are pressured into behaving like extroverts. In this context, introverts are people that get their energy from within, extroverts derive their energy from others. In their work style, introverts tend toward more deliberative processes and developing understanding before sharing; extroverts are action oriented, they tend to jump in immediately and multi-task and seek out extrinsic rewards.

Collaboration is one method in which introverts are pushed from their comfort zone and expected to not only reach out to strangers but to interact intellectually. This type of interaction was well suited for introverts in a virtual mode. However, the boundary removal on the Internet was transferred to in-person interactions. For introverts, this seemingly natural transition compelled a step back rather than a step in. Cain's premise is that introverts are more productive and more creative when they are allowed time alone. Thus, while Kettl (2006) and others have assumed that collaboration is a positive factor and creates public value, Cain cautions that collaboration is not always the best solution to solving complex

problems. However, when collaboration is warranted, managers are advised to remember that one half to one third of their workforce is probably introverted and that there are multiple modes of collaboration.

Collaboration is literally co-labor. In the literature, the term is defined as a manner in which people work together on shared objectives, with shared resources, and are jointly held accountability to produce goods, services, or information. Collaborations may be formed to solve problems that cross traditional boundaries and to share limited funds and skills to provide better value to stakeholders. Additionally, collaboration may improve employees' contributions through increased awareness, expanded knowledge, and improved innovation and problem solving skills. Participation in collaborations may be at the individual, group, organization, and industry level. Successful collaborations are indicated by trustworthiness among participants, support by managers and leaders, enabling processes and infrastructure, and compensation systems that endorse collaborative behaviors. There are indications that collaboration also has its challenges. Bringing together disparate parties exposes different organization cultures; one example provided was the differing values of police officers and social workers

(arrests versus rehabilitation). The work style preferences of employees have also emerged as a countervailing force. Research indicates that employee preferences for quiet, reflective work have been overridden by the push for more collaboration.

This literature review has explored a variety of theories and applications of organization change, culture, and collaboration. The trend towards increasing collaboration has been instantiated by a new style of work environment. We now turn our review to the academic and policy discussions of the work environment, and in particular, work space design.

#### *WORK SPACE*

In the previous section, collaboration is offered as one method to bridge chasms. Following this thread, it is possible to consider that work space and work space design, may serve that bridging function. The literature on work space reveals both the tangible and intangible aspects of the work environment. The former addresses the atmospherics in which employees perform their duties and delves into the subject of hostile work environments, which results from harassment and discrimination. This study

focuses on the tangible aspects of the environment, i.e., the physical characteristics of office environments.

#### *EVOLUTION OF WORK SPACE*

Work space has changed as the nature of work has changed. In the early 1900s, workers labored in factories, after World War II and into the 1960s, workers began to work in office environments (Sundstrom and Sundstrom 1986). Today, work spaces reflect another change in how work is accomplished. Work is increasingly done in a teaming manner, there is more work done virtually via computers, and work sites are more often geographically dispersed (U.S. General Services Administration Public Buildings Service 2009). The early work spaces are reflected in the work of Taylor and then by the Hawthorne studies. Taylorism meant that there was one best way to maximize efficiency; in this formula humans were units of production (Taylor 1912). Open floor factories are indicative of the Taylor model of one right, rational way to maximize efficiencies. In 1924, an operational research study revealed that people appeared to change their work habits independent of their efficiencies. This study of the Western Electric Company led "to new thinking about the relationship of the work environment to productivity"

(Shafritz and Hyde 2007, 593). Workers that thought they were being observed in their work space reported that they felt more valued and therefore exerted more effort. These Hawthorne studies may be the first indicator that work space has more meaning than just physical space (Sundstrom and Sundstrom 1986; Haynes 2007).

#### *VALUES AND DESIGN*

As people began to migrate from piece work on the factory floor to office work, the environment in which they toiled also changed. However, the values that informed the early work places have not radically changed well into the twenty-first century. British architect and office planning expert, Francis Duffy, provides examples of values and assumptions and how they have been expressed in office design (2000). The first assumption is that employees are lazy and that they must be under constant scrutiny; this led to the creation of office space that must be open for visual inspection by managers. The second assumption is that promotions must be openly acknowledged through work space; as an employee advances upward in the organizational hierarchy, these advancements should be reflected in their work space, e.g. a larger office, upgraded furniture, external window views. The third tenet is that

subordinates must be reminded of their place in the hierarchy; the lower an employee's position in the hierarchy, the more austere the individual space, if in fact any space is designated as assigned individual work space. The fourth convention is that separation of work units is necessary and is indicated by hard boundaries, i.e. walls between departments. These boundaries convey that interaction between departments, branches, and teams is neither required, nor desired. Fifth, there is a need to protect information and this security is managed by keeping separations between those that need to know and those that do not. This need to know was invoked to protect both proprietary business information as well as public sector information. In the Intelligence Community this need-to-know was operationalized as compartmentalization (Friedman 2013). The sixth assumption is that people must be present at work in order to earn their pay; this means that every employee must have an assigned seat. The last value is also a boundary issue in that workers may be expected to create a separation between their work role and their home roles, thus, commuting is necessary to depart from the home to get to one's work space. These seven values, as expressed in work space, are likely familiar, and may resonate with many people in the



work force, whether they are employed in a fast food restaurant or employed in a service provider industry.

#### *CHANGING PARADIGMS*

The types of spaces that are designed with control in mind may be reaching obsolescence. Changes in the nature of work lead to different views of work space. These differences are being exposed by changes in the work force. Changes in the workforce are evident in the demographics of the workforce and in the values of those entering and departing the work force (U.S. General Services Administration Public Buildings Service 2009; Kaczmarczyk and Murtough 2002). The millennials, born at the end of the 20<sup>th</sup> century, continue to enter the workforce and join the Generation X and the Baby Boomers. As the boomers continue to exit the workforce, the values of the millennials will become more influential on work environments. The values attributed to the younger workforce are teaming, diversity, concern for the environment, and worldly views (in addition to autonomy, communication, and quality of life). The next older generation work mates, Gen Xers, have quite different values; in general, they are individualistic, self-sufficient, distrusting, and result-oriented (Loehr n.d.).

Also, it may be premature to discount the influence of the baby boomers who may remain in the workforce longer than expected due to the removal of the mandatory retirement age of 70 (Riccucci and Naff 2008). These potentially opposing value systems may make it difficult to design work spaces that suit the needs of the multi-generational workforce.

Employee's physical work space addresses both their comfort as well as the layout of the work space (Haynes 2007). Employee comfort is provided through lighting, size of the space, availability of equipment, travel distance to other employees, and building amenities (Zalesny and Farace 1987). The layout of the physical work space should enable the successful achievement of organizational objectives (Peterson and Beard 2004). It is important that an employee feels comfortable enough to be able to satisfy their performance expectations; this construct is similar to Maslow's hierarchy of needs (1943), managers must satisfy employees' basic needs before they may seek higher levels of performance from the employees.

The evolution of work space from open factories, to many offices, to offices for a few, reflects the changing styles of workforce management. In the mid-20<sup>th</sup> century an increase in a city centric, professionalizing workforce was reflected in the increase in office buildings. The modern

form of open work space reflects the recognized needs for more interaction and sharing of ideas and information among employees (both leaders and followers). One way to encourage this interaction is through work space design. Work space configuration influences how employees interact, and it causes distractions that influence the functionality of the space. The work spaces must satisfy both individual and group needs in order to enable the pursuit of organizational objectives (Laing, Duffy, Jaunzens, and Willis 1998). The trends for work space have been reflecting a re-distribution of the individual, private, and group spaces with a reduction in individual space (Steiner 2005; Laing et al. 1998). Various descriptors have emerged to describe these types of spaces. Individual spaces are referred to as cells, personal harbors, and pods; group spaces are referred to as dens, clubs, hives, and commons (Zalesny and Farace, 1987; Duffy 1997; Heerwagen et al. 2004).

#### *WORK SPACE AND CULTURE*

The relationship between work space and culture has been established in the research literature. The theory that "patterns of social interaction" (Sundstrom and Sundstrom 1986, 253) can be influenced by work space design

is called architectural determinism. Similarly, organizational ecology theory relates organizational culture to work space. For organizations seeking to change its culture, work space design is a key factor to successful culture change, specifically, it is necessary for "matching the physical environment" (Turner and Myerson 1998, 2) to the desired organizational culture; the mismatch between work space and culture was exposed in a pre- and post- move survey. Zalesny and Farace (1987) concluded that employee satisfaction with work space was influenced by the employee work role. In this study of organizational relocation, managers expecting a new work space that symbolically identified their status were not satisfied while clerical workers were more satisfied. These authors concluded that the new work space was incompatible with the organization's culture. A case study in Dubai also found a relationship between work space designs and corporate culture (Steiner 2005). It was revealed that the cost of conducting business suggested a broader interpretation of return on investment. In addition to the traditional facility costs, managers determined that transfer of knowledge, and employee retention were key factors in the influence of culture to new work space design. The Public Works and Government

Services Canada also acknowledges the effect that workplaces have on employee retention and productivity (Kaczmarczyk and Murtough 2002).

The link between work space and collaboration is also elaborated upon by Heerwagen et al. (2004). This research identifies the relationship between work space and collaboration from a performance perspective, specifically how work space design contributes to social interaction. The design of work space for collaboration must consider visual and auditory access. The way that work gets done can be influenced; collaboration is facilitated by workers ability to see and hear surrounding interactions that exposes the nature and style of work and it creates an environment in which to develop relationships.

Collisions are "chance encounters and unplanned interactions between knowledge workers" (Waber, Magnolfi, and Lindsay 2014, 71). The interactions are being studied as a means to design space to increase productivity through communication in a specific way. Communication may be for engagement, exploration, or energy. Engagements, which are exchanges within a group, are encouraged by increasing break area sizes, which leads to increases in knowledge sharing. Exploration involves communications with outside groups. This can be increased through the implementation

of 'hot seating' where employees do not have assigned seats and select work spaces randomly. The third category, energy, involves communicating with more people overall. From an organizational perspective, innovation is supported by exploration and energy influenced space designs. Conversely, spaces that may facilitate interaction may inhibit cognitive work and may lead to superficial conversations under the fear of others listening. Heerswagen et al. (2004) identify this as the "dilemma of collaborative work environments" (525). This dilemma of balancing the need for collaboration with the need for privacy has been a trend in work space design, i.e. the challenge of meeting the needs of both the individuals and groups.

The lens of research on work space design and management has expanded. Researchers are now identifying a relationship between the facility management concerns of design and maintenance to organizational goals. Thus, facility management practices may influence performance, both at the organization and employee level. Haynes (2007) developed a concept of the relationship between management of employees, how those employees behave, and how the work force is managed. This study was conducted using self-assessments to perform factor analysis. Haynes acknowledges

a potential design weakness inherent in the personal bias of self-assessments and offers that this potential bias is offset by the value of this contributory research. With this cross cut of organizational concerns, Haynes (2007) identified four components that should be considered as factors in employee retention and increased productivity. The four components are grouped as physical and behavioral. The two physical components are comfort and office layout. The two behavioral components are interaction and distraction. Peterson and Beard (2004) conducted a study on the ability of work space to influence interaction among employees on a team. In this study, interaction was defined as communication between people that is necessary to meet organizational goals. The findings of this study indicate that employees were comfortable (physical) in the open space and that the work space did contribute to communication. This confirms a previous study that work space does affect how employees behave in that situation (Oldham and Rotchford 1983). Conversely, this study contrasts with an earlier study that concluded that there is no relationship between physical work space and social interaction (Sundstrom, Burt, and Kamp 1980). These findings resulted from a survey of public organizations in Tennessee that tested the relationship between

architectural privacy and psychological privacy.

Architectural privacy was defined as "visual and acoustic isolation" while psychological privacy was define as a "sense of control over access" (102). This theme continues to emerge in the literature. Fayard and Weeks (2011) caution that collaborative space designs must account for not only proximity, but also privacy, and permission.

According to Morton (2014), open space designs are now the design standard. Open spaces allow more flexibility and cost less than designs with fixed elements. While the trend is toward less individual space, the design features allow employees more options for work and more flexibility in the available space. Collaboration spaces also continue to emerge in design elements. Benching (think picnic table styles) is emerging as an option to pods, which again reduces individual space (and thus cost). Benching provides a place to touch down or a place to gather for team collaboration. The architectural design trends continue with variances of open space that mitigate the biggest complaint, acoustical distractions and privacy (Stephens 2014). Architects are adding noise absorbent features to include sound dampeners and thicker glass. Another innovation in open space designs is co-working. Co-working incorporates the needs for a variety of space



without full investment in re-design by offering memberships to establishments. This type of arrangement is particularly attractive to small businesses with limited resources.

#### *MEASURES*

Similar to the discussions about measures in organizational change and organizational culture, measuring the performance of work space design has been a challenge (Kaczmarczyk and Murtough 2002). Historically, work space management was synonymous with facilities management. In this view, measurement was based on building efficiencies, the cost per square foot, maintenance cost, and space utilization. More recently, managers are recognizing the potential value that work space can contribute to organizational goals. Through an understanding of the potential relationship between three [historically separate] disciplines of facilities, human resources, and information technology, managers can exploit opportunities to be innovative in cross-discipline implementations.

Kaczmarczyk and Murtough (2002) produced a report on the Public Works and Government Services Canada (PWGSC) effort to measure "innovative workplace environments" (164) in recognition of the interdependencies between

disciplines. This report identifies three approaches, a GSA cost per person model, employee satisfaction with the workplace, and a productivity payback model. The US General Services Administration (GSA) controls nearly 40 percent of US Federal Government rentable space and developed a model of measurement that could be used by all federal agencies to understand and measure performance. This model was introduced in 1999 and was revised in 2002. The model is unique in its applicability to evaluate alternate work environments. The second performance model discussed by Kaczmarczyk and Murtough (2002) was also developed by GSA, in 2000. GSA developed an employee satisfaction survey to capture assessments of whether people like their environment, whether they can be productive in their environment and whether they choose to stay with the organization because they like their environment, i.e. People, Places and Tools (168). In the GSA study, the survey was administered in the US, UK, and Canada; the US government has the lowest satisfaction scores. The third model, developed by GSA is the Productivity Payback Model that asserts an investment in space is actually an investment in people and used compensation cost as a proxy for productivity. This model is best applied when compensation and output are

identifiable measures. This particular model is likely a challenge to use in public organizations where output is difficult to measure. The PWGSC has adapted the GSA concepts and is seeking to integrate and measure government work spaces. Their approach utilizes pre- and post-occupancy surveys to understand the effect of office designs. A different approach to measurement is to use existing employee track tools to monitor social interactions. Through the use of sociometrics, organizations can measure and analyze collisions in the work space. Through a synthesis of where employees spend time and which areas are increasing productivity and innovativeness, space designers assess the effectiveness of the work space against the intended interactions.

#### *SUMMARY*

This literature review covered the topics of organization change, organizational culture, collaboration, and work space. The key concepts for each topic were selected for their relevance to the research question, *is there a relationship between work space design and collaboration?*

The literature on organizational change addresses four major areas, content, context, process, and criterion.

Content literature describes types of organizational change. Context literature explores the causes for organizational change. The literature on process exposes methods and procedures to be used for organizational change designs. The literature on criterion of organizational change seeks to explain measurement of organizational change. Of the four themes, the dearth of literature on criterion of change was revealed. This was particularly true for the public sector.

The key contributors to the research on organizational culture, i.e. how things get done, are Selznick, Schein, Pettigrew, and Khademian. These four authors use psychology, sociology, and anthropology to provide a multi-disciplinary basis for the body of knowledge. The literature expounds on the differences between the public and private sector in organizational culture change and exposes both its suitability and measurability in various settings. The positivist and post-positivist paradigms reveal a conflict between the rationalist view and the view to change the culture from an efficiency model to a value model. This conflict extends to the role of leaders in culture change and a debate on whether leaders can affect change.

Collaboration occurs when people share resources and responsibility for an activity or task. Both private and public organizations are exploring methods to increase collaboration in order to maximize scarce resources and to improve performance. Collaboration occurs at the individual, group, and industry levels. Studies indicate that collaboration adds to knowledge sharing, relationship building, and innovation. The research portrayed four areas that contribute to successful collaboration: shared purpose, contribution, processes, and infrastructure.

Work space design has been supporting work objectives since the early 20<sup>th</sup> century. However, it is only recently that the relationship between work space and employee behaviors has been viewed as an investment in organizational results and outcomes. Early space designs reflect a means to control and reward employees. The recent literature suggests a turnabout, i.e. employees' needs and behaviors are now influencing the work space designs. The spaces are evolving to use employee interactions and collaborations to inform the design characteristics. Work space design will continue to be influenced by changes in the values of the work force as well as by how those employees choose to work.

*CONCLUSION*

The debate surrounding the efficacy of organization change is a key motivator for this scholarly research. This literature review confirmed the challenge of sustaining and measuring change initiatives; this was especially evident for culture change. In the literature, culture is both a target of change and a critical factor for other types of successful, long-term organization change (Armendakis and Bedeian 1999; Oakland and Tanner 2007). The trends in the study of organizational culture change include an exploration of the role of leadership in initiating and sustaining change, implementation methods, and techniques to quantify the outcomes of change efforts. These near term trends will continue into the future and will be complicated by a fundamental change in the workforce demographics.

Collaboration is identified as a factor of culture change (one of many). This study operationalizes collaboration in physical space, where collaboration is a work style in which employees interact in their work environment to produce shared knowledge. This working definition is potentially agnostic to the boundaries of organizational structure apparent in the literature. Specifically, collaborations of interest in this study are

between co-located people that may or may not be assigned to the same organization. While collaboration carries cultural implications of artifacts, values, and assumptions suggesting a potentially broad brush study; this study is purposely focused on collaborative behavior rather than on the less observable aspects of organizational culture. One example of this type of co-location arrangement is the CIA Counterterrorism Center. This physical space is organized around a defined mission and the space is populated by experts from multiple disciplines. The success of this arrangement has recently triggered consideration by the CIA Director of a proposal for a CIA-wide restructure from functional alignment (operatives and analysts) to alignment based on geography and issues (Miller 2014).

The pace of change has increased and the rate of change seems to be increasing exponentially. For example, the number of employees that work from home has increased by over 10 million employees, a 16% increase in just over a decade (T. L. Friedman 2005). Perhaps, constant change may be the new status quo. Work space design appears to be a lagging indicator of changes in the work place. Unlike the traditional pace of redecorating and renovation, work space design will continue to emerge as an investment area, **i.e.**

as a target of change, to support organizational objectives.

Work space design will continue to be influenced by changes in the values of the work force as well as by how those employees choose to work. The challenge may be to balance the needs of the individual with the needs of the organization, using work space design as the fulcrum.

The literature provided a rich context for the key concepts of organizational change, culture, collaboration, and work space. Leaders that choose to initiate, or those that are immersed in change, are encouraged to prepare themselves for a difficult task. Changing the culture is one type of organizational change; this type of change requires an astute mind that is attuned to the many layers of organizations, i.e. symbology, understanding what is valued, and understanding how things may be perceived. Increasing collaborative behaviors is an emergent culture topic that offers promise for public administrators seeking to increase their organization's efficiency and effectiveness. Through collaborations, organizations are sharing diminishing resources and delivering more fulsome products and services. One approach to increase collaboration is to create a work space that facilitates and encourages employee interaction. Through designs that



break down physical barriers and create collaborative spaces, leaders are witnessing an increase in teaming, learning, and innovation. This type of organizational change is worthy of exploration and discovery, to expand understanding, and to create new ways to think about organizations.

#### *DEFICIENCIES IN PAST RESEARCH*

While the literature on organizational change and culture change presents a wide range of theories and conclusions regarding the processes and viability of successful change, they converge on the dearth of research. Maynard-Moody, Stull and Mitchell (1986) report that "serious empirical work on the real effects...is non-existent", and Peters and Savoie (1994) report "no convincing evidence" (424) of change in the civil service culture. Riccucci (2001) specifically calls out the lack of quantitative analysis on culture. Fernandez and Rainey (2006) recognize the limited attempts but stated that research is based on small populations and that research using large data sets is warranted. These observations have been a key influence in this research design. The lack of quantitative research reinforced the need for quantitative analysis, while the human dimension revealed

by the literature suggested a reformulation to a mixed method approach. The proposed methodology responds to the calls for quantitative analysis of culture change while also incorporating the strength of qualitative research to capture the stories of those that have experienced the work environment.

*"Our goal is to make the entire federal government both less expensive and more efficient and to change the culture of our national bureaucracy..."* President Bill Clinton (The National Performance Review 1993)

## METHODOLOGY

The purpose of this chapter is to provide the method of inquiry for this study into organizational change in the public sector. The previous chapter provides insight into this subject from the multiple perspectives of academia, policy makers, and practitioners. The literature addresses the concepts of organization change and the components that comprise change. Using a wide aperture, we first explore various types, environments, means, and measures of change. As the aperture narrows, the literature review keys on operational concepts, i.e. on organizational culture and one specific factor of culture, collaboration. The previous research on work space, as a change catalyst, informs the reader regarding one type of purposeful, initiated change. This broad-to-narrow path, from organizational change to collaboration, affords the reader a full framework for the research question, is there a relationship between collaboration and work space?

### *RESEARCH QUESTION*

The drive to improve the delivery of government goods and services provides ample opportunity for scholars and practitioners. This research explores a relationship that

draws from public administration theory and the practicalities of government operations. The theory upon which this study draws is organizational theory, specifically change theory. In order to improve delivery, we must do things differently. The challenge to leaders and managers is to understand why they should change, what to change, how to effect the change, when to implement the change, and how to assess the change. One underlying theme for each of these answers is the culture of the organization. And thus, culture change becomes the goal of improvement efforts. Organizational culture is complex and may be impossible to understand. Yet, unraveling culture into its components is intriguing and is necessary for successful change initiatives. This research delves into one of the components of culture, collaboration. Collaboration is a work style that involves two or more people with shared goals, resources, and accountability that produce a shared output. Operationalized for this research, collaboration involves employees working together to produce shared knowledge.

The construct for working together provides a potential linkage between the theory and the practicality. Working together in space suggests that changing space may influence how people work together. The physical

conditions of work space are the result of the design of the physical space. The design may incorporate visual design elements that affect lighting, e.g. natural or artificial. The design may affect the acoustic conditions through the use of sound absorbing or sound reflecting materials. The intersecting nodes of change imperative, collaboration as a cultural attribute, and work space design, is the underlying challenge that leads to the research question for this mixed methods study:

Is there a relationship between work space design and collaboration?

#### *RESEARCH DESIGN*

The purpose of this study is to explore the relationship between the organizational culture attribute, collaboration, as the dependent variable, and work space, as the independent variable. The research is exploratory and descriptive. The rationale for this study is to seek additional understanding of the research topic through both objective manipulations of variables as well as through an inductive exploration of the relationship between collaboration and work space. A descriptive and inferential statistical analysis of this relationship responded to the calls for quantitative analysis of

organizational change (Fernandez and Rainey 2006; Armenakis and Bedeian 1999; A. Pettigrew, 1987). The qualitative phase of the study, through exploratory content analysis, seeks to illuminate the dynamics of the relationship that is inaccessible from the data.

The first two phases of the study will be conducted simultaneously. The quantitative phase will be conducted to determine if a relationship could be identified between the variables, collaboration and work space. Non-experimental quantitative research, as a deductive approach, provides the ability to generalize from the static Federal Employee Viewpoint Survey (Fedview) data to explore the theory that there is a relationship between collaborative behaviors and work space design. The qualitative phase will be conducted to explore the evidence of a relationship between the two variables. Through the use of exploratory, content analysis and hermeneutics, the qualitative method provides a social view for the line of inquiry. The following methodology discussion is divided into three parts, quantitative, qualitative, and mixing. The first quantitative and qualitative parts are organized in a similar manner, data description, data collection, and data analysis. The third part describes how the results of the quantitative and qualitative research will be integrated.

### *QUANTITATIVE METHODOLOGY*

Quantitative methods are used to evaluate theories by examining variables in an objective, data-centric manner, and non-experimental quantitative research, as a deductive approach, provides the ability to generalize. The quality of the data itself will be characterized using descriptive statistics and will then be examined as variables reflecting a theoretical construct. Quantitative methods may allow for sample data to be used as estimations for generalizations to a larger population (Warner 2013).

*Data.* The quantitative research will be conducted using secondary, cross-sectional data from the federal government-wide survey managed by the Office of Personnel Management (OPM). The initial surveys were conducted on a biannual basis as the Federal Human Capital Survey (2004, 2006, and 2008) and were designed to measure employees' perceptions of management. In 2004, legislation (P.L. 108-136) mandated annual surveys, effective in 2007; the policy change from voluntary to mandatory surveys increased participation rates. In 2010, the annual survey was renamed as the Federal Employee Viewpoint Survey (Fedview). The questions remained primarily consistent from 2004 to 2010; however, the survey's purpose evolved from a

measurement of human capital management to a measurement of leadership and management practices [that contribute to agency performance].

OPM conducts periodic reviews of the Fedview questions that result in changes to the questions included in the annual survey (D. R. Miller 2014). According to Dr. Rosemary Miller, OPM, following good survey practice, OPM periodically convenes a working group to review the Fedview questions. The group includes representatives from participant agencies and the Office of Management and Budget. Dr. Miller confirmed that the results of the working group led to the inclusion of a collaboration specific question on the 2010 survey. Dr. Miller was not able to confirm any relationship between the new question and The White House issued Open Government Directive (Executive Office of the President Office of Management and Budget 2009) establishing transparency, participation, and collaboration as the principals of open government the previous year (2009). The addition of the Fedview question on collaboration in 2010 provides a boundary for the proposed data set. This research design includes responses for the four years that include the collaboration



specific question, 2010-2013. The eighty-four Fedview questions are contained in Appendix A.

In 2004, the survey was given to full time, permanent employees of the members of the President's Management Council (PMC) representing nearly thirty major agencies. In addition to the PMC members, a significant number of smaller agencies elected to participate. In the 2013 survey, nearly one hundred agencies responded (Appendix B). OPM compiled the agency-provided data into reports by agency. In order to adjust for demographic bias, the raw data collected by participating agencies was weighted by OPM using other available data in order to generalize to the Federal employee population that is covered by the survey. The weights are developed using OPM data on gender, race, supervisory status, age, and agency size, and it ensures appropriate relative importance is given to each response. The data for this quantitative analysis will be extracted from the OPM agency reports compiled from agency administered surveys.

*Data Collection.* For this study, the Federal Employee Viewpoint Survey (Fedview) will be used for the data set. The responses to three questions, for four consecutive

years (N=172) will be collected. The three survey questions used to address the research question are:

Physical conditions (for example, noise level, temperature, lighting, cleanliness in the workplace) allow employees to perform their jobs well (independent variable).

Employees in my work unit share job knowledge with each other (dependent variable).

Managers support collaboration across work units to accomplish work objectives (dependent variable).

Following OPM methodology, this study will combine the strongly agree and agree responses to form a positive response category. The independent variable, work space, will be approximated by the survey question on physical conditions, whereby employee perceptions of physical conditions are the result of work space design. The dependent variable is collaboration, represented by the survey questions 'Employees in my unit share knowledge' and 'Managers support collaboration across work units to support work objectives'. These two questions most closely represent collaboration as conceptualized in this study as employees working together to produce shared knowledge. This cross-sectional analysis of the Fedview data will seek to understand the static factors related to the association between work space and collaboration. The secondary data

intended for this original analysis is available to the public at no cost.

*Data Analysis.* The sample data will be screened to identify and correct errors and inconsistencies prior to data analysis. The sample data will be described and ordered through the use of descriptive statistics. The data will be examined to generate an array of the data (skewness), the distribution of the data (standard deviation), and the relationship between the data as defined by correlation statistics. The entirety of the data will be analyzed for correlation between collaboration and work space using Pearson's product moment coefficient,  $r$  (Warner 2013). Following, a linear regression analysis will be performed to determine causality, i.e. does work space influence collaboration?

The annual survey has been administered over multiple years. A threat to internal validity is the change in the actual survey participants as well as a change in the environments. The responses for the variable of interests are expected to change; however, the changes in the federal employment environments may have unintended influence on the outcomes. Construct validity is also a consideration as a threat to validity due to the use of secondary data

and the use of surrogates to represent the variables of interest. A dependency among the selected variables may also result in common source bias (Meier and O'Toole 2010).

The results of this study will reflect the experiences of the respondents and may not be generalizable to the federal agencies' not represented by the OPM agency reports.

Additionally, the Federal Employee Viewpoint Survey was administered to employees of the Executive Branch agencies and therefore the findings may not be applicable to organizations within the Legislative and Judicial Branches of the U.S. Government.

#### *QUALITATIVE METHODOLOGY*

Qualitative methods are used to investigate the human perspective of the issue raised in the research question and are commonly used for public administration research; in fact, 85% of public administration dissertations in 1981 were of a qualitative nature (Luton 2010). The inductive approach to qualitative research allows the researcher to explore and explicate. In contrast to the objective nature of quantitative research, exploratory methods allow the researcher to document relevant evidence and to develop explanatory concepts in progress (Miles, Huberman, and Saldana 2014). In this research, content analysis and

hermeneutics will be used to complement the story that the data did not tell. Luton (2010) describes documents as actors; in this study, the target documents provide a different perspective on the dynamics of policy maker influence on operationalizing culture.

*Data.* The documents to be examined provide evidence for the qualitative portion of this study. The documents may provide perspectives on how the work environment may, or may not, relate to collaboration experiences. The data will provide a two-dimensional qualitative perspective for this study. Content analysis will be used to seek evidence of a relationship between work space and collaboration based on the data, i.e. archival evidence of public sector activities. Additionally, hermeneutics will be used to interpret themes and meanings in the narratives of the documents.

*Data Collection.* A set of archival documentation will be analyzed for evidence. The set will be time-bounded with documents generated between 2010 and 2014. The data collection will involve purposive sampling (Remler and Van Ryzin 2011), specifically Congressional reports by committees charged with government oversight (Appendix C). This analysis may suggest additional data collection opportunities. The limitations of the use of documents for

evidence included access limitations, stylized writing, incompleteness and inaccuracies (Creswell 2009). An advantage of using published documents is that the published words provided context for the valuation of the content.

*Data Analysis.* The documents will be coded for content that is indicated by the literature as relevant to the variables of interest. The first cycle of coding will consist of reviewing the set of documents in total to identify emerging themes. Subsequently, each document will be revisited in order to code the text into the identified themes. In vivo (Miles, Huberman, and Saldana 2014) coding will be used to identify patterns and to create categories. In addition to capturing the language dimensions of the text, value coding will be performed due to its contribution to the culture dimension of the study. The coded content will be compiled into a graphic format to enable an exploration of "patterns or themes" (Miles, Huberman, and Saldana 2014) that suggest relevance of each document to the variables of interest. Reliability procedures will include dual coding, also called code-recode (Remler and Van Ryzin 2011). The coding will be conducted on the documents with two passes, the first will proceed in order of the document date and the second coding

will be performed on the documents in random order. The two sets of codes will be compared and differences reconciled through a third review.

#### *MIXING*

The results of the quantitative and qualitative research will be reviewed and compared to identify confirmations and discrepancies. Through this triangulation, the themes that may be exposed during the exploratory analysis will be converged with the results of the quantitative results to better understand the relationship between collaboration and work space. The summary results will be analyzed and applied to the research question. The study findings will reflect the mixed method results. The utilization of mixed methods triangulation is intended to increase the validity of this research (Creswell 2009).

This mixed methods strategy will reflect an integration of previous research modified to answer this study's research question. It will reflect the data collection methods identified for organization development studies elaborated by Cummings and Worley (2009). It will also exploit the systems approach to the relationship between individuals and the system described by Barney

(2004) and captured in the visual model by Burke and Litwin (1992) as organizational climate and culture. While other authors acknowledge the relationship between individuals and the system studied as organization climate and culture respectively (Wallace, Hunt, and Richards 1999), this mixed method study design reflects the research of Jung et al. (2009) to explore climate and culture through the use of quantitative and qualitative data.

Mixed method strategies provide an opportunity to gain additional insight into phenomena. This research design, which uses quantitative and qualitative approaches to extend the findings, is intended to enable a better understanding of the relationship between collaboration and work space. Specifically, the analysis of the OPM survey data will provide insight from the executive branch federal employees' perspective. The examination of archival documents, employing both content analysis and hermeneutics, may provide insight into the perceptions of legislators involved in policy and oversight of government agencies. The purpose of this study is to explore the relationship between collaboration and work space already advanced in previous research. This mixed methods strategy is designed to exploit the strengths of established



methodologies, using both quantitative and qualitative components to contribute to better understanding.

The next chapter provides the results of this research. The chapter is organized by research component, beginning with the results of the quantitative analysis. This quantitative section is further sub-divided into data, data characterization, descriptive statistical analysis, and inferential statistical analysis. The qualitative analysis section is also sub-divided into data, data characterization, and data analysis. The last section of the chapter describes the integration of the results from the prior analysis.

## **RESULTS**

### *RESULTS OF THE QUANTITATIVE ANALYSIS*

Quantitative analysis was conducted to objectively explore the nature of a relationship between the independent variable, work space, and the dependent variable, collaboration. The following results of the quantitative analysis are organized into four sections. The first two sections describe and characterize the data that was used for the analysis. The last two sections describe the results of the descriptive and inferential analysis.

### *DATA*

This quantitative research was conducted using data from the Federal Employee Viewpoint Survey (Fedview). This survey is administered by the U.S. Office of Personnel Management (OPM) on an annual basis. The purpose of the survey is to measure employee perceptions, both of workforce management and "of whether and to what extent conditions that characterize successful organizations are present in their agencies" (U.S. OPM 2013).

The participants of the Fedview are the departments, and the large, small, and independent agencies of the Executive Branch of the U.S. Government. Across the four

years of survey administration selected for this research (2010-2013), 83 organizations participated. One organization participated in only one year, the Kennedy Center in 2012, and two organizations participated in two years, the U.S. Office of Government Ethics and the U.S. Office Special Counsel in 2012 and 2013. The Export-Import Bank of the U.S. participated in three years. Seventy-nine organizations participated in all four years. For each of the four years, the *FedView Report by Agency* combines small and independent agencies into one response. In contrast, the Department of Defense (DoD) responses are reported by individual service components, i.e. Army, Army Corp of Engineers, Navy, Marine Corps, Air Force, and DoD 4<sup>th</sup> Estate.

The annual surveys were conducted in the spring of the reported year. For 2013, the survey lasted approximately six weeks between April and June. For 2012, the survey was administered from April to July. In 2011, the survey lasted approximately eight weeks from March to May. And in 2010, the six week survey was conducted in February and March. In 2012 and 2013, the population was expanded to include part-time permanent employees. In 2010 and 2011, the survey population included full-time, permanent

civilian employees. The surveys were conducted as a random sample or census as decided upon by each agency.

The surveys were administered electronically and via hard copy to those that requested in 2010. Often this was for those employees without electronic access. OPM extended deadlines to improve response rates and sent letters as follow-up to the initial requests. OPM also provided sample communications to agencies to aid in their communications with their workforces. Additionally, a help center was established to assist agency managers and employees with survey related questions. The response rates were 48.2% (2013), 46.1% (2012), 49.3% (2011), and 52% (2010). The survey administrators determined these rates to be sufficient to satisfy a 95% confidence interval that the sample(s) will include the true value of the population mean.

The data from the OPM published reports is weighted data. In order to adjust for demographic bias, the raw data collected by participating agencies is weighted by OPM. Using other available data, OPM adjusts the raw data in order to generalize to the Federal employee population that is covered by the survey. The weights are developed using OPM data on gender, race, supervisory status, age,

and agency size and it ensures appropriate relative importance is given to each response.

#### DATA CHARACTERIZATION

For this analysis, secondary data was used from the *Fedview Report by Agency* for the years 2010 (U.S. OPM 2010), 2011 (U.S. OPM 2011), 2012 (U.S. OPM 2012), and 2013 (U.S. OPM 2013). The data set was bounded with 2010; the first year the survey included the collaboration specific question (managers support collaboration across work units to accomplish work objectives). Each participant (or group) is represented for each year the survey was administered. The data regarding each year's survey is as follows:

	2010	2011	2012	2013
Participating Agencies	82	78	81	81
% of Executive Agencies	97	97	97	97
Survey Population	504609	560084	1622375	831811
% Response Rate	52	49.3	46.1	48.2

Table 1. Agency Participation

The number of participating agencies varies from year to year. This variance occurs in the entry and departure of small and independent agencies. In this study the survey responses for small and independent agencies are

reported as one case. The notable variance in the survey population in 2012 is attributable to the array of agencies conducting random sample studies and census. The Department of Veteran Affairs, the Federal Aviation Administration, and some of the organizations grouped as DoD other (4<sup>th</sup> estate), used random sampling; however, census surveys were the primary survey method for data collection. The OPM methodology plans for a minimum 40% response rate; however, some agencies choose census surveys to gather adequate data for agency level purposes. The response rate for each of the four years is sufficient to represent the true population of the Federal workforce.

The independent variable, work space, is approximated by the Fedview survey question on physical conditions. The dependent variable, collaboration, is represented by two survey questions on employee perceptions of knowledge sharing within their work group and on managers' support of collaboration. From the published reports, the agency level responses to the three questions, for four consecutive years (N=172) was collected. The three survey questions are:

Question 14: Physical conditions (for example, noise level, temperature, lighting cleanliness in the workplace) allow employees to perform their jobs well (independent variable).

Question 26: Employees in my work unit share job knowledge with each other (dependent variable).

Question 59: Managers support collaboration across work units to accomplish work objectives (dependent variable).

Respondents were provided six categories for response to the survey questions of interest: strongly agree, agree, neither agree or disagree, disagree, strongly disagree, and do not know. The ability of the respondent to share his or her perception along a spectrum allows the level of measurement of this data to be ordinal. According to Warner (2013), it is "reasonable" (9) to use scale data to perform statistical analysis to obtain "interpretable and useful results" (8). The use of scaled data as an ordinal variable is also supported by Newton and Rudestam (1999). The secondary Fedview data used was transformed to develop the data set for this analysis. The responses reflecting strongly agree and agree responses have been combined into one positive category in accordance with OPM methodology. Specifically, the percentage responses of strongly agree and agree were added to produce one value for a positive response for each question.

DESCRIPTIVE STATISTICAL ANALYSIS

Descriptive statistics were computed and analyzed for each of the Fedview survey questions representing the independent and dependent variables. The results of the statistical analysis are arrayed in Table 2.

Variable	Cases Valid /Missing	Mean	Median	Mode	SD	Skewness	Kurtosis	Stem & Leaf outliers
Phys Conditions	172	70.13	69.65	68.8*	7.03	0.045	0.228	4<=54; 5>=85
Workers share knowledge	172	74.12	73.90	74.50	4.8566	0.035	0.217	2<=61
Mgrs spt collab	172	58.82	58.80	54.2*	6.8362	0.107	0.157	1<=42; 4>=75
*Bi-modal								

Table 2. Descriptive Statistics

There were 172 valid cases for this analysis. The mean, median and mode for each variable are similar to each other indicating normal distributions. The range of the means across the variables indicates a difference in perceptions for the three questions. Of particular note is the 15.3% difference in the two questions representing the dependent variable, collaboration, with the mean for question 'workers share knowledge' at 74.12% and the mean



for the question 'managers support collaboration' at 58.82%. This difference is also evident in the values for median and mode. The distribution of the variable data indicates a normal distribution with acceptable positive values of skewness and kurtosis.

The stem and leaf plot identified outliers for each variable. For the independent variable (physical conditions), there were 9 extreme outliers, 4  $\leq 54$ , and 5  $\geq 85$ . For the low values, two cases are from the Broadcasting Board of Governors (BBG) and two are from the Office of Management and Budget (OMB). NOTE: Each agency or group is represented in 2010, 2011, 2012, and 2013. The five high values are from Pension Benefit Guaranty Corporation (3), Federal Energy Regulatory Commission, and the Security and Exchange Commission. For the dependent variable as represented by the question 'workers share knowledge' there were two extreme outliers with low values and zero with high values. The outliers are from the BBG. For the dependent variable also represented by the question 'managers support collaboration', there were 5 extreme outliers, 1 low (BBG) and 4 high (National Aeronautics and Space Administration (2) and the Nuclear Regulatory Commission (2)). A boxplot was created to assess the dispersion of the outliers. The boxplots indicate that the

extreme outliers did not fall significantly beyond the 25<sup>th</sup> and 75<sup>th</sup> percentile. These results, with consideration of  $N=172$ , led to the decision to complete the analysis with the extreme outlier cases.

#### *INFERENTIAL STATISTICAL ANALYSIS*

The analysis indicates that correlation is significant at the 0.01 level (2-tailed) between the independent variable, physical environment and the dependent variables, workers share knowledge and managers support collaboration. Using Cohen's rubric (Newton and Rudestam 1999), there is a moderate, positive relationship between 'workers share knowledge' and 'physical conditions' where  $R = .273$ . There is a strong, positive relationship indicated between 'managers support collaboration' and 'physical conditions' where  $R = .475$ . The results indicate that as the perceptions of physical conditions increases so do the perceptions of both indicators of collaboration, 'workers share knowledge' and 'managers support collaboration'.

The results of the correlation analysis led to the follow-on regression analysis. A linear regression was completed with 'physical conditions' as the independent variable and 'workers share knowledge' as the dependent variable. The analysis indicates the existence of a causal

relationship between these two variables, where  $F = 13.740$ ,  $\text{sig} < .001$ , and  $R\text{-squared} = .075$ . The second linear regression analysis was completed with 'managers support collaboration' as the dependent variable. In this analysis, there is also a causal relationship indicated where  $F = 49.509$ ,  $\text{sig} = < .001$ , and  $R\text{-squared} = .226$ . This analysis indicates a causal relationship where 7% and 22% of the variation in the perception of collaboration (indicated by workers perception of knowledge-sharing and management support of collaboration) can be explained by worker perceptions of 'physical conditions'.

#### *RESULTS OF THE QUALITATIVE ANALYSIS*

The results of the qualitative analysis are organized in a method similar to the results of the quantitative analysis. First, the data used in this analysis, the Congressional archival documents, is described and then characterized. The data analysis section then follows and begins with the results of the content analysis of the variables of interest, collaboration and work space. The analysis also includes the interpretive results of the legislative language and meaning revealed in the Congressional narratives.

*DATA*

The archival documents used for this qualitative analysis consisted of reports and testimony generated from the activities of two Congressional Committees. This collection of Congressional records allows both analysis of the content as well as an interpretation of the voices used to convey the results of the legislative and policy making deliberations.

The U.S. Congress employs standing and ad hoc committees to conduct oversight responsibilities. Two committees were selected for their responsibilities as they relate to this study. In the U.S. House of Representatives, the House Committee on Oversight and Government Reform (to be referred to as the HR Committee) is charged with oversight of the Executive Branch, i.e. to review and study "the organization and operation of Federal agencies" (H.R. Rep. No. 111-705 2011, 2). The list of the House of Representative reports may be found at Appendix E. In the U.S. Senate, these responsibilities are carried out by the Committee on Homeland Security and Governmental Affairs (to be referred to as the Senate Committee).

In order to align with the data set selected for the quantitative analysis that used four years of the OPM Federal Viewpoint Survey (2010-2013), the corresponding

sessions selected for this qualitative analysis include the 111<sup>th</sup>, 112<sup>th</sup> and 113<sup>th</sup> Congresses. The 111<sup>th</sup> Congress was in session from January 2009 to January 2011, the 112<sup>th</sup> Congressional session was from January 2011 to January 2013, and the 113<sup>th</sup> Congress was convened from January 2013 to January 2015. The documents included in this study were those that were publically available in 2015.

The documents selected for analysis were retrieved from the official Congressional web site (CONGRESS.GOV n.d.). The lists of reports used for evidence for this analysis is available at Appendix D (Senate) and Appendix E (House of Representatives) and is summarized as follows:

	Reports Collected	Pages
Senate		
111th Congress	48	1286
112th Congress	32	1145
113th Congress	32	862
House of Representatives		
111th Congress	26	1010
112th Congress	35	1434
113th Congress	41	1390

Table 3. Congressional Report Summary

The Chairman of the HR Committee during the 111<sup>th</sup> Congress was Mr. Edolphus Towns. Mr. Towns was elected to Congress in 1983 and was a registered Democrat from the

state of New York (History, Art & Archives, U.S. House of Representatives n.d.). Mr. Darrell Issa was elected to Congress in 2001 and served as the HR Committee Chair for the 112<sup>th</sup> and 113<sup>th</sup> Congresses (History, Art & Archives, U.S. House of Representatives n.d.). Mr. Issa was registered as a Republican from the state of California. The change in party leadership between the 111<sup>th</sup> and the 112<sup>th</sup> Congresses was reflected in the language of the analyzed documents.

The Chairman of the Senate Committee for the 111<sup>th</sup> and 112<sup>th</sup> Congresses was Mr. Joseph Lieberman (United States Senate n.d.). Mr. Lieberman was registered as an Independent Democrat from the state of Connecticut and was first elected to Congress in 1988. When Mr. Lieberman stepped down from the leadership position, Mr. Thomas Carper assumed the Chairmanship. Mr. Thomas Carper served as the Chairman of the Senate Committee for the 113<sup>th</sup> Congress. Mr. Carper is a registered Democrat and represents the state of Delaware (Tom Carper U.S. Senator for Delaware n.d.). For this study, it is important to note that the Chair of the Senate Committee remained within the Democratic Party and this provided consistency of the language and tone of the reviewed documents.

There were primarily three types of documents used for this analysis, HR Committee reports, Senate Committee

reports, and Committee testimony. There were two structures for the Committee reports driven by the legislative bodies of the U.S. House of Representatives and the U.S. Senate. The HR Reports averaged about 40 pages. The reports included purpose and summary, background, history, explanation of intent, administrative information, legislative language, and on occasion, a minority views. The Senate Reports averaged 30 pages. The reports included purpose and summary, background and need, history, explanation of intent, administrative information, and legislative language. The testimony reports averaged about 115 pages. In general, the testimony reports contained written statements, witness testimonies, and supporting material.

The nature of the U.S. legislature requires that legislation be addressed by both the House of Representatives and the Senate. Due to this parallel structure, some of the reviewed reports covered the same or similar topics. For example, the U.S. Postal Service was a topic of multiple reports (S. Rep. 112-143 and 113-237, H.R. Rep. 111-216, and 112-363). Redundancy was also evident within reports such that the documents used repetitive language to convey the emphasis of the topic at hand. An example of this writing style was observed in

Senate Report 112-235, "Interagency Personnel Rotation Act of 2011". In this document, the word interagency appeared over 150 times.

The content analysis of the Congressional reports resulted in 35 reports that contained the key word, collaboration. The topics of these reports were then used to identify hearings of relevance. Four hearings were identified as follows:

Senate Hearing 111-233

*National Security Reform: Implementing a National Security Service Workforce* (Oversight of Government Management, the Federal Workforce, and the District of Columbia Subcommittee 2009)

Senate Hearing 111-594

*Developing Federal Employees and Supervisors: Mentoring, Internships, and Training in the Federal Government* (Oversight of Government Management, the Federal Workforce, and the District of Columbia Subcommittee 2010)

H.R. Hearing 111-91

*Jobs, Jobs, Jobs: Transforming Federal Hiring* (Subcommittee on Federal Workforce, Postal Service, and the District of Columbia 2010)

H.R. Hearing 113-17

*Facilitating Cyber Threat Information Sharing and Partnering with the Private Sector to Protect Critical Infrastructure: An Assessment of DHS Capabilities* (Subcommittee on Cybersecurity, Infrastructure Protection, and Security Technologies 2013)

#### DATA CHARACTERIZATION

The data collected for this content analysis was identified using the themes identified from the literature



review. The initial code words were selected as key words and phrases relevant to the research question; the initial list also included commonly used synonyms. These code words represent the factors of study specific to this research question, i.e. collaboration and work space. Additional code words were included that indicated the themes of organizational change, content, context, process, and criterion. The code words used for analysis are: organization change, technology, context, culture, collaboration, cooperation, coordination, integration, work space, office space, environment, facility, improvement, efficiency, reform, and enhancement. Indicative of the exploratory nature of this study, additional words emerged as potential evidence for this study and were incorporated into the code list. These following words were added as part of the analysis: process, streamline, effective (and its variants), transformation, innovation, modernization, interagency, and information sharing.

#### *DATA ANALYSIS*

The qualitative analysis involved a multi-step process. The first review of the Congressional reports was ordered by the date as it appears on the reports. This date reflects that date that the report was ordered to be

printed. Each report was reviewed and annotated. All reports were coded during the first cycle. The text was analyzed for code words. Concurrently, the language of the text was scrutinized for emotive and value-laden communication. At the end of the first cycle, the contribution of the reports to the topic of interest was reevaluated. Three types of reports were excluded in the second cycle: oversight plans (3), activities reports (8), procedural guide (1), and resolutions of contempt (2). The numbers of reports in the first cycle compared to the numbers of reports analyzed in the second cycle as a result of disqualified reports are displayed in Table 4. The excluded reports were counted in the first cycle; however, they were not included in the final content analysis.

(These reports did provide contextual value.)

	Reports in 1 <sup>st</sup> Cycle	Reports in 2nd Cycle
Senate		
111th Congress	46	45
112th Congress	31	30
113th Congress	32	31
House of Representatives		
111th Congress	26	24
112th Congress	35	29
113th Congress	39	36
	209	195

Table 4. Congressional Reports in Second Cycle

The second coding was conducted in random order. Using a random number generator, each report was assigned a number. Each report was then analyzed in numerical order according to the randomly generated number. At the completion of the second coding the results of the first and second coding were reconciled. The reconciliation primarily required a consistent approach in identifying appropriate code words. For example, the code word (phrase) identified at the onset was work space. In the content analysis, other variations were identified, such as work place. The resolution used in the content analysis was to include variations that reflect the intent.

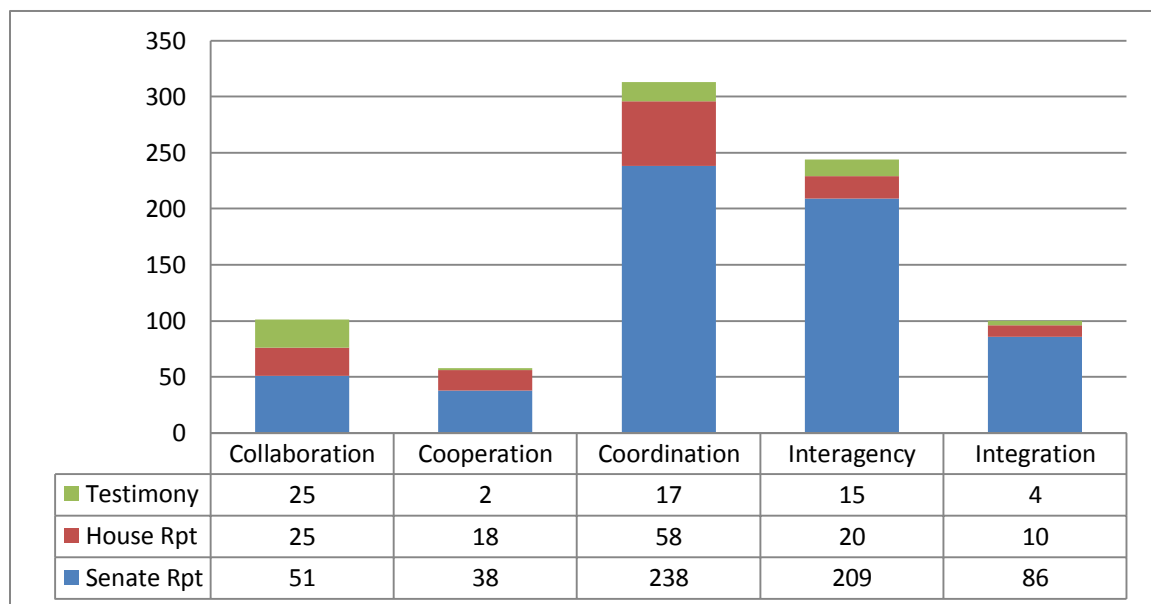


Table 5. Results of Content Analysis (Collaboration)

*Collaboration.* The content analysis resulted in evidence of the word collaboration occurring approximately 100 times. This low incidence exposed by the content analysis did not provide compelling evidence of collaboration within organizations as a topic. To extend the aperture for evidence, additional similar words were included for assessment. This extension is based on the use of the words collaboration, cooperation, and coordination nearly interchangeably in the targeted documents. The treatment of the three words suggests that the full meaning of collaborative behavior is not fully embraced. Collaboration is intended to mean an activity where resources, goals, and responsibility are shared to produce information or an output. As defined by the literature, coordination is communicating about independent activity in service of one view, while cooperation is employed to advance discrete results in a mutually advantageous manner. In this analysis, the three words (collaborate, cooperate, and coordinate) suggested a broader, operationalized meaning of 'work together'. Two additional words, interagency and integration also appeared in the documents in relation to the area of interest.

These words (in multiple formats) appeared as complements to other related words, e.g. interagency collaboration.

*Work space.* The second part of the relationship in this research is work space. The analysis of Congressional documents indicated the near absence of consideration of work space as being in a relationship with collaboration (Table 6.). Additionally, the analysis revealed limited evidence of work space as a contributor to achieving mission goals. The incidents of discussion of work space (in the broader context) revealed a Congressional interest in the traditional real estate value of space. Of note is the high occurrence of the code word facility; this is interpreted as an indicator of the Congressional interest in reducing excess government facilities and in making government facilities more secure, rather than in the layout or design of facilities in which employees work. In *Federal Real Property Asset Management Reform Act of 2013* (S. Rep. 113-122) the stated intent of federal property management is to reduce costs and be more efficient. Relevant to this study is the text of the legislative language that directs agencies on methods to reduce costs and increase efficiency; it reads "adopt workplace practices, configuration, and management techniques" (18).

Another noted exception to the dearth of work space references is a brief discussion of funding for the Department of Homeland Security (DHS) campus on the grounds of the former St. Elizabeth's Hospital in Southeast Washington, D.C. A status report on the new DHS facility elicited a supporting comment that a consolidated site would enable interaction among employees (S. Rep 112-193, *Activities of the Committee on Homeland Security and Government Affairs*).

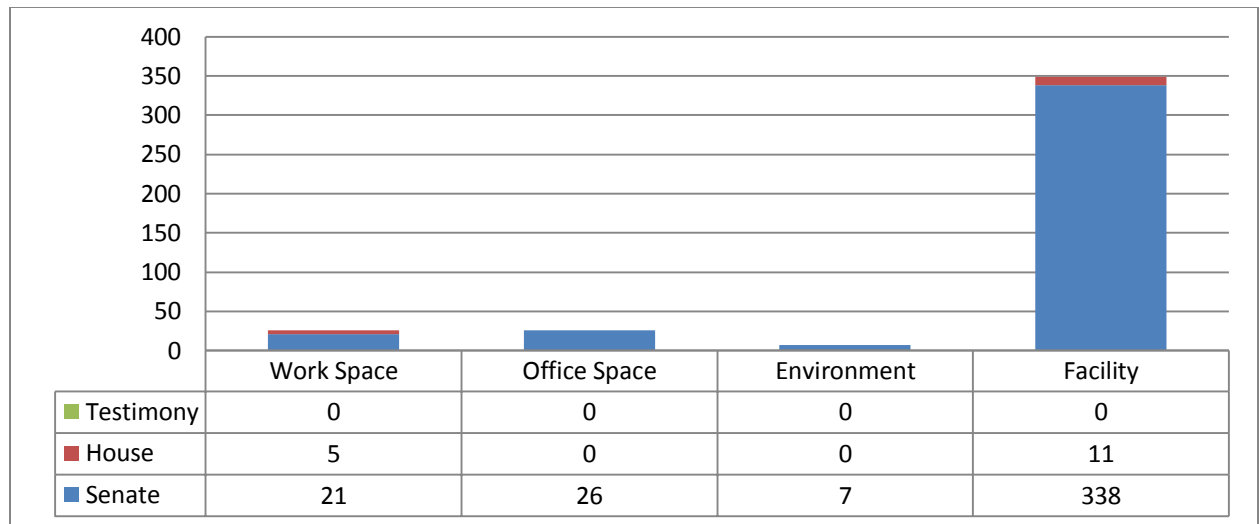


Table 6. Results of Content Analysis (Work space)

The material used for this content analysis was selected for its potential of providing evidence of a relationship between collaboration and work space. In addition to the literal analysis of the words, the

documents provided an insight into the nature of politics and reflected the views and perceptions of the participants through patterns or cultural relevant language. The interpretation of the archival documents provided evidence of the values of the Committee leadership over time as reflected in the language. In vivo coding provided additional evidence into the subcultures of the Committees as evidenced by the political nature of the patterns of speech. One example of this bifurcation appeared in the House reports addressing the federally provided benefits. One subculture describes the federal programs and benefits in a positive light, while another portrays them negatively. The words that support federalism include critical public service, pride, and openness. The words that are critical of federal management are incapable, burdensome, and wasteful.

The use of hermeneutics to this analysis of language patterns and values provided a richer context of the research material. Through phrases and words, the Committee and Hearing participants expressed their support for, or outrage of, federal programs. There was scant evidence in the Reports that provided insight into the focus of this study, i.e. evidence of a relationship between collaboration and work space. The content analysis

of the hearings did not provide evidence for consideration, i.e. there were zero instances of the key words for work space.

It is difficult to clearly know the intended meaning of the words, e.g. was it intended that cooperation, coordination, and collaboration imply similar expectations for interaction? Through the combination of the key words identified in this analysis, the impression is that the Committees are encouraging cross-talk among organizations, primarily among organizations involved in similar mission areas. The DHS was a recurring actor as reflected in the documents (appropriate given the Committee jurisdictions). The Homeland Security Act of 2002 (P.L. 107-296) legislated the establishment of DHS; it began as a federation of twenty-two organizations, each with its own culture (*Department of Homeland Security Authorization Act of 2012*, S. Rep. 112-249). In Senate Report 112-249, the word coordination appears 81 times, while the word collaboration occurs 1 time. This report also contained language encouraging integration (14 times) and information sharing (8 times).

The hearings provided additional context for discussions of collaboration among groups with shared interests. In Senate Hearing 111-233, *National Security*



*Reform: Implementing a National Security Service Workforce*, which addressed workforce reforms in the national security arena, the witnesses referred to collaboration 13 times and interagency 10 times; of the six witnesses, three referred to both collaboration and interagency (Table 7.).

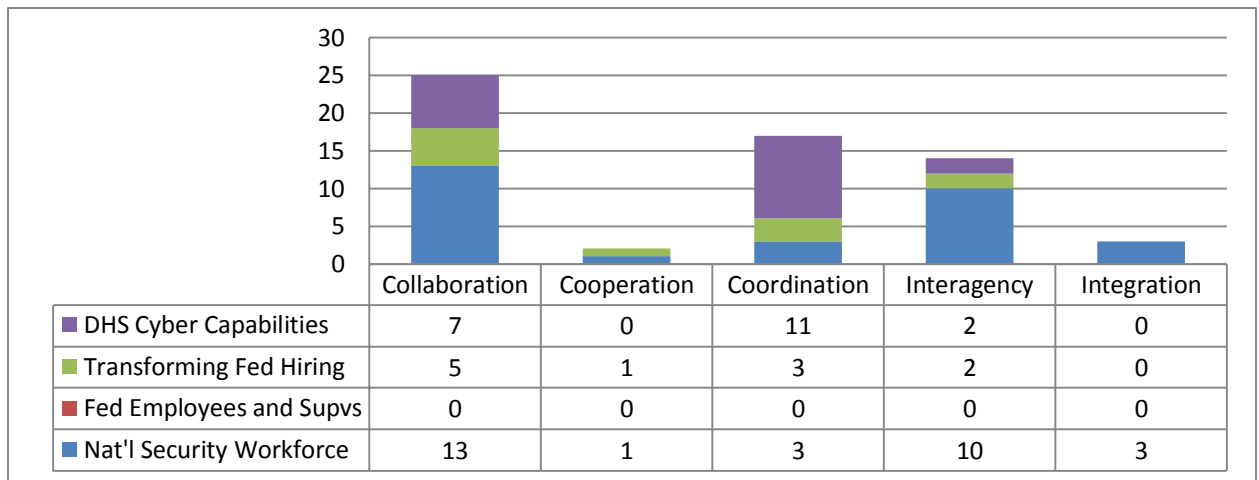


Table 7. Results of Hearing Content Analysis

In contrast, in Senate Hearing 111-594, *Developing Federal Employees and Supervisors: Mentoring, Internships, and Training in the Federal Government*, there were zero occurrences of the key word, collaboration, or its synonyms in practice, cooperation or coordination. The hearing was called to address the training and development needs and

requirements of new federal employees and supervisors. At the time of the hearing, OPM was predicting the departure of approximately one half million federal employees from the workforce in 2014 as a consequence of the retirement eligibility of the members of the baby boom generation. This hearing focused on training the incoming workforce, those intended to replace the wave of retirees, to "ensure that a new generation of employees is ready to lead" (Senate Hearing 111-594, 2).

Dr. Sanders, Intelligence Community, Chief Human Capital Officer, Office of the Director of National Intelligence, testified at the Senate national security reform hearing, to the need to create interagency rotational assignments that lead to "collaborative networks" (Senate Hearing 111-233, 8). Ambassador Pickering echoed this need for collaboration; however, he reported that the desired culture of collaboration is inhibited by the existing cultures, "cultures and interests of the departments and agencies trump the need for interagency collaboration" (24).

According to the data finding from the hearing reports, the evidence tells us that collaboration is a cultural attribute. It is also evident that government leaders are working to instill this attribute at an

organizational level, i.e. with a desire to work collaboratively across organizations. At the individual level, there is a lack of evidence that suggests a concerted effort to, or focus on, developing the collaborative skills of employees.

At the operational level, integration and fusion centers provide evidence that co-location is positively affecting the level of collaboration. Integration and fusion centers are physical spaces created to enable information sharing. According to testimony at an H.R. hearing on cyber threats, The National Cybersecurity and Communications Integration Center (NCCIC) is a "collaborative method" (*Facilitating Cyber Threat Information Sharing and Partnering with the Private Sector to Protect Critical Infrastructure: An Assessment of DHS Capabilities*, H.R. Hearing 113-17, 1). The NCCIC, hosted by the DHS, is a "round-the-clock information sharing, analysis, and incident response center where government, private sector, and international partners work together" (3). At the cyber security hearing, Ms. Stempfley testified that (within the cybersecurity mission) DHS is moving from "person-to-person" trust created within the NCCIC to "organization-to-organization" trust—this trust is necessary for information sharing. The DHS is also

supporting fusion centers; these centers enable information sharing across law enforcement agencies at the federal, state, and local level (*Department of Homeland Security Authorization Act of 2012*, S. Rep. 112-249). Physical collocation has become a mandatory requirement for promotion to senior positions in the Intelligence Community (S. Hearing 111-233, *National Security Reform: Implementing a National Security Service Workforce*). The National Counterterrorism Center and the National Counter Proliferation Center are two locations where Intelligence Community (IC) employees can serve their joint duty assignment. The IC joint duty program is modelled after the Department of Defense joint duty program, established in The Goldwater-Nichols Department of Defense Reorganization Act of 1986 (P.L. 99-433). This program was intended to break the stovepipes of the uniformed services by requiring a joint duty assignment for promotion to flag office. The success of the DoD program, after nearly 30 years, demonstrated the value of rotational assignments on a broader stage. In fact, the requirement for joint duty rotations of officers is given credit for causing "a tectonic shift" in the military culture (*Interagency Personnel Rotation Act of 2011*, S. Rep. 112-235, at 9, 2012). For the IC Joint Duty Program, Dr. Sanders

expressed its importance clearly in his testimony, "it is essential to the community's transformation and the creation of a culture of collaboration that is critical to our national security" (S. Hearing 111-233, at 8).

The selection of Congressional documents for this analysis was intended to discover and examine evidence of a relationship between collaboration and work space in the federal sector. In order to establish consistency in this analysis, a code-recode design was employed. The content analysis was performed on the Congressional documents in a date sequence and then in a random sequence. The two results were compared and reconciled. These documents provided relevant insight into the deliberative body concerned with government operations. The text provided both direct (words) and indirect (language) evidence of the topic of interest. Through an analysis of the words, and an interpretation of the meanings of words, this study indicates that collaboration is a cultural attribute that is being pursued as a target state, i.e. the way work gets done. While the occurrence of the word collaboration was limited, the evidence indicates an interest in creating a multiplier effect for producing government goods and services beyond individual and stand-alone organizational endeavors. The archival documents of the House and Senate

committees charged with oversight of the executive branch indicate that the DHS and IC are actively implementing physical co-locations of cross organizational efforts to compel collaboration. For the IC, additional incentives are being incorporated into career progression programs.

The use of Congressional documents to explore the relationship between collaboration and work space was informative for interagency consideration; however, the difficulty in discovering meaningful insight within agencies exposed a gap in the evidence. The documents used for this study were created during three sessions of Congress. The analysis revealed topical themes that crossed over between sessions and across chambers. A weakness of this analysis results from the potential for some words, reflective of a recurring topic, to have inflated counts. In one example, the topic of federal records management was addressed in multiple reports of both the House and Senate committees (H.R. Rep. 111-406, *Electronic Message Preservation Act*, H.R. Rep. 113-127, *Presidential Library Donation Reform Act of 2013*, S. Rep. 111-213, *To Authorize Appropriations for the National Historical Publications and Records Commission*, S. Rep. 113-218, *Presidential and Federal Records Act Amendments of 2014*, et al.)

*MIXING*

This study is an exploration of collaboration and work space. A review of the literature on collaboration offered multiple definitions. Linden (2003) offered a definition of collaboration that suggested a deep relationship while the GAO (U.S. Government Accountability Office 2009) definition was painted with a broad brush. Linden defined collaboration as a commitment to sharing, work, resources, output, and responsibility. The GAO included cooperation, coordination, and integration as part of its definition of collaboration (U.S. Government Accountability Office 2009). The space between these two definitions provided wide latitude for this study.

The quantitative analysis was conducted using secondary survey data of federal employees in executive agencies, with N=172. Three survey questions were identified as proxies for collaboration (dependent variable) and work space (independent variable). The analysis indicated a significant correlation between the variables, with a stronger relationship indicated by employees' perceptions of managers' support of collaboration. The regression analysis indicated a causal

relationship between the independent and (each of) the dependent variables.

In the qualitative analysis, the evidence of a relationship between collaboration and work space was limited. In the content analysis of thousands of pages of over two hundred Congressional reports and testimonies, collaboration appeared about 100 times, and work space and work place appeared about 50 times. By applying the GAO definition that includes collaboration, coordination, and cooperation, the count increased to well over 300 times (327).

The results of the quantitative and qualitative analysis suggest two conditions at play. First, the quantitative results provide evidence that work space can affect employees [perceptions of] collaborative behavior. This suggests an opportunity for federal leaders and managers. If an increase in collaboration is desired, then the analysis indicates that work space may be an available tool to achieve the objective. Second, the qualitative results indicated that leveraging work space to increase collaboration has seen little exposure for intra-organizational purposes. However, the evidence indicates that the U.S. national security community (to include both DHS and the IC) are very interested in increasing



collaboration. They are proactively pursuing opportunities, primarily through collocation. Through joint duty assignments and motivated by the promotion requirement to do so, employees are increasingly interacting with peers from other organizations.

The combination of the federal employee perceptions and the legislature output also exposes the dichotomy of episodic and continuous change. The study revealed a causal relationship between the physical work environment and perceptions of collaboration. Should leaders choose to affect a change in work environment, the employees may perceive this as a gamma change, i.e. a "change in state" (Golembiewski 1976, 140). The quantitative analysis did not provide insight into the acceptability of this type of change. However, the qualitative analysis did provide evidence for incremental change. In the content analysis, the word 'process' occurred 562 times while the word 'transform' appeared 172 times and the word 'reform' appeared 27 times. This array of numbers indicates that the strongest interest is in making transactional level changes and the least interest is indicated in radical or strategic change based on the counts of the key words.

The use of mixed methods in this study allowed the triangulation of the results generated from a quantitative

analysis and a qualitative analysis. A weakness of this mixed study is the analysis of data derived from different participants. The data for the statistical analysis represented perceptions from federal employees in the Executive Branch. The data for the qualitative analysis [primarily] reflected the views of the elected members in the Legislative Branch.

## DISCUSSION

The intent of this study was to expand the body of knowledge on organizational change theory by exploring the relationship between collaboration and work space in the public sector. The analysis yielded mixed results. The quantitative analysis, using secondary data from four years' of the OPM Federal Employee Viewpoint Survey, indicated the existence of a statistically significant causal relationship between collaboration and work space. However, the content and interpretive analysis of the text from the Congressional documents failed to reveal similar evidence of a relationship. The significance of these findings is noteworthy for what they do and do not reveal.

From the broad perspective, the literature review exposed four themes of organizational change, content, context, process, and criterion. The literature that may be categorized as content includes studies on the types of organizational change, while the environments and causes for change are addressed in studies on the contexts of change. The research on change processes addresses methodologies of change, and the research on criterion covers measures and measurement of change.

This study narrowed the area of examination to one type of organizational change, namely, changing organizational cultures. As a target of change, culture in organizations is difficult to observe, difficult to characterize, and any successful change is difficult to sustain. The literature revealed that obstacles to organizational change become more acute with organizational culture change initiatives. There are obstacles to change that are more problematic in the public sector due to political elections and short term appointments. These cyclical machinations create instability and present a challenge to the commitment necessary to truly influence organizational cultures.

Organizational cultures may be characterized through many lenses. Schein (1992) provided a practical perspective leveraging observability of culture. This view separates culture into three levels, artifacts, values, and basic assumptions. Each level becomes increasingly more difficult to observe and access. Organizational culture change theory converges on the position that culture change efforts must acknowledge the multi-dimensionality of the targeted culture.

This research focused on one dimension of culture, collaboration, i.e. co-labor. In this study, collaboration

is an activity that involves people working together with a shared purpose to achieve shared outcomes, with shared accountability. These few words describe a complex endeavor that may be explored using Schein's lenses of observability (1992), i.e. artifacts, values, and basic assumptions. This study explored collaboration through the artifactual lens of work space. The research question, 'is there a relationship between collaboration and work space?' delves into the practicality of affecting collaborative behavior by work space design.

In the public sector, there is a dearth of evidence of a causal relationship between collaboration and work space. There are pockets of applied scholarly interest in which this relationship is emerging such as those pursued by the Government Services Administration (GSA). This mixed method research yielded valuable results. Using annual survey data that reflects the perceptions of Executive Branch federal workers, the findings of the quantitative analysis provided evidence of a causal relationship between work space and collaboration. In this analysis, the employees' perceptions of the work space conditions had a lesser effect on their perceptions on workers sharing of knowledge (7%) than on managers' support of collaboration (22%). The difference between the level of co-workers'

influence on collaboration and the manager-influenced collaboration was unexpected. This may be attributable to other factors. For example, the larger effect on employees' perception [of the management support for collaboration] may be associated with the managers' decision authority regarding the choice and investment in the physical work environment and the work space design. The smaller effect on workers sharing of information may also be a reflection of demographics. As the representation of millennials increases and baby boomers retire, knowledge sharing may be a generational attribute that operates independently of other factors such as work space design.

While the quantitative analysis provided evidence of an influence of the physical environment on collaborative types of behavior, the qualitative analysis suggests that other factors influence the extent to which federal personnel collaborate. The analysis of Congressional documents for content and meaning, over three sessions, revealed an interest in increased collaboration yet provided minimal evidence of legislative efforts to achieve this desired work style.

In addition to the relationship between collaboration and work space identified in this study, there are likely

other influencing factors. Following the levels of observability identified by Schein (1992), other artifacts, values, and basic assumptions may be contributors. Organizations that require formal business attire may be unwittingly indicating that communication must also be formal, rather than open and sharing. Both personal and office values, such as loyalty, may affect collaborative behaviors. Employees may have assumptions regarding priorities that may hamper collaboration. For example, if employees perceive that the end result is the highest priority, then engaging with others to develop relationships may be perceived as an inefficient use of time. Burke and Litwin (1992) and Goodsell (2011) included motivation as a factor of culture. Employees may be intrinsically or extrinsically motivated and therefore, are indifferent to clues provided by work space design. Employees may be pursuing self-interests or they may be highly committed to an agency mission. In these situations, employees may seek out collaborators to improve their likelihood of success, independent of managers' initiatives. Collaboration as a factor of culture is quite likely as complex to understand as culture itself; it is difficult to identify influencing variables as well as how those variables interact.

The central research question in this study was developed as an academic endeavor to explore the theory and meaning of organization change in practice. In response to the call for research involving large populations, this research confirmed the findings of prior, small population research. The significance of this methodology is confirmation of a causal relationship between collaboration and work space at the federal level. The use of surrogates from the OPM Fedview data set suggests that administrators seeking to understand and manage collaboration may examine organization specific survey data results to identify causes and trends. Likewise, a statistical relationship may be corroborated through content analysis and hermeneutics of jurisdictionally appropriate Congressional documents. The meaning within the Congressional narrative may provide awareness and insight that may prove to be critical for successful organizational change initiatives.

For the world of policy and practice, this study is significant at the macro level where the majority, two-party political system in the United States is a key driver of public administration. The turnover in Congressional membership, resulting from the electoral changes of representatives and political party majorities, affects U.S. policies and programs and how they are implemented by



federal civil servants. This change in members and majority party sways Congressional control of the purse strings and how Congress authorizes federal government spending. As public administrators justify and compete for resources, the level of collaboration among administrators is likely to be influenced by the changes in legislators and legislation.

The lack of evidence in the Congressional records may be attributable to the economic and political environment for the 111<sup>th</sup>, 112<sup>th</sup>, and 113<sup>th</sup> Congresses. In this time frame of the late 2000s, the U.S. economy fell into a recession; the contraction of the economy resulted in reduced tax revenues and thus, a push to prioritize and reduce government expenditures. The fiduciary focus of Congress (expressed in the documents) reflected serious concern about the financial situations of the representatives' constituents. While GAO found that collaboration may improve government efficiency and effectiveness (U.S. Government Accountability Office 2009), the emotionally charged Congressional language tended toward expressions of less government and more organizational accountability. The Congressional message of "the perilous times" (H.R. Rep. 111-116 *Federal Employee Paid Parental Leave Act of 2009* at 11), in turn, influences

agencies towards a reactionary culture, e.g. crisis management (Khademian 2002). The stress on agency funding leads to difficult resource decisions. Administrators must prioritize their work and chose where to absorb the Congressionally-directed reductions. It is during these resource-constrained environments that activities get scrutinized; agencies must weigh the benefits and consequences of funding decisions to ensure the achievement of core mission objectives against those resources necessary for functions such as travel, training, supplies, and facilities. The annual cycle of government funding is also a challenge for sustaining long-term collaborative projects.

The interest in increased collaboration was evident in the document analysis; however, there was a dearth of evidence on implementation practices to effect change. The analysis did provide evidence that work space continues to be viewed primarily as a function of real property management, rather than as a means to improve mission outcomes. The evidence of a causal relationship between work environments and perceptions of collaboration provided in this study may provide an opportunity. For example, the documents included legislative proposals for disposing of excess federal property (H.R. Rep. 112-402 *Excess Federal*

*Building and Property Disposal Act of 2011*, and S. Rep. 112-241 *Federal Real Property Asset Management Reform Act of 2012*, and S. Rep. 113-122 *Federal Real Property Asset Management Reform Act of 2013*). The rate of disposal has been underwhelming and in order to accelerate the transactions, agencies are being offered incentives. For each sale of real property, agencies are approved to retain 18 percent of the proceeds from the completed sales of real property for reinvestment in property management and disposal (S. Rep 113-122). The return of proceeds, directed to installation management, may be used as a source of funds for interior facilities purposes, i.e. work space design.

The analysis of archival documents for content and meaning revealed examples of emerging recognition of a relationship between collaboration and work space. The Intelligence Community (IC) has expressed its support of collaborative behavior through the implementation of the IC Joint Duty Program (Senate Hrg. 111-233 *National Security Reform: Implementing a National Security Service Workforce*). This proactive human capital initiative expands outwards through the instantiation of integration and fusion centers with partners of the IC. These physical co-locations indicate a continuing commitment to the use of

physical environments to encourage interagency collaborations. A continued investment in work space may contribute to the development of long term relationships. The use of integration centers may aid in mitigating the challenge for sustaining longer term collaboration initiatives (Adler, Heckscher, and Prusak 2011). While the IC is demonstrating a concerted effort to increase interagency collaboration, data accessibility is a limitation to further study of IC interagency initiatives.

Incentivizing employees to collaborate is a consideration of organizational culture. It is a logical decision that employee development plans include goals and objectives for collaboration. The implementation of the plans will enable employees to adapt to, and be successful in, external collaborative assignments. For employees to commit to collaborative work styles, they must sense organizational support. The Department of Defense (DoD) and the IC are using sticks and carrots to encourage collaborative behaviors. In both communities, employees must complete rotational assignments in external organizations as a requirement for promotions to senior positions. After the decades-long commitment by the DoD, the expectation for joint duty, as a requirement for advancement, has embedded itself into the culture of the

promotion practices. The IC is on a path to replicate this successful culture change, i.e. that it is acceptable and expected for employees to depart the home agency to collaborate with external partners and stakeholders. The evidence revealed that the IC and DoD openness toward interagency collaboration is not wholly accepted across the federal government. In some cases, the perception is that agencies do not want to work together (H.R. Rep. 112-455 *Federal Information Security Amendments Act of 2012*).

There was also evidence that the government lacks credibility as a partner. In order to share goals, purposes, and resources, trust is required. This trust is difficult to achieve when security concerns preclude partners from access to appropriate relevant data and information. Yet, it is encouraging to find evidence that collaboration, as an emerging practice, is gaining traction. These successes should continue to attract the attention of organizational change scholars.

As a factor of culture, collaboration is affected by the positive and negative opinions of culture change. The content analysis revealed a tendency toward reactionary rhetoric regarding culture. Organizational culture, uncovered in this research, was used as a lightning rod for change. The Office of Thrift Supervision is described as

having "an ineffective regulatory culture" (S. Rep. 112-193 *Activities of the Committee on Homeland Security and Governmental Affairs* at 135). The "culture of misconduct" at the U.S. Secret Service was a target of investigation (S. Rep. 113-115 *Activities of the Committee on Homeland Security and Governmental Affairs* at 21). And, the Washington Metropolitan Area Transit Association was accused of having a "deficient safety culture" (H.R. 111-705 *Activities of the Committee on Oversight and Government Reform* at 151). The tendency towards characterizing culture negatively only serves to make change efforts that much more difficult.

The scholars and practitioners of organizational culture change are encountering a shift in work force demographics. Millennials are replacing baby boomers; in 2014, 53 percent of full time federal employees were eligible to retire (S. Rep. 111-364 *Federal Supervisor Training Act of 2010*). The recruitment pool has expanded with a surge of younger members who have expressed different values, informed by their networked, on-line, information sharing habits. For example, the Congressional documents provided evidence of the changing expectations of the younger work force; they value fairness and diversity. Employees expect fair treatment of themselves and their co-

workers in regards to worker benefits (S. Rep 111-376 *Domestic Partnership Benefits and Obligations Act of 2009*). As the largest employer in the U.S. (S. Rep 111-376), human resource professionals are encountering the challenges of demographic changes. This shift in the work force provides a rare opportunity to instill contemporary values and behavior expectations in new employee programs as well as mid- and upper- level training. This research offers evidence of an emergent behavior, the cultural attribute of collaboration, that may contribute to the culture shift desired by those developing policy and by those implementing policy.

This research contributes to the body of knowledge of organizational theory by providing confirmation of a relationship between collaboration and work space. It enables a more informed discussion of the viability of culture change initiatives. In addition to the potential for exploiting the use of work space to influence collaboration, it also exposes the challenges to public administrators, i.e. the dilemma when faced with the constraints and opportunities of its political and budgetary environment.

Over ten years ago, Khademian (2002) addressed the challenge of culture change in public organizations. In

this pivotal text, she concluded that public managers should focus on commitments regarding public programs. A significant component of this concept is the role of partnerships. The criticality of forming relationships that serve the needs of all members is aligned with the momentum of building collaborations. Through the expression of commitments, collaborative behaviors will become a part of the culture.

As a career-long practitioner and as a new scholar, the significance of these findings is confirming and humbling. As a target of change, I have experienced change under leaders that chose to wield sticks and leaders that chose to wield carrots. Interestingly enough, both were effective; the astute leaders understood that each person experiences change differently and that change strategies must be adaptive and holistic. Changing work space has proven to follow a similar path. The recent literature by Susan Cain (2012) and others, is challenging the one-size-fits-all method of work space design. Different people need different environments. Through a combination of quiet, cognition space, and collaboration space, each employee will respond differently. This study confirms that informed leaders can leverage work space to influence collaboration as a means to maximize and share resources,



create learning opportunities, and increase innovation. This study also confirms that public administrators face a challenge in acquiring resources to implement work space design features. By engaging Congress and other stakeholders, leaders in the public sector can expose financiers to the success with the national security arenas, through GSA studies, and through GAO reports. This study has provided an opportunity to examine previous experiences and initiatives through the theoretical lens. It has reinforced lessons learned, both positive and negative, and it provides the academic foundation to continue on a path of practice informed by theory.

*Summary.* It is unlikely that interest in organizational change theory and its application will wane. As long as stock holders expect profits, and citizens expect public goods and service, leaders and managers will continue to seek ways to satisfy their stakeholders. This study focused on collaboration, one factor of one type of organizational change. This study provided evidence of a causal relationship between work space and collaboration and that the environment is conducive to continued interest in collaboration, particularly in the national security sector. At this time, there is evidence that the Intelligence Community and Department of Homeland Security

are operating integrated work centers with representation by multiple agencies, and using rotational job assignments as the preferred method to instantiate collaboration. The evidence to suggest that this activity is being measured was limited. Generally, the evidence of criterion was limited to directives to agency Inspector Generals to provide feedback.

Public Administration scholars should be encouraged by the plausibility of successful culture change while remaining mindful of the environment.

*Future Research.* Public sector managers will continue to seek tools that assist with developing the workforce in ways that improve near-term performance and long-term outcomes. Research that integrates existing resources in new ways should be pursued. The General Service Administration continues to study the relationship between work space design and its contribution to collaborative behaviors. This effort should continue. Agency-level decision makers may leverage the emerging research to reduce operating costs, and more importantly, to achieve core mission objectives.

This research concludes that, at the federal level, work space does influence collaboration and that making

changes in the work space has not emerged as an obvious approach to change. The nature of this study expands the body of knowledge at the strategic level. In order to explore this relationship at the operational and tactical levels, additional research is recommended into individual agencies, or mission sectors of the federal government. The interagency efforts of the IC and DHS to work collaboratively are ideal candidates to explore for this scholarly area. This research contributed to the body of knowledge on organizational change theory. In the future, the causal relationship between work space and collaboration has the potential to be employed as an important change management tool for public sector managers.

The importance of this topic cannot be understated. The national security sector is committed to collaboration to meet the threats from non-state actors (terrorists), weapons of mass destruction, criminals that do not stop at geographical boundaries, "Internet time" (S. Rep. 112-235 *Interagency Personnel Rotation Act of 2011* at 3), and constrained resources. These five factors must be addressed to secure the nation from terrorism, weapons proliferation, insurgencies, cyber-crimes, domestic

emergencies and public health emergencies. The imperative is clear; a scholarly investment that contributes theoretical knowledge is necessary to confirm, modify, or disprove this collaborative approach.

## Appendix A Fedview Questions

- (1) I am given a real opportunity to improve my skills in my organization.
- (2) I have enough information to do my job well.
- (3) I feel encouraged to come up with new and better ways of doing things.
- (4) My work gives me a feeling of personal accomplishment.
- (5) I like the kind of work I do.
- (6) I know what is expected of me on the job.
- (7) When needed I am willing to put in the extra effort to get a job done.
- (8) I am constantly looking for ways to do my job better.
- (9) I have sufficient resources to get my job done.
- (10) My workload is reasonable.
- (11) My talents are used well in the workplace.
- (12) I know how my work relates to the agency's goals and priorities.
- (13) The work I do is important.
- (14) Physical conditions allow employees to perform their jobs well.
- (15) My performance appraisal is a fair reflection of my performance.
- (16) I am held accountable for achieving results.
- (17) I can disclose a suspected violation of any law, rule or regulation without fear of reprisal.
- (18) My training needs are assessed.
- (19) In my most recent performance appraisal, I understood what I had to do to be rated at different performance levels.
- (20) The people I work with cooperate to get the job done.
- (21) My work unit is able to recruit people with the right skills.
- (22) Promotions in my work unit are based on merit.
- (23) In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.
- (24) In my work unit, differences in performance are recognized in a meaningful way.
- (25) Awards in my work unit depend on how well employees perform their jobs.
- (26) Employees in my work unit share job knowledge with each other.
- (27) The skill level in my work unit has improved in the past year.
- (28) How would you rate the overall quality of work done by your work unit?
- (29) The workforce has the job-relevant knowledge and skills necessary to accomplish organizational goals.

- (30) Employees have a feeling of personal empowerment with respect to work processes.
- (31) Employees are recognized for providing high quality products and services.
- (32) Creativity and innovation are rewarded.
- (33) Pay raises depend on how well employees perform their jobs.
- (34) Policies and programs promote diversity in the workplace.
- (35) Employees are protected from health and safety hazards on the job.
- (36) My organization has prepared employees for potential security threats.
- (37) Arbitrary action, personal favoritism and coercion for partisan political purposes are not tolerated.
- (38) Prohibited Personnel Practices are not tolerated.
- (39) My agency is successful at accomplishing its mission.
- (40) I recommend my organization as a good place to work.
- (41) I believe the results of this survey will be used to make my agency a better place to work.
- (42) My supervisor supports my need to balance work and other life issues.
- (43) My supervisor/team leader provides me with opportunities to demonstrate my leadership skills.
- (44) Discussions with my supervisor/team leader about my performance are worthwhile.
- (45) My supervisor/team leader is committed to a workforce representative of all segments of society.
- (46) My supervisor/team leader provides me with constructive suggestions to improve my job performance.
- (47) Supervisors/team leaders in my work unit support employee development.
- (48) My supervisor/team leader listens to what I have to say.
- (49) My supervisor/team leader treats me with respect.
- (50) In the last six months, my supervisor/team leader has talked with me about my performance.
- (51) I have trust and confidence in my supervisor.
- (52) Overall, how good a job do you feel is being done by your immediate supervisor/team leader?
- (53) In my organization, leaders generate high levels of motivation and commitment in the workforce.
- (54) My organization's leaders maintain high standards of honesty and integrity.
- (55) Managers/supervisors/team leaders work well with employees of different backgrounds.
- (56) Managers communicate the goals and priorities of the organization.
- (57) Managers review and evaluate the organization's progress

toward meeting its goals and objectives.

(58) Managers promote communication among different work units.

(59) Managers support collaboration across work units to accomplish work objectives.

(60) Overall, how good a job do you feel is being done by the manager directly above your immediate supervisor/team leader?

(61) I have a high level of respect for my organization's senior leaders.

(62) Senior leaders demonstrate support for Work/Life programs.

(63) How satisfied are you with your involvement in decisions that affect your work?

(64) How satisfied are you with the information you receive from management on what's going on in your organization?

(65) How satisfied are you with the recognition you receive for doing a good job?

(66) How satisfied are you with the policies and practices of your senior leaders?

(67) How satisfied are you with your opportunity to get a better job in your organization?

(68) How satisfied are you with the training you receive for your present job?

(69) Considering everything, how satisfied are you with your job?

(70) Considering everything, how satisfied are you with your pay?

(71) Considering everything, how satisfied are you with your organization?

(72) Have you been notified that you are eligible to telework?

(73) Please select the response below that BEST describes your teleworking situation.

(74) Do you participate in the following Work/Life programs... Alternative Work Schedules (AWS)?

(75) Do you participate in the following Work/Life programs... Health and Wellness Programs?

(76) Do you participate in the following Work/Life programs... Employee Assistance Program (EAP)?

(77) Do you participate in the following Work/Life programs... Child Care Programs?

(78) Do you participate in the following Work/Life programs... Elder Care Programs?

(79) How satisfied are you with the following Work/Life programs in your agency... Telework?

(80) How satisfied are you with the following Work/Life programs in your agency... Alternative Work Schedules (AWS)?

(81) How satisfied are you with the following Work/Life programs in your agency... Health and Wellness Programs?

(82) How satisfied are you with the following Work/Life

programs in your agency... Employee Assistance Program (EAP)?

(83) How satisfied are you with the following Work/Life programs in your agency... Child Care Programs?

(84) How satisfied are you with the following Work/Life programs in your agency... Elder Care Programs?



## Appendix B Fedview Participants

Broadcasting Board of Governors  
Court Services and Offender Supervision  
Agency  
Department of Agriculture  
Department of Commerce  
Department of Education  
Department of Energy  
Department of Health and Human Services  
Department of Homeland Security  
Department of Housing and Urban Development  
Depart of Justice  
Department of Labor  
Department of State  
Department of the Interior  
Department of the Treasury  
Department of Transportation  
Department of Veterans Affairs  
Environmental Protection Agency  
Equal Employment Opportunity Commission  
Federal Communications Commission  
Federal Election Commission  
Federal Energy Regulatory Commission  
Federal Trade Commission  
General Services Administration  
National Aeronautics and Space  
Administration  
National Archives and Records Administration  
National Credit Union Administration  
National Labor Relations Board  
National Science Foundation  
Nuclear Regulatory Commission  
Office of Management and Budget  
Office of Personnel Management  
Pension Benefit Guaranty Corporation  
Railroad Retirement Board  
Securities and Exchange Commission  
Small Business Administration  
Social Security Administration  
U.S. Agency for International Development  
Department of Defense  
    Department of the Army  
    U.S. Corps of Engineers  
    Department of the Navy

U.S. Marine Corps  
 Department of the Air Force  
 OSD, Joint Staff, Defense Agencies, and  
 DoD Field Activities  
 Small/Independent Agencies  
   Advisory Council on Historic Preservation  
   African Development Foundation  
   American Battle Monuments Commission  
   Chemical Safety and Hazard Investigation  
 Board  
   Commission on Civil Rights  
   Committee for Purchase From People Who Are  
 Blind or Severely Disabled  
   Commodity Futures Trading Commission  
   Consumer Product Safety Commission  
   Corporation for National and Community  
 Service  
   Defense Nuclear Facilities Safety Board  
   Export-Import Bank of the United States  
   Federal Election Commission  
   Federal Housing Finance Agency  
   Federal Labor Relations Authority  
   Federal Maritime Commission  
   Federal Mediation and Conciliation Service  
   Federal Retirement Thrift Investment Board  
   Institute of Museum and Library Services  
   Inter-American Foundation  
   International Boundary and Water  
 Commission  
   Kennedy Center  
   Marine Mammal Commission  
   Merit Systems Protection Board  
   National Capital Planning Commission  
   National Council on Disability  
   National Endowment for the Arts  
   National Endowment for the Humanities  
   National Gallery of Art  
   National Indian Gaming Commission  
   National Mediation Board  
   National Transportation Safety Board  
   Nuclear Waste Technical Review Board  
   Occupational Safety and Health Review  
 Commission  
   Office of Navajo and Hopi Indian  
 Relocation

Office of the U.S. Trade Representative  
Overseas Private Investment Corporation  
Postal Regulatory Commission  
Selective Service System  
Surface Transportation Board  
U.S. International Trade Commission  
U.S. Office of Government Ethics  
U.S. Office of Special Counsel  
U.S. Trade and Development Agency  
US Access Board  
Woodrow Wilson International Center for  
Scholars

## Appendix C Congressional Committees

U.S. Senate Committee on Homeland Security and Governmental Affairs

Permanent Subcommittee on Investigations

Subcommittee on Financial and Contracting Oversight

Subcommittee on the Efficiency and Effectiveness of Federal Programs and the Federal Workforce

Subcommittee on Emergency Management, Intergovernmental Relations, and the District of Columbia

U.S. House Committee on Oversight and Government Reform

Subcommittee on Economic Growth, Job Creation and Regulatory Affairs

Subcommittee on Energy Policy, Health Care and Entitlements

Subcommittee on Federal Workforce, US Postal Service and the Census

Subcommittee on Government Operations

Subcommittee on National Security

## Appendix D Senate Committee Reports

111<sup>th</sup> Congress, Senate Committee on Homeland Security and  
Governmental Affairs

S RPT	TITLE	DATE
111-7	Federal Financial Assistance Management Improvement Act of 2009	03/11/09
111-15	To Provide Additional Personnel Authorities for the Special IG for Afghanistan Reconstruction	04/29/09
111-21	Presidential Records Act Amendments of 2009	05/19/09
111-23	FEMA Accountability Act of 2009	06/01/09
111-56	Enhanced Oversight of State and Local Economic Recovery Act	07/22/09
111-75	Federal Firefighters Fairness Act of 2009	09/14/09
111-76	Government Charge Card Abuse Prevention Act of 2009	09/21/09
111-77	Federal Executive Board Authorization Act of 2009	09/22/09
111-86	US Secret Service Uniformed Division Modernization Act of 2009	10/05/09
111-87	To Provide that Claims of the US to Certain Document Relating to FDR Shall be Treated as Waived and Relinquished in Certain Circumstances	10/05/09
111-88	Non-Foreign Area Retirement Equity Assurance Act of 2009	10/14/09
111-91	Effective Homeland Security Management Act of 2009	10/26/09
111-102	Plain Writing Act of 2009	12/09/09
111-103	Emergency Management Assistance Compact Grant Reauthorization Act of 2009	12/09/09
111-104	Providing for Additional Security in States' Identifications Act of 2009	12/09/09
111-105	Amateur Radio Emergency Communications Enhancement Act of 2009	12/10/09
111-112	Commission on Wartime Relocation and Internment of Latin Americans of Japanese Descent Act	12/23/09
111-163	Congressional Award Program Reauthorization Act of 2009	03/15/10
111-167	Federal Agency Energy Efficiency Improvement Act of 2009	04/12/10
111-177	Telework Enhancement Act of 2010	05/03/10
111-179	Information Technology (IT) Investment Oversight Enhancement and Waste Prevention Act of 2009	05/05/10
111-184	Federal Hiring Process Improvement Act of 2010	05/12/10
111-192	Federal Supply Schedules Usage Act of 2009	05/17/10

111-200	Reducing Over-Classification Act	05/27/10
111-203	Postal Service Retiree Health Benefits Funding Reform Act of 2009	06/09/10
111-213	To Authorize Appropriations for the National Historical Publications and Records Commission Through Fiscal Year 2014, and for Other Purposes	06/21/10
111-215	Predisaster Hazard Mitigation Act of 2010	06/23/10
111-231	US Secret Service Retirement Act of 2009	07/26/10
111-234	Multinational Species Conservation Funds Semipostal Stamp Act of 2010	07/27/10
111-235	Fire Grants Reauthorization Act of 2010	07/28/10
111-239	Pre-Election Presidential Transition Act of 2010	08/02/10
111-248	To Allow Certain U.S. Customs and Border Protection Employees Who Serve Under an Overseas Limited Appointment for at Least 2 Years, and Whose Service is Rated Fully Successful or Higher Throughout That Time, to be Converted to a Permanent Appointment in the Competitive Service	08/05/10
111-291	Redundancy Elimination and Enhanced Performance for Preparedness Grants Act	09/16/10
111-300	Kingman and Heritage Islands Act of 2009	09/22/10
111-338	Anti-Border Corruption Act of 2010	09/29/10
111-339	DC Hatch Act Reform Act of 2010	09/29/10
111-350	Government Accountability Office Improvement Act of 2010	11/18/10
111-351	Census Oversight Efficiency and Management Reform Act of 2010	11/18/10
111-360	<i>Activities of the Committee on Homeland Sec and Governmental Affairs</i>	
111-364	Federal Supervisor Training Act of 2010	12/14/10
111-365	Earmark Transparency Act	12/14/10
111-368	Protecting Cyberspace as a National Asset Act of 2010	12/15/10
111-370	Continuing Chemical Facilities Antiterrorism Security Act of 2010	12/16/10
111-372	GPRA Modernization Act of 2010	12/16/10
111-374	To Amend Ch 21 of Title 5 USC, To Provide That Fathers of Certain Permanently Disabled or Deceased Veterans Shall be included with Mothers of Such Veterans as Preference Eligibles for Treatment in the Civil Service	12/17/10
111-376	Domestic Partnership Benefits and Obligations Act of 2009	12/17/10

112<sup>th</sup> Congress, Senate Committee on Homeland Security and  
Governmental Affairs

S RPT	TITLE	DATE
112-16	Independent Task and Delivery Order Review Extension Act of 2011	05/09/11
112-21	Federal Acquisition Institute Improvement Act of 2011	06/09/11
112-22	Amateur Radio Emergency Communications Enhancement Act of 2011	06/13/11
112-24	Presidential Appointment Efficiency and Streamlining Act of 2011	06/21/11
112-28	Fire Grants Reauthorization Act of 2011	06/29/11
112-37	Government Charge Card Abuse Prevention Act of 2011	07/18/11
112-90	Continuing Chemical Facilities Antiterrorism Security Act of 2011	10/20/11
112-92	Asia-Pacific Economic Cooperation Business Travel Cards Act of 2011	11/08/11
112-97	Amend Title 39 USC to Extend the Authority of the USPS to Issue a Semipostal to Raise Funds for Breast Cancer Research	11/29/11
112-143	21st Century Postal Service Act of 2012	01/31/12
112-154	To Promote the Development of the SW Waterfront in the DC, and for Other Purposes	03/29/12
112-155	Whistleblower Protection Enhancement Act of 2012	04/19/12
112-159	Government Accountability Office Improvement Act of 2011	04/24/12
112-171	Formal Charleston Naval Base Land Exchange Act of 2012	05/24/12
112-178	DC Courts and Public Defender Service Act of 2011	06/25/12
112-180	US Fire Administration Reauthorization Act of 2012	07/12/12
112-181	Improper Payments Eliminations and Recovery Improvement Act of 2011	07/12/12
112-186	DC Special Election Reform Act	07/16/12
112-193	<i>Activities of the Committee on Homeland Security and Governmental Affairs</i>	07/31/12
112-202	Secure Facilities Act of 2012	08/02/12
112-205	US Secret Service Retirement Act of 2012	08/28/12
112-206	Jaime Zapata Border Enforcement Security Task Force Act	08/28/12
112-211	Hatch Act Modernization Act of 2012	09/13/12
112-219	GAO Mandates Revision Act of 2012	09/19/12
112-230	DHS Audit Requirement Target (DART) Act of 2012	11/02/12

112-235	Interagency Personnel Rotation Act of 2011	11/13/12
112-240	Safeguarding American Agriculture Act of 2012	11/26/12
112-241	Federal Real Property Asset Management Reform Act of 2012	11/27/12
112-244	Stock Act	12/03/12
112-249	Department of Homeland Security Authorization Act of 2012	12/13/12
112-257	Domestic Partnership Benefits and Obligations Act of 2012	12/19/12

113<sup>th</sup> Congress, Senate Committee on Homeland Security and Governmental Affairs

S RPT	TITLE	DATE
113-109	Congressional Award Program Reauthorization Act of 2013	09/23/13
<i>113-115</i>	<i>Activities of the Committee on Homeland Security and Governmental Affairs</i>	<i>10/28/13</i>
113-122	Federal Real Property Asset Management Reform Act of 2013	11/19/13
113-124	Improper Payments Agency Cooperation Enhancement Act of 2013	12/12/13
113-128	Government Accountability Office Improvement Act	12/17/13
113-139	Digital Accountability and Transparency Act of 2013	03/27/14
113-157	The Federal Data Center Consolidation Act of 2013	05/06/14
113-207	DHS Cybersecurity Workforce Recruitment and Retention Act of 2014	07/14/14
113-216	Never Contract with the Enemy Act	07/23/14
113-217	Responsible Use of Taxpayer Dollars for Portraits Act of 2013	07/23/14
113-218	Presidential and Federal Records Act Amendments of 2014	07/23/14
113-232	Governmental Reports Elimination Act of 2014	07/31/14
113-235	Multinational Species Conservation Funds Semipostal Stamp Reauthorization Act of 2013	07/31/14
113-236	All-American Flag Act	07/31/14
113-237	Postal Reform Act of 2013	07/31/14
113-240	National Cybersecurity and Communications Integration Center Act of 2014	07/31/14
113-243	Taxpayers Right-to-Know Act	08/26/14
113-244	Smart Savings Act	08/26/14
113-245	Presidential Library Donation Reform Act of 2014	08/26/14



113-248	Border Patrol Agent Pay Reform Act	08/26/14
113-249	Gold Star Fathers Act of 2014	08/26/14
113-250	Emergency Information Improvement Act of 2014	09/08/14
113-256	Federal Information Security Modernization Act of 2014	09/15/14
113-257	Preventing Conflicts of Interest with Contractors Act	09/16/14
113-259	Truth in Settlements Act of 2014	09/18/14
113-261	DHS OIG Mandates Revision Act of 2014	09/18/14
113-262	Federal Information Technology Acquisition Reform Act	09/18/14
113-263	Chemical Facilities Anti-Terrorism Standards Program Authorization and Accountability Act of 2014	09/18/14
113-268	Conference Accountability Act of 2014	10/01/14
113-272	Amending Title 5 USC To Provide That Persons Having Seriously Delinquent Tax Debts Shall Be Ineligible for Federal Employment	11/13/14
113-276	Security Clearance Accountability, Reform and Enhancement Act	12/01/14
113-283	Enhanced Security Clearance Act of 2014	12/02/14

## Appendix E Representatives Committee Reports

111<sup>th</sup> Congress, House of Representatives Committee on Oversight  
and Government Reform Reports

HR RPT	TITLE	DATE
111-38	Reducing Information Control Designations Act	03/16/09
111-58	Family Smoking Prevention and Tobacco Control Act pt 2	03/26/09
<i>111-69</i>	<i>Oversight Plans for All House Committees</i>	<i>03/31/09</i>
111-114	Improved Financial and Commodity Markets Oversight and Accountability Act	05/18/09
111-115	Enhanced Oversight of State and Local Econ Recovery Act	05/18/09
111-116	Federal Employee Paid Parental Leave Act of 2009	05/18/09
111-135	Federal Advisory Committee Act Amendments of 2009	06/04/09
111-172	DC Hatch Act Reform Act of 2009	06/19/09
111-216	USPS Financial Relief Act of 2009	07/21/09
111-239	Government Information Transparency Act	07/30/09
111-273	Transportation Security Workforce Enhancement Act of 2009	09/29/09
111-274	FBI Families of Fallen Heroes Act	09/29/09
111-275	Kingman and Heritage Islands Act Of 2009	09/29/09
111-329	World War I Memorial and Centennial Act of 2009	11/05/09
111-387	Government Accountability Office Improvement Act of 2009	12/19/09
111-400	Domestic Partnership Benefits and Obligations Act of 2009	01/22/10
111-406	Electronic Message Preservation Act	01/27/10
111-431	Secure Federal File Sharing Act	03/11/10
111-432	Plain Writing Act of 2010	03/11/10
111-474	Telework Improvements Act of 2010	05/04/10
111-504	Government Efficiency, Effectiveness, and Performance Improvement Act of 2010	06/14/10
111-586	All-American Flag Act	09/14/10
111-587	Federal Supply Schedules Usage Act of 2010	09/14/10
111-588	Overseas Contractor Reform Act	09/14/10
111-623	IG Authority Improvement Act of 2010	09/23/10
<i>111-705</i>	<i>Activities of the Committee on Oversight and Government Reform</i>	<i>01/03/11</i>

112<sup>th</sup> Congress, House of Representatives Committee on Oversight  
and Government Reform Reports

HR RPT	TITLE	DATE
112-36	Scholarships for Opportunity and Results Act	03/17/11
112-37	To Amend Title 41, USC, to Extend the Sunset Date for Certain Protests of Task and Deliver Order Contracts	03/17/11
<i>112-48</i>	<i>Oversight Plans for All House Committees</i>	<i>03/31/11</i>
112-115	Federal Employee Tax Accountability Act of 2011	06/23/11
112-116	Extension of Probationary Period Applicable to Appointments in the Civil Service	06/23/11
<i>112-128</i>	<i>Activities of the House Committee on Oversight and Government Reform</i>	<i>06/28/11</i>
112-149	Civilian Service Recognition Act of 2011	07/18/11
112-260	DATA Act	10/25/11
112-315	SOAR Technical Corrections Act	12/06/11
112-334	Reducing the Size of the Federal Government Through Attrition Act of 2011	12/19/11
<i>112-349</i>	<i>Activities of the House Committee on Oversight and Government Reform</i>	<i>12/23/11</i>
112-363	Postal Reform Act of 2011	01/17/12
112-376	Government Charge Card Abuse Prevention Act of 2011	01/27/12
112-394	Securing Annuities for Federal Employees Act of 2012	02/09/12
112-402	Excess Federal Building and Property Disposal Act of 2011	02/27/12
112-455	Federal Information Security Amendments Act of 2012	04/26/12
112-461	Regulatory Freeze for Jobs Act of 2012	07/20/12
112-483	Unfunded Mandates Information and Transparency Act of 2011	05/16/12
112-484	Grant Reform and New Transparency Act of 2011	05/15/12
112-508	Whistleblower Protection Enhancement Act of 2011	05/30/12
112-513	Midnight Rule Relief Act of 2012	06/01/12
112-534	Government Customer Service Improvement Act	06/15/12
112-535	Federal Employee Phased Retirement Act	06/15/12
112-536	Keeping Politics Out of Federal Contracting Act of 2011	06/15/12
<i>112-546</i>	<i>Resolution Recommending that the House of Representatives Find Eric H. Holder, Jr., Attorney General, U.S. Department of Justice, in Contempt of Congress for Refusal to Comply with a Subpoena Duly issued by the Committee on Oversight and Government Reform</i>	<i>06/22/12</i>

112-568	Third Semiannual Activities of the House Committee on Oversight and Government Reform	06/29/12
112-585	Veteran Skills to Jobs Act	07/09/12
112-607	Federal Reserve Transparency Act of 2012	07/17/12
112-630	Amending Title 5, USC, To Make Clear that Accounts in the Thrift Savings Funds are Subject to Certain Federal Tax Levies	07/30/12
112-635	Taxpayers Right-to-Know Act	07/31/12
112-663	Access To Congressionally Mandated Reports Act	09/10/12
112-664	Government Spending Accountability Act of 2012	09/11/12
112-686	Government Employee Accountability Act	09/21/12
112-689	<i>A Citizens Guide on Using the FOIA and the Privacy Act of 1974 to Request Government Records</i>	09/21/12
112-698	Improper Payments Elimination and Recovery Improvement Act of 2012	11/30/12

113<sup>th</sup> Congress, House of Representatives Committee on Oversight and Government Reform Reports

HR RPT	TITLE	DATE
113-11	"Billions of Federal Tax Dollars Misspent on NY's Medicaid Program"	03/05/13
113-23	<i>Oversight Plan for All House Committees</i>	03/25/13
113-35	Contracting and Tax Accountability Act of 2013	04/12/13
113-36	Government Accountability Office Improvement Act	04/12/13
113-37	DC Chief Financial Officer Vacancy Act	04/12/13
113-38	Federal Employee Tax Accountability Act of 2013	04/12/13
113-40	Federal Information Security Amendments Act of 2013	04/16/13
113-118	Presidential Library Donation Reform Act of 2013	06/20/13
113-126	Formerly Owned Resources for Veterans to Express Thanks for Service Act of 2013	06/25/13
113-127	Presidential and Federal Records Act Amendments of 2013	06/25/13
113-128	Electronic Message Preservation Act	06/25/13
113-154	Amending Title 5, USC, To Require that the OPM Submit an Annual Report to Congress Relating to the use of Official Time by Federal Employees	07/16/13
113-155	FOIA Oversight and Implementation Act of 2013	07/16/13
113-156	Alcohol and Tobacco Tax and Trade Bureau Personnel Flexibilities Act	07/16/13
113-183	Government Spending Accountability Act of 2013	07/30/13

113-184	Citizen Empowerment Act	07/30/13
113-186	Government Employee Accountability Act	07/31/13
113-267	Amending the DC Home Rule Act to Clarify the Rules Regarding the Determination of the Compensation of the Chief Financial Officer of the DC	11/15/13
113-268	OPM IG Act	11/15/13
113-270	Digital Accountability and Transparency Act of 2013	11/18/13
113-303	<i>Activities of the House Committee on Oversight and Government Reform</i>	12/20/13
113-352	Unfunded Mandates Information and Transparency Act of 2013	02/14/14
113-354	All Economic Regulation Are Transparent Act of 2014 part 1	02/21/14
113-354	All Economic Regulation Are Transparent Act of 2014 part 2	02/25/14
113-355	Taxpayers Right-to-Know Act	02/21/14
113-358	Taxpayer Transparency Act of 2014	02/25/14
113-359	Federal Information Technology Acquisition Reform Act	02/25/14
113-415	<i>Resolution Recommending That the House of Representatives Find Lois G. Lerner, Former Director, Exempt Organizations, IRS, in Contempt of Congress for Refusal to Comply with a Subpoena Duly Issues by the Committee on Oversight and Government Reform</i>	04/14/14
113-415	<i>Resolution Recommending That the House of Representatives Find Lois G. Lerner, Former Director, Exempt Organizations, IRS, in Contempt of Congress for Refusal to Comply with a Subpoena Duly Issues by the Committee on Oversight and Government Reform</i>	04/14/14
113-418	Amending the Act Entitled "An Act to Regulate the Height of Buildings in the DC" to Clarify the Rules of the DC Regarding Human Occupancy of Penthouses Above the Top Story of the Building Upon Which the Penthouse is Placed	04/28/14
113-419	Government Reports Elimination Act of 2014	04/28/14
113-507	Smart Saving Act	06/30/14
113-514	DC Courts, Public Defender Service, and Court Services and Offender Supervision Agency Act of 2014	07/03/14
113-515	Federal Register Modernization Act	07/03/14
113-519	All Circuit Review Extension Act	07/14/14
113-562	Safe and Secure Federal Websites Act of 2014	07/28/14
113-602	Federal Reserve Transparency Act of 2014	09/16/14
113-603	Senior Executive Service Accountability Act	09/16/14

113-668	Design-Build Efficiency and Jobs Act of 2014	12/12/14
113-669	Stop Unworthy Spending Act	12/12/14

## REFERENCES

- Abele, J. "Bringing Minds Together." *Harvard Business Review*, July-August 2011: 86-93.
- Adler, Paul, Charles Heckscher, and Laurence Prusak. "Building a Collaborative Enterprise." *Harvard Business Review*, July-August 2011: 95-101.
- Agranoff, Robert. "Inside Collaborative Networks: Ten Lessons for Public Managers." *Public Administration Review* 66, no. S1 (2006): 56-65.
- Appleby, P. "Government is Different." In *Classics of Public Administration*, edited by J. Shafritz and A. Hyde, 119-123. Boston, MA: Thomson Wadsworth, 1945.
- Armenakis, Achilles A., and Arthus G. Bedeian. "Organizational Change: A Review of Theory and Research in the 1990." *Journal of Management*, 1999: 293-315.
- Barnard, Chester. *Functions of the Executive*. 30th. Cambridge, MA: Harvard University Press, 1938.
- Barney, J. B. "Introduction: William Ouchi's Theory Z: How American Business Can Meet the Japanese Challenge." *Academy of Management Executive* 18, no. 4 (2004): 106-107.
- Beer, Michael, and Russell A. Eisenstat. "Developing an Organization Capable of Implementing Strategy and Learning." *Human Relations*, 1996: 597-619.
- Benkler, Yochai. "The Unselfish Gene." *Harvard Business Review*, July-August 2011: 77-85.
- Burke, W. Warner, and George H. Litwin. "A Causal Model of Organizational Performance and Change." *Journal of Management*, 1992: 523-545.
- Butts, Carter T., Ryan M. Acton, and Christopher Steven Marcum. "Interorganizational Collaboration in the

- Hurricane Katrina Response." *Journal of Social Structure* 13 (Jan 2012): 1-36.
- Cain, Susan. *Quiet: The Power of Introverts in a World That Can't Stop Talking*. New York: Broadway Books, 2012.
- Cigler, Beverly. "The "Big Questions" of Katrina and the 2005 Great Flood of New Orleans." *Public Administration Review*, no. Special Issue (December 2007): 64-76.
- Creswell, John W. *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks: SAGE Publications, Inc., 2009.
- Cummings, T.G., and C.G. Worley. *Organizational Development and Change*. 9th ed. Mason, OH: South-Western Cengage Learning, 2009.
- Damanpour, Fariborz. "Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators." *Academy of Management Journal*, 1991: 555-590.
- de Lancer Julnes, Patria. *Performance-Based Management Systems*. Boca Raton, FL: CRC Press, 2009.
- Dean Jr., James W., Pamela Brandes, and Ravi Dharwadkar. "Organizational Cynicism." *Academy of Management Review*, 1998: 341-352.
- Dodaro, Gene L. "Partnership and Collaboration: Meeting the Challenges Across All Levels of Government." Alexandria: U.S. Government Accountability Office, 2012.
- Duffy, F. *The New Office*. London: Conran Octopus Limited, 1997.
- Duffy, Francis. "Design and Facilities Management in a Time of Change." *Facilities* 18, no. 10/11/12 (2000): 371.
- Dull, M. "Leadership and Organizational Culture: Sustaining Dialog Between Practitioners and Scholars." *Public Administration Review* 70, no. 6 (2010): 857-866.



- Executive Office of the President Office of Management and Budget. "Open Government Directive MH-10-06." Washington, D.C., December 8, 2009.
- Fayard, Anne-Laure, and John Weeks. "Who Moved My Cube?" *Harvard Business Review*, July-August 2011: 103-110.
- Fernandez, Sergio, and Hal G. Rainey. "Managing Successful Organizational Change in the Public Sector: An Agenda for Research and Practice." *Public Administration Review* 66, no. 2 (2006): 168-176.
- Fox-Wolfgramm, Susan J., Kimberly B. Boal, and James G. Hunt. "Organizational Adaptation to Institutional Change: A Comparative Study of First-order Change in Prospector and Defender Banks." *Administrative Science Quarterly*, 1998: 87-126.
- Friedman, Andrew. *Covert Capital: Landscapes of Denial and the Making of the U.S. Empire in the Suburbs of Northern Virginia*. Berkeley and Los Angeles, CA: University of California Press, 2013.
- Friedman, Thomas L. *The World is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux, 2005.
- Fund for Our Economic Future. *Catalyzing Regional Economic Transformation Lessons from Funder Collaboration in Northeast Ohio*. Strategic Review, Mountain View: Creative Commons, 2013.
- Gagliardi, Pasquale. "The Creation and Change of Organizational Cultures: A Cultural Framework." *Organization Studies*, 1986: 117-134.
- Gardner, H. *Five Minds for the Future*. Boston, MA: Harvard Business Press, 2008.
- Golembiewski, Robert T., Keith Billingsley, and Samuel Yeager. "Measuring Change and Persistence in Human Affairs: Types of Change Generated by OD Designs." *The Journal of Applied Behavioral Science* 12, no. 2 (1976): 133-157.

- Gondo, Maria, and John Amis. "Variations in Practice Adoption: The Roles of Conscious Reflection and Discourse." *Academy of Management Review* 38, no. 2 (2013): 229-247.
- Goodsell, Charles T. *Mission Mystique: Belief Systems in Public Agencies*. Washington, DC: CQ Press, 2011.
- "Government Performance and Result Act of 1993, Pub. L 103-62." January 5, 1993.
- Gresov, C., H. Haveman, and T. Oliva. "Organizational Design, Inertia and the Dynamics of Competitive Response." *Organization Science* 4, no. 2 (May 1993): 181-208.
- Gulick, Luther. "Notes on the Theory of Organization." In *Classics of Public Administration*, edited by Jay M. Shafritz and Albert C. Hyde, 79-87. Boston: Thomson Wadsworth, 1937.
- Gunnell, John G. "Development, Social Change, and Time." In *Temporal Dimension of Developmental Administration*, edited by Dwight Waldo, 47-89. Durham, NC: Duke University Press, 1970.
- Hargrove, Ervin C., and John C. Glidewell. *Impossible Jobs in Public Management*. Lawrence: University Press of Kansas, 1990.
- Haynes, B. "An Evaluation of the Impact of the Office Environment on Productivity." *Facilities* 26, no. 5/6 (2008): 178-195.
- Haynes, B. P. "Office Productivity: A Shift from Cost Reduction to Human Contribution." *Facilities* 25, no. 11/12 (2007): 452-462.
- Heerwagen, J., K. Kampschroer, K. Powell, and V. Loftness. "Collaborative Knowledge Work Environments." *Building Research & Information* 32, no. 6 (2004): 510-528.
- History, Art & Archives, U.S. House of Representatives. n.d. <http://history.house.gov/People/> (accessed March 5, 2015).

- "Homeland Security Act of 2002, Pub. L. 107-296." November 25, 2002.
- Hood, Christopher. "A Public Management for All Season: The Risk of New Public Management." In *Classics of Public Administration*, by Jay M. and Albert C. Hyde Shafritz, 495-507. Boston: Thomson Wadsworth, 1991.
- Ibarra, H., and M. T. Hansen. "Are You a Collaborative Leader?" *Harvard Business Review*, July-August 2011: 69-74.
- "Intelligence Reform and Terrorism Prevention Act of 2004, Pub. L. 108-458." December 17, 2004.
- Jelinek, M., L. Smircich, and P. Hirsch. "Introduction: A Code of Many Colors." *American Science Quarterly* 28, no. 3 (1983): 331-338.
- Joyce, William, and John Slocum. "Collective Climate: Agreement as a Basis for Defining Aggregate Climates in Organizations." *Academy of Management Journal* 27, no. 4 (1984): 721-742.
- Jung, Tobias, Tim Scott, Huw Davies, Peter Bower, Diane Whalley, Rosalind McNally, and Russell Mannion. "Instruments for Exploring Organizational Culture: A Review of the Literature." *Public Administration Review*, 2009: 1087-1096.
- Kaczmarczyk, S. and J. Murtough. "Measuring the Performance of Innovative Workplaces." *Journal of Facilities Management* 1, no. 2 (August 2002): 163-176.
- Kettl, Donald F. "Managing Boundaries in American Administration: The Collaborative Imperative." *Public Administration Review* 66, no. S1 (2006): 10-19.
- Khademian, Anne M. *Working with Culture: The Way the Job Get Done in Public Organizations*. Washington, D.C.: Congressional Quarterly Press, 2002.
- Kotter, John P. and Dan S. Cohen. *The Heart of Change*. Boston, MA: Harvard Business School Press, 2002.

- Kotter, John P. *Leading Change*. Boston, MA: Harvard Business School Press, 1996.
- Kotter, John P. "Leading Change: Why Transformation Efforts Fail." *Harvard Business Review*, 1995: 59-67.
- Laing, A., F. Duffy, D. Jaunzens, and S. Willis. *New Environments for Working: The Re-Design of Offices and Environmental Systems for New Ways of Working*. London: Construction Research Communication, Ltd., 1998.
- Latta, G. "A Process Model of Organizational Change in Cultural Context ([oc.sup.3] model): The Impact of Organizational Culture on Leading Change." *Journal of Leadership & Organizational Studies* 16, no. 1 (2009): 19.
- Leitner, M., M. Barnett, J. Kent, and T. Barnett. "The Impact of Hurricane Katrina on Reported Crimes in Louisiana: A Spatial and Temporal Analysis." *The Professional Geographer* (Taylor & Francis LLC) 63, no. 2 (2011): 244-261.
- Library of Congress*. n.d.  
<http://beta.congress.gov/bill/108th-congress/senate-bill/2845> (accessed April 26, 2013).
- Linden, Russ. "Learning to Manage Horizontally: The Promise and Challenge of Collaboration." *Public Management*, August 2003: 8-11.
- Linden, Russell M. *Working Across Boundaries: Making Collaboration Work in Government and Nonprofit Organization*. San Francisco, CA: Jossey-Bass, 2002.
- Lipman-Blumen, J. *Connective Leadership: Managing in a Changing World*. Oxford: Oxford University Press, 1996.
- Loehr, Anne. *Anne Loehr Transformational Leadership*. n.d.  
<http://www.anneloehr.com/2013/11/07/infographic-generational-differences-in-america-101/> (accessed January 26, 2015).

- Lurie, Irene, and Norma Riccucci. "Changing the "Culture" of Welfare Offices: From Vision to the Front Lines." *Administration & Society*, 2003: 653-677.
- Luton, Larry S. *Qualitative Research Approaches for Public Administration*. New York: M.E. Sharpe, Inc., 2010.
- Martin, Michel. *National Public Radio*. May 20, 2014. <http://www.npr.org/2014/05/20/314241687/waiting-at-va-hospitals-a-matter-of-life-and-death> (accessed November 17, 2014).
- Maslow, A. "A Theory of Human Motivation." In *Classics of Public Administration*, edited by and A. Hyde J. Shafritz, 111-118. Boston, MA: Thomson Wadsworth, 1943.
- Maynard-Moody, Steven, Donald D. Stull, and Jerry Mitchell. "Reorganization as Status Drama: Building, Maintaining, and Displacing Dominant Subcultures." *Public Administration Review*, 1986: 301-310.
- McAfee, Andrew P. "Enterprise 2.0: The Dawn of Emergent Collaboration." *MIT Sloan Management Review* 47, no. 3 (2006): 21-28.
- McConnell, M. "Overhauling Intelligence." *Foreign Affairs*, 2007: 49-58.
- McGregor, Douglas M. "The Human Side of Enterprise." In *Classics of Public Administration*, by Jay M., and Albert C. Hyde Shafritz, 158-163. Boston: Thomson Wadsworth, 1957.
- McGuire, Michael. "Collaborative Public Management: Assessing What We Know and How We Know It." *Public Administration Review* 66, no. S1 (2006): 33-43.
- McHugh, Marie. "The Stress Factor: Another Item for the Change Management Agenda? ." *Journal of Organizational Change*, 1997: 345-362.

- Meier, K. J. and L. J. O'Toole, Jr. "I Think (I Am Doing Well), Therefore I Am: Assessing the Validity of Administrators' Self-Assessments of Performance." *International Public Management Journal* 16, no. 1 2010: 1-27.
- Miles, Matthew B., A. Michael Huberman, and Johnny Saldana. *Qualitative Data Analysis: A Methods Sourcebook*. 3<sup>rd</sup> ed. Los Angeles, CA: SAGE Publications, Inc., 2014.
- Miller, Dr. Rosemary, interview by Cynthia Q. Burns. *Office of Personnel Management* (October 22, 2014).
- Miller, Greg. "CIA May Revamp How it is Organized." *The Washington Post*. Washington, D.C.: The Washington Post, November 20, 2014. A1, A6.
- Moore, Mark H. *Creating Public Value: Strategic Management in Government*. Cambridge, MA: Harvard University Press, 1995.
- Morton, Jennie. "Reconfiguring the Open Office Buildings." *Buildings*, 2014: 44-49.
- Moulton Reger, S. *Can Two Rights Make a Wrong? Insights from IBM's Tangible Culture Approach*. Upper Saddle River, NJ: IBM Press, 2006.
- Mulrine, A. "Marine Chief: 'Don't Ask, Don't Tell' Repeal Could be Deadly 'Distraction'." *The Christian Science Monitor*, December 14, 2010.
- National Commission on Terrorist Attacks Upon the United States. "The 9/11 Commission Report." July 22, 2004. <http://www.9-11commission.gov/report/911Report.pdf>. (accessed February 7, 2013).
- "National Defense Reauthorization Act for Fiscal Year 2004, U.S. Public Law 108-136." Washington, D.C.: U. S. Government Printing Office, November 4, 2003.
- Newton, R., and Kjell Rudestam. *Your Statistical Consultant: Answers to Your Data Analysis Questions*. Thousand Oaks, CA: SAGE Publications, Inc., 1999.

- Oakland, J. S., and S. J. Tanner. "A New Framework for Managing Change." *The TQM Magazine*, 2007: 572-589.
- Oldham, G., and N. Rotchford. "Relationships Between Office Characteristics and Employee Reactions: A Study of the Physical Environment." *Administrative Science Quarterly* 28, no. 4 (1983): 542-556.
- Orlikowski, Wanda J. "Improvising Organizational Transformation Over Time: A Situated Change Perspective." *Information Systems Research*, 1996: 63-92.
- Ostroff, F. "Change Management in Government." *Harvard Business Review* 85, no. 4 (2006): 141-147.
- Ott, J. S. *The Organizational Culture Perspective*. Pacific Grove, CA: Brooks/Cole Publishing Company, 1989.
- Ouchi, W. G. *Theory Z: How American Business Can Meet the Japanese Challenge*. Reading, MA: Addison-Wesley, 1981.
- P21 Framework Definitions*. 2009.  
[http://www.p21.org/documents/P21\\_Framework\\_Definitions.pdf](http://www.p21.org/documents/P21_Framework_Definitions.pdf).
- Paglis, L. L., and S. G. Green. "Leadership Self-efficacy and Managers' Motivation for Leading Change." *Journal of Organizational Behavior* 23, no. 2 (2002): 215-235.
- Parker, A.M. *President signs bill repealing Defense personnel system*. October 28, 2009.  
<http://www.govexec.com/defense/2009/10/president-signs-bill-repealing-defense-personnel-system/30229/>.
- Parkin, Jennifer, Simon Austin, James Pindler, Thom Baguley, Simon Allenby. "Balancing Collaboration and Privacy in Academic Workspaces." *Facilities* 29, no. 1/2 (2011): 31-49.
- Patton, Michael Q. *Utilization-Focused Evaluation*. Thousand Oaks: SAGE Publications, Inc., 2008.
- Perry, J. L., and H. G. Rainey. "The Public-Private Distinction in Organization Theory: A Critique and

- Research Strategy." *The Academy of Management Review* 13, no. 2 (1988): 182-201.
- Peters, B. G., and D. J. Savoie. "Civil Service Reform: Misdiagnosing the Patient." *Public Administration Review*, 1994: 418-425.
- Peterson, T., and J. Beard. "Workspace Technology's Impact on Individual Privacy and Team Interaction." *Team Performance Management* 10, no. 7/8 (2004): 163-172.
- Pettigrew, A. "Context and Action in the Transformation of the Firm." *Journal of Management Studies* 24, no. 6 (1987): 649-670.
- Pettigrew, A. "On Studying Organizational Cultures." *Administrative Science Quarterly* 24, no. 4 (1979): 570-581.
- Pettigrew, Andrew M., Richard W. Woodman, and Kim S. Cameron. "Studying Organizational Change and Development: Challenges for Future Research." *Academy of Management Journal*, 2001: 697-713.
- "Post Katrina Emergency Management Reform Act of 2006, U.S. Public Law 109-295." November 21, 2006
- President, The. "Executive Order 13583 Establishing a Coordinated Government-Wide Initiative to Promote Diversity and Inclusion in the Federal Workforce." *Federal Register*. Vol. 76. Washington D.C., August 23, 2011.
- Quinn, R. E., and Kim Cameron. "Organizational Life Cycles and Shifting Criteria of Effectiveness." *Management Science*, 1983: 33-51.
- Rainey, Hal G. *Understanding and Managing Public Organizations*. San Francisco: Jossey-Bass, 2009.
- Reichers, Arnon E., John P. Wanous, and James T. Austin. "Understanding and Managing Cynicism about Organizational Change." *Academy of Management Executive*, 1997: 48-59.



- Riccucci, N. "The "Old" Public Management versus the "New" Public Management: Where Does Public Management Administration Fit In?" *Public Administration Review* 61, no. 2 (2001): 172-175.
- Riccucci, Norma, and Katherine Naff. *Personnel Management in Government: Politics and Process*. Boca Raton: CRC Press, 2008.
- Sanger, M. B. "From Measurement to Management: Breaking Through the Barriers to State and Local Performance." *Public Administration Review*, 2008: S70-S85.
- Sanger, M. B. "Getting to the Roots of Change: Performance Management and Organizational Culture." *Public Performance & Management Review* 31, no. 4 (2008): 621-653.
- Sastry, M. Anjali. "Problems and Paradoxes in a Model of Punctuated Organizational Change." *Administrative Science Quarterly*, 1997: 237-275.
- Schein, E. H. *Organizational Culture and Leadership: A Dynamic View*. 2nd. San Francisco, CA: Jossey-Bass, 1992.
- Schneider, S. "Administrative Breakdowns in the Government Response to Hurricane Katrina." *Public Administration Review* 65, no. 5 (2005): 515-516.
- Selznick, Philip. *Leadership in Administration*. Evanston, IL: Row, Peterson and Company, 1957.
- . *TVA and the Grass Roots: A Study in the Sociology of Formal Organizations*. Berkeley and Los Angeles: University of California Press, 1949.
- Shafritz, J. M., and A. C. Hyde, ed. *Classics of Public Administration*. 6th. Boston, MA: Thomson Wadsworth, 2007.
- Simon, Herbert A. *Administrative Behavior*. 4th. New York, NY: The Free Press, 1997.

- Smircich, L. "Concepts of Culture and Organizational Analysis." *Administrative Science Quarterly* 28, no. 3 (1983): 339-358.
- Smola, K. W., and C. D. Sutton. "Generational Differences: Revisiting Generational Work Values for the New Millennium." *Journal of Organizational Behavior* 23, no. 4 (2002): 363-382.
- Statement by the President. *The White House*. May 30 2014. <http://www.whitehouse.gov/photos-and-video/video/2014/05/30/president-obama-speaks-press#transcript> (accessed November 17, 2014).
- Steiner, J. "The Art of Space Management: Planning Flexible Workspaces for People." *Journal of Facilities Management* 4, no. 1 (2005): 6-22.
- Stephens, Suzanne. "Beyond Cubed." *Architectural Record*, 2014: 56.
- Sundstrom, E., and M. Sundstrom. *Work Places: The Psychology of the Physical Environment in Offices and Factories*. Cambridge: Cambridge University Press, 1986.
- Sundstrom, E., R. Burt, and D. Kamp. "Privacy at Work: Architectural Correlates of Job Satisfaction and Job Performance." *Academy of Management Journal* 23, no. 1 (1980): 101-117.
- Taylor, F. "Scientific Management." In *Classics of Public Administration*, edited by J. Shafritz, and A. Hyde, 36-38. Boston, MA: Thomson Wadsworth, 1912.
- "The Advent of the National Geospatial-Intelligence Agency." *National Geospatial-Intelligence Agency*. September 2011. <https://www.nga.mil/About/History/Pages/default.aspx> (accessed January 26, 2014).
- The National Performance Review. "From Red Tape to Results: Creating a Government That Works Better and Costs Less." In *Classics of Public Administration*, edited by

J. Shafritz and A. Hyde, 551-558. Boston, MA: Thomson Wadsworth, 1993.

Thompson, James R. "Toward "Flexible Uniformity"? Civil Service Reform, "Big Government Conservatism," and the Promise of the Intelligence Community Model." *Review of Public Personnel Administration* (Sage), 2010: 421-444.

Thomson, Ann Marie, and James Perry. "Collaboration Processes: Inside the Black Box." *Public Administration Review* 66, no. S1 (2006): 20-32.

Tolbize, A. "Generation Differences in the Workplace." 2008.

Tom Carper U.S. Senator for Delaware. n.d.  
<http://www.carper.senate.gov/public/index.cfm/biography-and-pictures> (accessed March 5, 2015).

Treverton, Gregory and Peter Wilson. "True Intelligence Reform Is Cultural, Not Just Organizational Chart Shift." *Christian Science Monitor*, 2005.

Turner, G. and J. Myerson. *New Workspace New Culture*. Hampshire: Gower Publishing Limited, 1998.

Tzu, Sun. *The Art of War*. Translated by Samuel B. Griffith. New York: Oxford University Press, 1963.

United States Senate. n.d.  
[http://www.senate.gov/artandhistory/history/common/generic/Senate\\_Historical\\_Office.htm](http://www.senate.gov/artandhistory/history/common/generic/Senate_Historical_Office.htm) (accessed March 5, 2015)

"*Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT Act) Act of 2001*, U. S. Public Law 107-56." October 26, 2001.

U.S. General Services Administration Public Buildings Service. *The New Federal Workplace*. Program Evaluation, Washington: GSA Public Buildings Service, 2009.

- U.S. Government Accountability Office. n.d.  
<http://www.gao.gov/search?q=collaboration> (accessed January 14, 2015).
- U.S. Government Accountability Office. "9/11 Commission Report Reorganization, Transformation, and Information Sharing GAO-04-1033T." 2004.
- U.S. Government Accountability Office. *Interagency Collaboration: Key Issues for Congressional Oversight of National Security Strategies, Organizations, Workforce, and Information Sharing*. Report to Congressional Committees GAO-09-904SP, Washington, D.C.: GAO, 2009.
- U.S. Government Accountability Office. "Monitoring of Safeguards and Addressing Employee Perceptions are Key to Implementing a Civilian Performance Management System in DoD." Evaluation, Washington, D.C., 2009.
- U.S. Office of Personnel Management. *Fedview*. 2014.  
[http://www.fedview.opm.gov/2014FILES/FEVS\\_Millennials\\_Report.pdf](http://www.fedview.opm.gov/2014FILES/FEVS_Millennials_Report.pdf) (accessed October 20, 2014).
- U.S. Office of Personnel Management. "2013 Federal Employee Viewpoint Survey Results: Employees Influencing Change Technical Report." Technical, Washington, D.C., 2013.
- U.S. Office of Personnel Management. "FedView Report by Agency." Agency, Washington, D.C., 2011.
- U.S. Office of Personnel Management. "FedView Report by Agency." Agency, Washington, D.C., 2012.
- U.S. Office of Personnel Management. "FedView Report by Agency." Agency, Washington, D.C., 2013.
- U.S. Office of Personnel Management. "Results From the 2010 Federal Employee Viewpoint Survey Report by Agency." Agency, Washington, D.C., 2010.
- Waber, Ben, Jennifer Magnolfi, and Greg Lindsay.  
"Workspaces That Move People." *Harvard Business Review*, 2014: 68-77.

- Waldo, D. *The Administrative State*. 2nd. New York, NY: Holmes & Meier Publishers, Inc, 1984.
- Walinga, J. "Toward a Theory of Change Readiness: The Roles of Appraisals, Focus, and Perceived Control." *The Journal of Applied Behavioral Science* 44, no. 3 (2008): 315-347.
- Wallace, J., J. Hunt, and C. Richards. "The Relationship Between Organisational Culture, Organisational Climate and Managerial Values." *The International Journal of Public Sector Management* 12, no. 7 (1999): 548-564.
- Wanberg, C. R., and J. T. Banas. "Predictors and Outcomes of Openness to Changes in a Reorganizing Workplace." *Journal of Applied Psychology* 85, no. 1 (2000): 132-142.
- Warner, Rebecca M. *Applied Statistics From Bivariate Through Multivariate Techniques*. Thousand Oaks: SAGE Publications, Inc., 2013.
- Wax-Thibodeaux, Emily. "VA Chief Plans Major Restructuring." *The Washington Post*. Washington, D.C.: The Washington Post Company, November 11, 2014.
- Wilkins, A. L., and W. G. Ouchi. "Efficient Cultures: Exploring the Relationship Between Culture and Organizational Performance." *Administrative Science Quarterly* 28, no. 3 (1983): 468-481.
- Wilson, W. "The Study of Administration." In *Classics of Public Administration*, edited by J. Shafritz, and A. Hyde, 36-38. Boston: Thomson Wadsworth, 1887.
- Zalesny, M., and R. Farace. "Traditional Versus Open Offices: A Comparison of Sociotechnical, Social Relations, and Symbolic Meaning Perspectives." *Academy of Management Journal* 30, no. 2 (1987): 240-259.