The Relationship Between the New Inclusion Quotient (IQ) Index and the Twin Challenges of Problematic Behaviors and Underrepresentation in the Federal Government

By

J. Bruce Stewart, BS, MIS

A doctoral thesis

Presented to the Graduate Faculty of the Doctor of Law and Policy Program

at Northeastern University

In partial fulfillment of the requirements for the degree of

Doctor of Law and Policy

Under the supervision of Dr. Golnoosh Hakimdavar

Second reader, Dr. Vanessa Weaver

College of Professional Studies

Northeastern University

Boston, Massachusetts

June 2019
DEDICATION

I would like to dedicate the completion of my doctoral studies to my family. It’s been an especially difficult past two years due to the losses of my mother, Carolyn Stewart and oldest brother Frank “Butch” Stewart. But, because of their encouragement, along with that of my wife, kids, brother and sisters and a few close friends I have been able to stay the course. I sincerely appreciate and love my family. And dad, this was especially for you.
ACKNOWLEDGEMENTS

There are just too many colleagues and mentors for me to thank all of them in this short space. But I first want to thank all the Professors and the team of the Law and Policy program. I really enjoyed this program because of the commitment, dedication, and kindness of all the Law and Policy team. Specifically, I want to thank my committee advisors. Dr. Hakimdavar, Dr. Weaver, and Dr. Pawlyshyn. Dr. Weaver has been a source of inspiration and positivity. Another colleague I would like to single out is Juliet Bourke. Juliet provided the theoretical foundation for me to view diversity and inclusion from a much deeper perspective. She has been a wealth of information and acknowledged as a leader in the inclusive diversity field. Finally, to my colleagues in the federal government and specifically my team at the Office of Personnel Management (OPM). It was a privilege to work with the finest and most knowledgeable inclusive diversity experts anywhere. Our team accepted the momentous undertaking of implementing and guiding President Obama’s historic Executive Order 13583. It was the first-time federal agencies were specifically directed to increase their efforts in building a more inclusive and diverse federal government. One that reflects the diversity of America’s citizens. Also, thank you to my cohort. All of you should know that I learned something from everyone of you and sincerely thank you for the help. Because of your commitment to this program I was able to successfully complete this doctoral study.
Abstract

The Federal workforce has historically been underrepresented in every demographic group except white males (Burns, Barton, & Kerby, 2012). A recent RAND report (Lytell, Keller, Katz, Marquis, & Sollinger, 2016) found that the Federal Government (Department of Defense (DoD)) suffers from several problematic workplace behaviors including sexual harassment, sexual assault, and unlawful discrimination. The lack of demographic diversity and the proliferation of problematic behaviors create a Twin Challenge for the federal government. These Twin Challenges presents a major risk factor to a well-functioning federal government if left unchecked. The purpose of this non experimental correlational study was to establish the relationships, if any, between federal government inclusion practices known as the New IQ, and the number of discrimination complaints filed, minority composition, and scores of employee engagement and support for diversity. Using correlational and regression analysis this study was unable to substantiate a relationship between the New IQ and the dependent variables of number of discrimination complaints and minority composition. However, this study did find a strong relationship between the New IQ and employee engagement and positive perception of diversity amongst federal employees from 89 federal agencies. This research study argues that New IQ practices encourage an optimal combination of ties that result in increased inclusive behaviors and encourages more research in the areas of small world networks, inclusive intelligence, and social physics.

Keywords: inclusion, New IQ, diversity, engagement, discrimination, small world networks,
Table of Contents

**Chapter 1: Introduction** .................................................................................................................. 12
  - Background and Context .............................................................................................................. 14
  - Law and Policy .............................................................................................................................. 16
  - Problem Statement ...................................................................................................................... 19
  - Purpose of Study .......................................................................................................................... 21
  - Research Questions and Hypothesis .......................................................................................... 20
  - Theoretical Framework .............................................................................................................. 21
  - Conceptual Framework .............................................................................................................. 21
  - Definitions .................................................................................................................................. 23
  - Assumptions ................................................................................................................................. 24
  - Scope and Delimitations .............................................................................................................. 25
  - Limitations .................................................................................................................................. 25
  - Significance ................................................................................................................................. 25
  - Summary ........................................................................................................................................ 27

**Chapter 2: Literature Review** ............................................................................................................. 29
  - Literature Search Strategy ......................................................................................................... 30
  - Theoretical Foundation .............................................................................................................. 30
  - Literature Review Related to Key Concepts ................................................................................. 33
  - Diversity ....................................................................................................................................... 34
  - Inclusion Solution ......................................................................................................................... 36
Page Left Blank Intentionally
List of Tables

Table 1. Descriptive Statistics of New IQ Scores FY 2014 ..............................................67
Table 2. Multiple Regression output using the five dimensions of the New IQ .................67
Table 3. Descriptive output of New IQ and Employee engagement variables. FY 2017 .......73
Table 4. New IQ and employee engagement regression run .............................................74
Table 5. Regression output of New IQ and perception of diversity variables. FY 2017 .......76
List of Figures

Figure 1. Small World Theory of Inclusion .................................................................22
Figure 2. Small World Theory of Inclusion: The Inclusive Loop .................................23
Figure 3. FEVS Important Population Characteristics Source: 2016 FEVS Report ..........62
Figure 4. Discrimination Complaint Data FY 2010 thru FY 2014. Source: 2014 FEORP ....64
Figure 5. Scatter Plot of New IQ and Complaint Dependent Variable ........................67
Figure 6. Scatter Plot of FY 2016 New IQ scores and Minority Composition N= 39 ....71
Figure 7. Scatter Plot of FY 2017 New IQ Scores and Employee Engagement Scores ....72
Figure 8. Scatter Plot of New IQ Scores and Perception of Diversity .........................75
Chapter One: Introduction

The Federal government has historically been a leader in workforce diversification. Beginning in 1947 when President Truman signed Executive Order 9981 to Desegregate the Armed Forces, the federal government has led the way in promoting diversity, and later inclusion as a workplace goal. However, a 2016 RAND report suggested that considerably more efforts to improve inclusion and diversity within the government is needed. The RAND report (Lytel et al., 2016) found the critical importance of inclusiveness in affecting outcomes, highlighting that the Federal Government (Department of Defense (DoD) suffers from several problematic behaviors including sexual harassment, sexual assault, unlawful discrimination which have detrimental effects upon agency effectiveness. Additionally, most demographic groups have been historically underrepresented in the Federal government, especially in senior leadership levels, except for white males. (Burns, et al., 2012). (For purposes of this paper government underrepresentation and problematic behaviors will be referred to as the Twin Challenges). The Twin Challenges of problematic behaviors and lack of demographic diversity pose major risk factors to a well-functioning government if left unchecked. To address these Twin Challenges, then President Obama in August 2011 issued Executive Order 13583-Establishing a Coordinated Government-wide Initiative to Promote Diversity and Inclusion in the Federal Workforce (Appendix B).

The goal of this study is to identify the relationship, if any, between federal government inclusion practices known as the New IQ and the number of discrimination complaints, minority composition, and scores of engagement and diversity perception. The hypothesis for this study is that Federal Agency New IQ scores are negatively correlated to decreased discrimination complaints and positively correlated to minority composition, increased levels of employee
engagement and positive diversity perception.

The New Inclusion Quotient (IQ) consists of 20 questions (listed in Appendix A of this study) which were selected by an analysis of the Office of Personnel Management (OPM’s) Employee Viewpoint Survey (EVS) questions. These 20 EVS questions had the highest correlation to inclusive environments of the 87 questions tested. The 20 questions are grouped into five Habits of inclusion, “F.O.C.S.E” (Fair, Open, Cooperative, Supportive, Empowering).

The hypothesis suggests that New IQ independent variables (Fairness, Openness, Cooperativeness, Supportiveness, and Empowerment) sustain the optimal combination of strong and weak ties (Neal, 2015) within government agencies resulting in improved social capital (Putnam, 2011) which produces higher rates of diversity, inclusion, and engagement scores. Furthermore, this optimal amount of social capital created by the combination of strong and weak ties is theorized will produce lower discrimination and reprisal complaints. Several researchers (Neal, 2004; Pentland, 2015; Uzzi, 2007) in many disciplines have established the importance of optimal strong and weak ties which have also been described by various researchers as bonding and bridging social capital. This optimal combination of ties results in increased inclusive behaviors as measured and described by the New IQ (Deloitte, 2013).

Chapter one of this study presents the research issue, its legal and policy context, and the empirical literature informing a direction for this research study. Chapter two will present the research design and theoretical concept. Chapter three discusses the methodology of the study. In chapter four the findings of the study analysis are described. And, finally chapter five presents a summary of this non experimental correlational study and recommends possible directions of future research in this area.
Background and Context

In 2011, Shore et al. performed an extensive review of research literature on the topic and found that inclusion, as defined by belongingness and uniqueness was associated with higher job satisfaction. Specifically, studies showed that inclusion was positively correlated with employee satisfaction (Acquavita, 2009) and that exclusion from decision-making is a predictor of attrition (Mor Barak, 2006). Inclusive environments were associated with reduced conflict and increased job satisfaction (Nishii, 2013). In 2004, the Corporate Leadership Council established a framework that further linked employee engagement with employee retention and performance.

However, recent social indicators suggest that Americans have become much more polarized ideologically, segregated ethnically, and embedded in organization and educational silos (Bishop, 2011). This “sorting” effect was first documented in a book called, “The Big Sort” by Michael Bishop. In it, Bishop identified many ways that American society was becoming much more culturally, socially, and politically homogenous. In Bishop’s research he suggested the primary reason for this massive sorting effect was due to rapid and deep demographic changes specifically ethnic increases due to immigration and the decrease of Caucasian birth rates. Although the federal government has taken extensive actions to specifically protect federal employees from unfair practices progress has been uneven (Lytell et al., 2016).

Law and Policy Review

There are three primary directives that provide the basis and appropriate governing authority for this respective research. These directives include: the Executive Order 13583 -- Establishing a Coordinated Government-wide Initiative to Promote Diversity and Inclusion in the Federal Workforce, the 1978 Civil Service Reform Act, and the 5 U.S. Code 2301 Merit system principles Code of Federal Regulations (CFR). These directives were designed to promote
equality and fair hiring and promotion opportunities for all federal employees regardless of
demographic differences. This conclusion was supported by surveys conducted by Sirota, D.,

The following section discusses the key executive orders, federal laws, and public statues that
govern essential inclusive diversity directives, laws and regulations within the federal sector.

**Executive Order (EO) 13583 -- Establishing a Coordinated Government-wide Initiative to
Promote Diversity and Inclusion in the Federal Workforce**

EO 13583 was created to produce a singular document that provided a clear and
comprehensive direction and set of strategies federal agencies could initiate to improve inclusive
diversity within their agencies. Responsible parties for the implementation of EO 13583; The
Office of Personnel Management (OPM), The Equal Employment Opportunity Commission
(EEOC), and the Chief Human Capital Office (CHCO) produced a comprehensive set of
strategies that provided agencies a roadmap to implement their inclusive diversity strategies in a
coordinated manner (Appendix C: Inclusive Diversity Strategic Plan). These strategies included
a governmentwide Diversity and Inclusion Strategic Plan, a comprehensive forty-six page
Diversity and Inclusion Guidance that provided agencies a step-step description on how to
implement the prior required government wide Diversity and Inclusion Plan, and a web-based
Diversity and Inclusion Dashboard to provide agencies an easy and simplified way to measure
their diversity and inclusion progress as determined by the responsible parties of EO 13583.

EO 13583 in fact was the culmination of several prior Executive Orders all with the purpose
of realizing “…Our Nation derives strength from the diversity of its population and from its
commitment to equal opportunity for all. We are at our best when we draw on the talents of all
parts of our society, and our greatest accomplishments are achieved when diverse perspectives
are brought to bear to overcome our greatest challenges.” (EO 13583, 2011). As detailed in EO 13583 several Executive Orders had been ordered in the past as detailed in the quote below from EO 13583:

Executive Order 13171 of October 12, 2000 (Hispanic Employment in the Federal Government), directed executive departments and agencies to implement programs for recruitment and career development of Hispanic employees and established a mechanism for identifying best practices in doing so. Executive Order 13518 of November 9, 2009 (Employment of Veterans in the Federal Government), required the establishment of a Veterans Employment Initiative. Executive Order 13548 of July 26, 2010 (Increasing Federal Employment of Individuals with Disabilities), and its related predecessors, Executive Order 13163 of July 26, 2000 (Increasing the Opportunity for Individuals with Disabilities to be Employed in the Federal Government), and Executive Order 13078 of March 13, 1998 (Increasing Employment of Adults with Disabilities), sought to tap the skills of the millions of Americans living with disabilities. (EO 13583, 2011)

The Civil Rights Reform Act of 1978

The Civil Rights Reform Act of 1978 codified into public regulations a series of legislative laws and policies to restructure and improve the efficiency and effectiveness of executive branch federal agencies of carrying out respective laws. The Act specifically restructured and clarified Civil Rights laws of 1964 and 1968 about ensuring equal opportunity in the hiring, promotion, selection, and managing of citizens from underrepresented groups. Although originally initiated to ensure protection from other Watergate type scandals (Ingraham, P. & Ban, C, 1984) the Reform Act substantially revised the equal opportunity laws and produced a series of new
Title 5 CFR Merit Systems Principles

A commitment to equal opportunity, diversity, and inclusion is critical for the Federal Government as an employer. By law, the Federal Government's recruitment policies should "endeavor to achieve a work force from all segments of society" (5 U.S.C. 2301(b)(1)). As the Nation's largest employer, the Federal Government has a special obligation to lead by example. Attaining a diverse, qualified workforce is one of the cornerstones of the merit-based civil service. (EO 13583, 2011).

CFR 2301 makes clear that the federal government has a direct and special obligation to be a model and lead by example in achieving and maintaining a diverse and inclusive workforce. 5 CFR 2301 additionally provides the following detailed guidance:

(1) Recruitment should be from qualified individuals from appropriate sources in an endeavor to achieve a work force from all segments of society, and selection and advancement should be determined solely based on relative ability, knowledge, and skills, after fair and open competition which assures that all receive equal opportunity.

(2) All employees and applicants for employment should receive fair and equitable treatment in all aspects of personnel management without regard to political affiliation, race, color, religion, national origin, sex, marital status, age, or handicapping condition, and with proper regard for their privacy and constitutional rights.

5 CFR 2301 clearly places the responsibility of the Federal government to ensure federal employees are treated fairly and that the government is a model of diversity and inclusion.

Problem Statement

Although, the Federal government has improved its diversity posture within the federal
workforce more still needs to be done. As the Center for American Progress (2011) Report claimed the federal government needs to do more to ensure it reflects the diversity of American society. As of 2016, the Federal workforce was underrepresented in every demographic group to include women and minorities in Senior Executive Service positions (Maturo, 2018). The federal government faces a diversity and inclusion problem (COP, 2011; Lytell, et al. 2016). And, most demographic groups have been historically underrepresented except for white males in the Federal sector.

Furthermore, Federal agency engagement scores have continued to decline and in 2015 dropped to the lowest level in 11 years. And, as Federal News Radio (Kopp, 2015) reported, “This decline reflects federal sector trials amid shutdowns, budget constraints, multiyear pay freezes, slowdowns in hiring and management snafus.” However, as pointed out in the article, more importantly is the continued decline in senior political and career leaders and their ability to create an engaging workplace (Kopp, 2015).

The continued decline of federal sector employee engagement provides a significant challenge to the ability of the federal sector to effectively achieve its stated goals (OPM, 2016). The federal government is the largest employer in the world (FEORP, 2016) (and disengaged employees cost the United States billions of dollars a year in systemic inefficiencies in part due to the Twin Challenges mentioned earlier in this paper (Lytel et al., 2016).

Inclusion as a predictor of performance and employee engagement in the private sector has been studied with positive results (Shore, 2014; Nishii, 2015; Bourke, 2016). And, while several studies in the private sector point to a robust nexus between inclusion, employee engagement, and organizational outcomes (Acquavita et al., 2009) very little research has been accomplished in the federal sector on the relationship between inclusion and the twin challenges described
earlier. A substantial problem in identifying a link between inclusion and the twin challenges is the lack of a measurable definition of inclusion.

In 2011, Shore et al. performed an extensive review of research literature on the topic and found that inclusion, as defined by belongingness and uniqueness was associated with higher job satisfaction. Specifically, studies showed that inclusion was positively correlated with employee satisfaction (Acquavita et al., 2009) and that exclusion from decision-making is a predictor of attrition (Mor Barak et al., 2006).

The New IQ provides researchers the first useable tool to measure the perception of inclusive behaviors within the federal sector using validated federal employee survey results.

**Purpose of the Study**

The goal of this correlational study is to establish and clarify the relationship between the federal government New IQ scores and the number of discrimination complaints, minority composition, level of employee engagement, and positive perception of diversity within 89 federal agencies. This correlational approach was utilized to identify combinations of dependent and independent variables which provided the greatest positive impact on the Twin Challenges outlined above. The data set in this study, in sum, consisted of 89 data points drawn from FY 2014, FY 2016 and FY 2017 Federal Employee Viewpoint Survey (FEVS) depending on data availability variable analyzed, and integrity. Demographic information for this study was retrieved from the 2017 Federal Government Annual Equal Opportunity Report and the 2014 Equal Employment Opportunity Commission (EEOC) complaint database. Knowledge generated is expected to provide effective strategies to improve federal government diversity and inclusion outcomes.
Research Questions

Using a correlational approach this quantitative study is an attempt to establish and clarify the link between the federal government New Inclusion Quotient scores and the number of discrimination complaints and minority composition, and employee engagement and diversity perception scores. The study research questions and hypothesis are:

- Research Question 1: Is there a relationship between New IQ scores and number of discrimination complaints?
  
  Hypothesis 1: New IQ scores have a negative correlation to the number of discrimination complaints.

- Research Question 2: Is there a relationship between New IQ scores and federal agency the number of agency minorities?
  
  Hypothesis 2: There is a moderate relationship between New IQ scores and the number of minorities within federal agencies.

- Research Question 3: Is there a relationship between New IQ scores and federal employee engagement scores?
  
  Hypothesis 3: There is a strong relationship between New IQ scores and federal employee engagement scores.

- Research Question 4: Is there a relationship between New IQ scores and perception of diversity of federal employees?
  
  Hypothesis 4: New IQ scores are highly correlated with the perception of diversity of federal employees.
Theoretical Framework

The fundamental theory providing the foundation of this research is *The Small World Theory of Inclusion which consists of three classic theories of human behavior*. While, several theories of human motivation and behavior relate to a general theory of inclusion the following three well-known theories provide a significant basis for the Small World Theory of Inclusion. These three well-researched theories include, Watts and Strogatz Small World Network theory (1998), Putnam’s Social Capital Theory (1995), and Brewer’s Optimal Distinctiveness Theory (1999) research. Alone, neither theory provides an adequate theory of inclusion, combined they generate a powerful lens with which to understand the results of this study. The Small World Theory of Inclusion which frames the work of Watts and Strogatz, Putnam, and Brewer into a network science framework using small world theory as a means of explanatory power.

At a basic level the theory predicts that organizations which sustain the ideal combination of strong and weak ties will have higher rates of diversity, inclusion, and engagement scores. Furthermore, this optimal combination of strong and weak ties will also result in fewer discrimination complaints, higher number of minority employees, and higher engagement and diversity perception scores due to role modelling as suggested by Bandura’s (1971) social learning theory. Several researchers in many disciplines have established the importance of optimal strong and weak ties (Uzzi, 2007; Neal, 2015; Strogatz & Watts, 1999) which have also been described by various researchers as bonding and bridging social capital (Putnam, 2001). This optimal combination of ties results is understood in this research study to increase prosocial behaviors as measured, described, and promoted by the New IQ.

Conceptual Framework

The small world theory of inclusion is a theory of inclusion which builds on the theoretical
models of well-established theories of inclusion, social capital, and the Strogatz and Watts theory of small world networks. Figure 1 describes the small world theory of inclusion at a macro level and represents strong and weak ties as gradients of connections amongst groups and teams. With optimal connections and ties represented as a Zone of Inclusion.

Figure 1. Small World Theory of Inclusion. The small world theory of inclusion at a macro level and represents strong and weak ties as gradients of connections amongst groups and teams. With optimal connections and ties represented as a Zone of Inclusion.

At a deeper level the small world theory of inclusion is depicted in the next figure at a micro level and depicts the process of cultural transformation to a more inclusive environment as an inclusive loop. This inclusive loop is comprised of five steps which begins with individuals looking to satisfy their core human needs of being uniquely valued and a sense of belonging as understood from Brewer’s Optimal Distinctiveness Theory. In step two of the inclusive loop the
incorporation of New IQ behaviors (fairness, openness, cooperation, supportiveness, and empowerment) through organizational education establishes and encourages New IQ behaviors which are in turn reinforced as norms by small groups or teams that are characterized by Strogatz and Watts articulation of the formation of strong ties. These strong ties produce the bonding capital as articulated by Putnam’s Social Capital Theory. As teams interact through inclusive behaviors weak ties should start to emerge and in turn create connections between organizational groups and teams which produce an optimal zone of small and weak ties which then are internalized as organizational norms of behaviors and perpetuate a virtuous cycle of inclusive actions of prosocial behaviors.
Figure 2. The small world theory of inclusion is depicted in the at a micro level and depicts the process of cultural transformation to a more inclusive environment as an inclusive loop.

**Definition of Key Terminology**

**Diversity**- Any aspect of difference between two individuals or a group (Page, 2014)

**Inclusion**- The feeling of being accepted within a group (Mor-Barak, 2011)

**New Inclusion Quotient (IQ)**- Researched based strategy to advance inclusive behaviors of fairness, openness, cooperativeness, supportiveness, and empowerment. (OPM, 2016)

**Social Capital**- The bonds of trust built between individuals on a team or in a community (Putnam, 2004)

**Small World Networks**- a type of social network characterized by strong and weak ties. (Watts and Strogatz, 1999)

**Assumptions**

This study includes several significant assumptions that are theoretical, methodological, and topical. The theoretical assumptions associated with the power of strong and weak ties as understood through social network theory (Strogatz & Watts, 2001; Neal, 2015; Uzzi, 2005). Additionally, the notion that inclusiveness can be measured based on the use of Likert surveys and defined through core human needs (Brewer, 1999; Shore, 2011; Nishii, 2014) in an accurate manner is assumed.

Methodologically, it is assumed that non experimental correlational methods are appropriate in establishing an accurate and scientifically sound method of identifying a relationship between multiple variables. Creswell (2011) asserts, quantitative research can derive from secondary data collected using a survey tool design for the study. Furthermore, because the FEVS is a self-administered web survey, there was an assumption that the respondents would remain honest and
willing to provide answers to the best of their ability.

From a topical point of view, it is assumed that diversity and inclusion do provide verifiable and substantial influence or organizational prosocial behaviors that in effect lead to improved FEVS scores as associated with dependent variables utilized in this study.

**Scope of Study**

The scope of this study was limited to federal agencies who participated in the respective study years and that also provided discrimination and demographic data. Agencies who were included within the study had to have participated in the FEVS, provided complaint data to the EEOC, and submitted their respective MD 715 Reports for the targeted years.

The Federal government is the largest employer in the United States with approximately 4.3 million employees (FEORP, 2016). The federal government generally consist of over 300 agencies and subcomponents. For the purposes of this study 89 agencies met the requirements of top-level agencies that included various sub components. In other words, only the top levels of the respective agencies were considered in the study data. Although, these 89 agency components represented the entirety of the approximately 300 subcomponents.

**Study Limitations**

Only specific years between FY 2014 and 2017 were chosen for this study due to the inconsistency and missing data from some agencies. For example, only 37 top level agencies could be utilized to investigate the relationship between New IQ and discrimination complaints because several agencies were either missing FEVS data or complaint data for the target years. Target years were selected on how many agencies had reported or participated with full datasets.

**Rationale and Significance**

The primary goal of this study is to identify the relationship, if any, between federal
government inclusion practices known as the New IQ and the number of discrimination/reprisal complaints filed and engagement/diversity perception increases. The general hypothesis of this study is Federal Agency New IQ scores are highly correlated to the number of EEO complaints filed and number of reprisals by the respective agency with a corresponding increase in scores of diversity perception and employee engagement. The study data set consist of 89 data points drawn from FY 2014 Federal Employee Viewpoint Survey (FEVS) and the 2014 Federal Government Annual Equal Opportunity Report published by the Equal Employment Opportunity Commission (EEOC). The data sets were disambiguated from one another requiring a significant amount of data entry into the respective Excel spreadsheet. Due to the data heavy aspect of this research study the quantitative approach is the best method to identify possible relationships amongst variables.

Quantitative research is the systematic inquiry into phenomena using statistical, mathematical, or computational techniques (Creswell, 2013). Quantitative data is data that can be analyzed using statistical methods to uncover important insights into the effectiveness of programs, phenomena, and other associated situations and circumstances. Further, the application of statistical methods is the most used method of scientific inquiry in the analysis of data and information. Quantitative methodology is closely associated with the Scientific Method of forming a hypothesis, identifying variables, performing appropriate analysis techniques, and confirming or proving invalid the respective operating hypothesis (Creswell, 2013). Utilizing correlational research techniques which consist of identifying the relationship between variables, the correlation coefficient, direction of the relationship, strength of relationship and the Pearson r. Also, included in correlation statistical techniques is most notably regression analysis which could also be interpreted as prediction (Shmueli, 2010).
Inclusion as a predictor of performance in the federal sector has been studied with positive results. This adds to several studies in the private sector that point to a robust nexus between inclusion, employee engagement, and organizational outcomes. However, little research has been undertaken to analyze the impact of inclusive behaviors within the federal sector.

Furthermore, a 2016 RAND report suggested that considerably more efforts to improve inclusion and diversity within the government is needed. The RAND report (Lytel et al., 2016) found the critical importance of inclusiveness in affecting outcomes, highlighting that the Federal Government (Department of Defense) suffers from several problematic behaviors including sexual harassment, sexual assault, unlawful discrimination which have detrimental effects upon agency effectiveness. Additionally, most demographic groups have been historically underrepresented in the Federal government, especially in senior leadership levels, except for white males.

**Summary**

There is substantial empirical support for fostering diversity to improve performance outcomes, (Page, 2008; Cox, 1991; Bourke, 2015; Pentland, 2014) but a company cannot leverage the intrinsic value of diversity without facilitating inclusive behaviors amongst leaders and employees. In increasingly diverse work environments, where individuals must work with others from vastly different backgrounds than their own, the need for individuals within a company to engage in inclusive behaviors is critical to team and organizational success (Mor-Barak, 2011). However, many companies do not have access to the research that will help them shape an inclusive culture within the workplace. Without an understanding of the crucial variables that play an important role in creating an inclusive culture, diversity can be detrimental to a company’s success. Therefore, taking the appropriate steps to cultivate an inclusive culture
is imperative for a company to promote performance outcomes within a diverse work environment. The New Inclusion Quotient (IQ) is a construct that incorporates the underlying indicators of an inclusive culture, which include fairness, cooperation, support, openness, and empowerment.

Although the New IQ can be assessed through a targeted survey, many companies are unsure of the steps that are necessary to transform their New IQ score for the better. Subsequently, this study argues for a more robust view of inclusion that provides a strong theoretical foundation, is measurable, and incorporates some of the latest thinking on social capital theory, small world networks, and power of optimal combinations of strong and weak ties.

Chapter 2: Literature Review

Previously this study has highlighted the Twin Challenges the federal government faces in attempting to create a more demographically diverse federal workforce while also reducing the occurrence of problematic behaviors associated with less than inclusive workplace environments. To address the Twin Challenges the Obama administration initiated EO 13583 which directed federal agencies to increase their efforts to increase demographic diversity while also reducing the occurrence of problematic behaviors. Subsequently, this study measures the effectiveness of EO 13583 on the Twin Challenges by analyzing the impact of the New IQ factors of inclusion on the dependent variables of discrimination complaints, minority composition, and scores of engagement and diversity perception.

The following literature review highlights relevant research around four themes identified as critical to the framework of this study. The first theme addresses diversity and describes the basic tenets of diversity as a performance enhancer (Page, 2008; Cox, 1991) as well as the inherent paradox of diversity. Additionally, this section considers diversity as a double-edge
sword in terms of creativity and social cohesion. The next theme is centered on the basics of inclusion and how inclusive behaviors can provide solutions to many of the problematic behaviors discussed earlier in this study (Mor Barak, 2011). This section includes brief discussions on customer satisfaction, enhanced performance, employee retention, and inclusion as a predictor of performance. The third theme is on the New IQ. It describes the New IQ, as a new type of intelligence as discussed within the literature (Pentland, 2011; Wooley et al 2016). Part one discusses the connection of inclusive intelligence as a form of social connectedness while Part two summarizes the concept of inclusive intelligence in the context of Gardner’s theory of Multiple Intelligences. The fourth and last theme of this literature review is the research on a pattern of network connections known as Small World. These small world connections provide the cultural framework for how behaviors are transmitted from person to person and team to team. More importantly, it introduces the concept of optimal levels of strong and weak ties which is suspected as the primary benefit of implementation of prosocial behaviors (Neal, 2015; Uzzi, 2007).

**Literature Search Strategy**

A thorough literature search and review of the topic at hand was conducted to include upwards of 30 or more peer-reviewed journal articles. These articles went through a stringent review process to determine their quality and were published only when they were deemed to be worthy of publication. Therefore, the peer-reviewed articles contain methodologically-sound, rigorous research. The literature review only includes findings that are repeated across several articles, suggesting that the findings are especially robust across diverse populations and replicable.
Theoretical Foundation

While the concept of diversity has been at the forefront of research for improving workforce effectiveness and efficiency a new and emerging field focused on inclusion has recently gained prominence as an equally important ingredient in organizational success (Mor Barak, 2001). Subsequently, while diversity is necessary for increased employee engagement, it is not enough to benefit the company in any meaningful way as a standalone initiative (Roberson, 2006). Conversely, inclusion allows an organization to take advantage of a diverse workforce by improving the employee performance across the board, instead of targeting a specific subset of individuals within the workforce (Pless & Maak, 2004).

Humans have a natural desire to form meaningful social bonds with other individuals (Brewer, 1999), which allows them to fulfill what is described as their need to belong (Baumeister & Leary, 1995). To accomplish the goal of inclusion, individuals search for social groups in which they feel accepted (Shore et al., 2011). In this way, inclusion allows individuals to fulfill basic human needs thereby generating positive organizational outcomes (Shore, 2011; Mor-Barak, 1998; Baumeister & Leary, 1995).

Within the specific domain of the workplace, researchers have defined inclusion as “the degree to which individuals feel part of critical organizational processes” (Mor-Barak & Cherin, 1998). An integral aspect of this definition of inclusion involves the individual's ability to contribute to workplace discussions and decision-making in a significant way, while being provided the information and resources necessary for them to do so efficiently. Feeling trust towards their colleagues and the company is a prerequisite for these processes to unfold (Mor-Barak & Cherin, 1998).

Although several theories of human motivation and behavior relate to a general theory of
inclusion three well-known theories provide a significant foundation for this study. These three well-researched theories include, Watts and Strogatz Small World theory (1998), Putnam’s Social Capital Theory (1995), and Brewer’s Optimal Distinctiveness (1999) research. While neither theory provides an adequate theory of inclusion alone, combined they generate a powerful lens with which to understand the results of this study. Hence, *the Small World Theory of Inclusion* frames the classic work of Watts and Strogatz, Putnam, and Brewer into a network science framework using small world theory as a means of explanatory power.

The logic of focusing on behaviors which promote belonging, unique value, psychological safety, and optimal social capital and flows through a network of connections is that a more robust theory of inclusion is needed to improve organizational and societal outcomes. Hence, the small world theory of inclusion predicts that organizations which sustain the optimal combination of strong and weak ties will have higher rates of diversity, inclusion, and engagement scores. Furthermore, this optimal combination of strong and weak ties will also produce lower discrimination complaints and higher rates of minorities within respective federal agencies.

In each of these three theories of human interaction and ingroup behavior a distinction is made between ingroup cohesion and as Putnam (1995) would put it, “bridging behavior.” While Brewer’s Optimal Distinctiveness Theory emphasizes the human needs of belongingness and distinctiveness these needs are primarily constrained to “within” group interaction and relationships. Conversely, social capital theory as articulated by Putnam focuses on the importance of not only ingroup social cohesion but also the need for bridging social capital which is the trust that is built when ingroup members interact with other outgroup members. Inclusion as understood through Brewer’s model provides little acknowledgement on outgroup
connections while Putnam’s social capital theory of bonding and bridging capital suffers from what many researchers consider a lack of measurable factors not to mention an ever changing and little agreed upon definition of social capital. The theoretical and practical limitations of Brewer’s and Putnam’s models however can be minimized using the Watt’s and Strogatz’s Small World Theory.

Small world networks are networks that are characterized by high clustering but short path distance between some clusters (Neal, 2015). For instance, New York City could be considered a small world network. Manhattan is the hub, the Burroughs are clusters, ties within the boroughs could be considered strong ties, the connections between the boroughs would be weak ties, and everyone could be considered a node. Amazingly, the small world architecture is self-similar or what is known as a fractal (The framework is basically the same at all levels of observation (Bettencourt, L. M., Lobo, J., & West, G. , 2008). Small world networks have been identified as the basic structure of the brain, airline system, and the World Wide Web. Uzzi and Spiro (2005) identified that within the small world structure there is a “Q” zone where there is just enough clustering to achieve a person’s need to belong without becoming insular.

Conversely, the network is not so random as to discourage emergence of social cohesion, but there is enough contact with different clusters using weak ties that promote creativity. The true insight is what Putnam discovered in his research.

At a basic level the small world theory of inclusion predicts that ensembles which sustain the optimal combination of strong and weak ties will have higher rates of diversity, inclusion, and engagement (Neale, 2014; Uzzi & Spiro, 2005, Pentland, 2014). Furthermore, this optimal combination of strong and weak ties should produce fewer discrimination and reprisal
complaints, increase employee engagement, and improve diversity perception (OPM, 2011) and should be considered as the sum results of an inclusive culture.

**Literature Review Related to Key Concepts and Variables**

The following key concepts are the major theoretical drivers of this respective study. Each of the key concepts are linked to each of the study variables and are labelled next to the subheadings. The *Twin Challenges* represent the four dependent variables identified throughout this study. As noted in the Rand Study the Federal government’s recurring problem of underrepresentation of minorities (or a lack of demographic diversity) and problematic behaviors (behaviors which describe issues other than demographic diversity) are referred to as the *Twin Challenges*.

**Diversity (Dependent Variables; Discrimination Complaints and Minority Composition)**

There is substantial empirical support for fostering diversity to improve performance outcomes (Bourke, 2016) but a company cannot leverage the intrinsic value of diversity without facilitating inclusive behaviors amongst leaders and employees (Barak, 2007). In increasingly diverse work environments, where individuals must work with others from vastly different backgrounds than their own, the need for individuals within a company to engage in inclusive behaviors is at an all-time high. However, many companies do not have access to the research that will help them shape an inclusive culture within the workplace. Without an understanding of the crucial variables that play an important role in creating an inclusive culture, diversity can be detrimental to a company’s success. Therefore, taking the appropriate steps to cultivate an inclusive culture is imperative for a company to promote performance outcomes within a diverse work environment.

**The Double-Edged Sword.** Diversity has been dubbed a “double-edged sword” (Williams &
O’Reilly III, 1998) because it can improve business outcomes and enhance performance (Williams & O’Reilly III, 1998), but can be detrimental to a company’s success if it is not supplemented with an inclusive environment (Mannix & Neale, 2005). For instance, diversity in thought can create conflict and tension between workers, impeding productivity (Jehn et al., 1999). An inclusive climate, which is defined as “the degree to which an employee is accepted and treated as an insider by others in a work system” (Pelled et al., 1999), can help companies take advantage of diversity, without running the risk of suffering from diversity’s potential hindrances. Overall, diversity serves as a moderator between inclusion and performance, such that companies will perform substantially better with diverse groups in which inclusion is the norm compared to companies without diversity and/or inclusion (Ferdman, Avigdor, Braun, Konkin, & Kuzmycz, 2010).

**Different approaches to diversity.** Most diversity initiatives either promote a colorblind or multicultural approach, each of which engenders their own unique set of problems. With a colorblind perspective, differences are essentially ignored, which supposedly promotes equal treatment, but in fact perpetuates the differential outcomes for different groups (Karafantis, Pierre-Louis, & Lewandowski, 2010). Research shows that a colorblind approach to diversity and inclusion is associated with higher rates of racial bias (Richeson & Nussbaum, 2004) and that historically disadvantaged groups (i.e., women, people of color etc.) are less likely to trust an organization that advocates for a colorblind approach, yet has little diversity (Purdie-Vaughns et al., 2008).

On the other hand, a multicultural approach encourages diversity through specific initiatives to make individuals that are considered “diverse” feel more valued (Cox, 1991). These are largely targeted towards demographically underrepresented individuals, which can engender
hostility and in turn, resistance, from majority group members that feel excluded (Mannix & Neale, 2005). An all-inclusive multicultural (AIM) approach addresses many of the problems driven by colorblindness and multiculturalism by encouraging employees to acknowledge and value differences, which is incredibly important for minority members, while ensuring that all members of the organization, including majority members, feel as though they are valued for their unique skillsets and experiences (Stevens, Plaut, & Sanchez-Burks, 2008). Thus, the AIM approach serves to fulfill the needs of all members of an organization, and as such, should be incorporated into an inclusion management plan. The AIM approach is an approach to diversity based upon the recognition of the importance of inclusiveness.

Conclusion. The literature on diversity is generally in agreement that diversity can promote positive organizational outcomes (Page, 2008, Bourke, 2016). However, sometimes these positive outcomes can be sidetracked due to additional conflict caused by diverse individuals working together (Mor Barak, 2011). Further, the research suggests that there is two ways which can be used to advance diversity within organizations. But, both of these ways, colorblind and multicultural approach are both lacking in general success (Kalev & Dobbins, 2011).

The Inclusion Solution (Dependent Variables; Engagement and Diversity Perception Scores)

Although diversity has been at the forefront of research for improving workforce efficiency, there is a new and emerging field focused solely on inclusion that has derived from research on diversity. Diversity is necessary for inclusive efforts to be successful, but it is not enough to benefit the company in any meaningful way (Roberson, 2006). Inclusion allows a company to take advantage of a diverse workforce by improving the employee performance across the board, instead of targeting a specific subset of individuals within the workforce (Pless & Maak, 2004).
Humans have a natural desire to form meaningful social bonds with other individuals, which allows them to fulfill what is described as their need to belong (Baumeister & Leary, 1995). To accomplish their goal of inclusion, individuals try to find social groups that will make them feel accepted (Shore et al., 2011).

In this way, inclusion allows individuals to fulfill a basic human need, and as shown before, there are many negative consequences if individual feels that they have not fulfilled this need. Within the specific domain of the workplace, researchers have defined inclusion as “the degree to which individuals feel part of critical organizational processes” (Mor-Barak & Cherin, 1998, p. 48). An integral aspect of this definition of inclusion involves the individual's ability to contribute to workplace discussions and decision-making in a significant way, while being provided the information and resources necessary for them to do so efficiently. Feeling trust towards their colleagues and the company is a prerequisite for these processes to unfold (Mor-Barak & Cherin, 1998). Barak & Cherin, (1998) identified several benefits of achieving an inclusive environment, which include (but are not limited to):

**Customer Satisfaction.** Empathy allows employees to engage with their customers in a more cooperative way, because they value their customers’ concerns and recognize that they have unique needs that they would not otherwise understand without taking their perspective. Additionally, openness encourages employees to address a problem in a preventative rather than reactive way, since they will be better able to anticipate the unique challenges that their customers will face in advance. Additionally, employees that are empowered will be better able to fulfill the needs of their customers because they will feel that their own needs have been met. Finally, inclusion requires and simultaneously promotes cross-cultural competence, which will enhance an employee’s ability to respond appropriately to the needs of more diverse customers.
Enhanced Performance. Employee work effort is reduced when they feel excluded, largely because they feel as though the organization treats employees unfairly (Deane & Ferdman, 2013; Travis & Barak, 2010). Additionally, inclusion facilitates innovation by freeing employees from stress about exclusion and their interactions with co-workers (Stevens et al., 2008). Along these lines, team role performance is facilitated by an inclusion climate, which may be motivated by increased altruism that is associated with inclusion (Chen & Tang, 2018; Stamper & Masterson, 2002). Employees will feel more comfortable in an inclusive environment to take risks and speak their mind (Travis & Barak, 2010). Finally, research shows that the expectation of social exclusion is linked with impaired cognitive processing, which can negatively impact performance (Baumeister, Twenge, & Nuss, 2002).

Employee Retention. A sense of belonging and fairness is a key factor in determining employee retention (Barak & Levin, 2002; Deane & Ferdman, 2013). In support of this, there is evidence showing that female executives in management organizations are more likely to leave their firms, which may be attributed to the lack of diversity typically found in top levels of management (Shore et al., 2011). With a positive diversity organizational climate, employees feel less inclined to leave, since the quality of co-worker interactions is a major factor predicting retention rates (Brimhall et al., 2014; Parra-Thornton, 2010). Additionally, when employees do not feel as though they can contribute to decision-making processes, they are more likely to hold an intention to leave (Michâlle E. Mor Barak, Levin, Nissly, & Lane, 2006).

Employee Engagement. Companies with a greater diversity focus are more likely to have engaged employees (Deane & Ferdman, 2013). For instance, when organizations create sponsorships for employees, they are more likely to feel engaged and stay with the organization
(Deane & Ferdman, 2013). Also, production deviance is negatively associated with perceived inclusion, thus employees that feel included will be more likely to focus on their work wholeheartedly (Stamper & Masterson, 2002).

**Inclusion as a Predictor of Performance.** The concept of inclusion as a predictor of performance is still in its infancy, however several studies point to a powerful nexus between inclusion, employee engagement, and organizational outcomes. In 2011, Shore et al. performed an extensive review of research literature on the topic and found that inclusion as defined by belongingness and uniqueness was associated with higher job satisfaction. Specifically, studies showed that inclusion was positively correlated with employee satisfaction (Acquavita et al., 2009) and that exclusion from decision making is a predictor of attrition (Mor Barak et al., 2006). Inclusive environments were associated with reduced conflict and increased job satisfaction (Nishii, 2010). In 2004, the Corporate Leadership Council established a framework that further linked employee engagement with employee retention and performance. This conclusion was supported by surveys conducted by Gallup (2005) and Sirota (2005).

**Conclusion.** Inclusion is viewed in literature as the logical next step of diversity advancement within organizations. Inclusion has been associated with improved customer satisfaction, improved levels of employee engagement, and a reliable predictor of team and organizational performance. Inclusion is defined as the feeling of being welcomed or the sense of belonging and being valued as a unique individual.

**The New IQ (Independent Variable)**

The New Inclusion Quotient (IQ) is a construct that incorporates the underlying indicators of an inclusive culture, which include: fairness, cooperation, support, openness, and empowerment. The development of New IQ construct relied heavily on current research in the area of
organizational inclusion. Primarily, the use of Shore et al’s analysis of the pertinent literature (Shore, L. M., Randel, A.E., Chung, B. G., Dean, M.A. Ehrhart, K.H, Singe, G. 2010) and Nishii’s specific research in the area (Nishii, L. 2010). Nishii identified three primary dimensions of inclusion: fairness of employment practices; integration of differences; and inclusion in decision-making. In the interest of being comprehensive, a review of other reputable research (Mor Barak & Cherin, 1998; April & Blass, 2010) and identified similar and additional emerging themes. These themes were then cross-walked against analogous themes and resulted in six dimensions to serve as the basis for the New IQ Index:

- fairness of employment practices (removal of barriers)
- integration of differences (empowerment of individual voices)
- inclusion/participation in decision-making
- inclusive management and leadership
- information access/open communication

However, in considering the New IQ construct the concept of a wholly different type of intelligence has come to light. Several recent researchers (Pentland, 2011; Wolley, 2014; Malone, 2014; Gardener, 2000) have identified a different type of intelligence that is outside the confines of individual intelligence. This collective type of intelligence is what I have termed inclusive intelligence. Which theorizes that what the New IQ construct is measuring is the “network intelligence” inherent within social networks as described by Pentland (2014).

**A New Kind of Intelligence: Part I.** Pentland (2014) with his team from MIT conducted state of the art research utilizing a new social system measurement device known as a socioscope. This socioscope accurately measured the non-verbal behaviors of the respective study groups. The results revealed by Pentland’s team identified that intelligent teams were in
fact not comprised of the most intelligent individuals, but instead included team members who used communication patterns that included equal turn taking, energetic conversations, and the foraging by some team members of new ideas from other grouped located outside the respective group. Additionally, Gardener (2001) as a part of his theory of multiple intelligences identified two of his eight types of intelligence that is directly related to the concept of inclusive intelligence. The first type is called intrapersonal intelligence and is a measure of a person’s ability to accurately identify their respective emotional state. The second component of intelligence Gardener identified was what is known as interpersonal intelligence. Interpersonal intelligence according to Gardener is a type of intelligence that is used to effectively build relationships with others. Both types of intelligences are critical in the fundamental structure of inclusive intelligence as it relates to the improved intelligence of the respective team. While Pentland identified “network intelligence” as intelligence that resides within a respective network, Wolley & Malone (2014) measured the collective intelligence of teams that reside within the teams or workgroup. Wolley and Malone’s research identified three attributes of smart teams, the number of women on the team, they gave roughly equal time to each other, and displayed high degrees of social sensitivity. Why did these teams comprised of these three factors do better than the other teams? Wolley and Malone suggest it was the product of social connectedness, or what is termed in this paper as inclusive intelligence.

**A New Kind of Intelligence: Part II.** The New IQ represents a new type of intelligence referred to as inclusive intelligence. This type of intelligence is built upon the foundation of Gardner’s theory of multiple intelligences (2001), Pentland’s (2014) assertion of network intelligence and Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W., (2010) argument for the validation of collective intelligence. Each of these three streams of
research on intelligence point to a new way of thinking of intelligence. From these researcher’s perspective, intelligence is now not to be considered and individual characteristic, but more importantly an emergent characteristic of highly inclusive teams. The more inclusively diverse the team the more intelligent (Page, 2008). Intelligence is a group activity and not on an individual one and is described by many as a product of structural and relational connections (Pentalnd, 2015).

**Conclusion.** The New IQ is argued as the next evolution of intelligence in organizational, team, and individual performance. Based on a researched backed five factors of inclusive behaviors the New IQ provides a connected system of behaviors and concepts which provide a new view and strategy for overcoming the Twin Challenges of the federal government.

**Small World Networks: A Pattern of Inclusive Connections (New IQ Variable)**

The idea of small world networks was popularized through an experiment by Stanley Milgram (Milgram, 1967). Milgram wanted to find out how many people on average were required to get a package to any stranger in the world. On average Milgram calculated the number to be six. In other words, it roughly takes six steps for one person to connect with a stranger anywhere in the world. Hence, the popular concept of *six degrees of separation*.

Small world networks are networks that are characterized by high clustering but short path distance between some clusters (Neal, 2015). For instance, New York City could be considered a small world network. Manhattan is the hub, the Burroughs are clusters, ties within the boroughs could be considered strong ties, the connections between the boroughs would be weak ties, and everyone could be considered a node. Small world networks have been identified as the basic structure of the brain, airline system, organizational relationships, and the World Wide Web. Uzzi and Spiro (2005) identified that within the small world structure there is a “Q” zone
where there is just enough clustering to achieve a person’s need to belong without becoming insular. Conversely, the network is not to random where no one knows each other, but there is enough contact with different clusters using weak ties that promote creativity. Uzzi goes on to describe the importance and ubiquity of Small World Network theory below:

The social movements and networks literature invite us to consider the role that the social relations among individuals have for mobilization outcomes. Regardless of the behavioral model we consider for information transmission or influence (be it game theoretical, a threshold-model, or an SIR framework often used in epidemiology) we have amassed compelling evidence that the patterning of social ties (Burt 1987; Gould 1995; Hedstrom et al 2000; Christakis and Flower 2007; Kim and Pfaff 2012); the structural position of early adopters (Watts and Dodds 2007, Banarjee et al 2013); macro-structural features of networks (Watts 1999; Centola 2015); and the interaction between these features and behavioral models all matter for mobilization outcomes (Centola and Macy 2007; Watts and Dodds 2009). This diverse literature that uses methods from experiments, through simulation, to highly sophisticated econometrics, documents a key social fact that relationships matter for ideational and behavioral convergence. This has long been established, but in specific settings it is hard to convincingly demonstrate empirically. We also know little about which relationships matter the most, and how that is mediated by the content of diffusion. (Makovi, K. 2016)

**The Ubiquity of Small Worlds.** Network science is new and important approach because while the sorting effect takes place at all scales of organization it can be represented as a network and applied to standard network science protocols. Specifically, Professor West’s
(2017) research has identified that teams, cities, and companies all have small world connection pattern networks. As such, theoretically, the factors that make successful teams, great cities, and thriving communities theoretically could be governed by the same rules. West (2017) refers to this ubiquitous scaling feature as the result of a pattern of network connections representing a small world network.

**Overcoming the Diversity Paradox.** Neal (2014) provides a significant contribution to the current focus on small world network science as a new and exciting method to describe and provide solutions to the previously mentioned Diversity Paradox. Neal (2015) conducted a series of computer simulations to prove that the most optimal arrangement of community reflects the small world network pattern. This is groundbreaking research which suggests that communities, societies, and organizations should be mindful not to engineer out cliques and enclaves that people inhabit and belong to voluntarily. In other words, some segregation enables a community, organization, and team to increase levels of social capital and inclusiveness. Even more importantly, Neal made the point that what really brings communities, teams, or companies together is that the “big feels small.” As Neal explains this happens through a pattern of connections that take advantage of the small world network architecture.

Subsequently, Pentland (2015) in his work on social physics identifies certain archetypes who are essential to enabling this small network communities and teams to thrive by promoting the flow of ideas. From Pentland’s perspective it is the flow of ideas that ultimately result in the
level of success an organization achieves. Pentland defines an idea as a “pattern of active solutions.” These ideas if allowed to flow throughout an organization through the natural small world network will provide an engine of success for the respective organization. And, finally Professor Geoffrey West (2017) identified small world networks as the key ingredient in what has been identified as universal principles of organizational scaling.

**Conclusion.** The small world approach literature provides an effective framework in which to discuss inclusive diversity and New IQ behaviors using the language of network science. Specifically, the use of strong and weak ties as well as the discussion of optimal connections provide the understanding of the primary benefits of utilizing New IQ behaviors. The research suggests New IQ behaviors are critical because they provide the foundation for optimal connections of strong and weak ties.

**Critical Oppositional Views and Gaps in the Literature**

There is a growing consensus that inclusive diversity is overall beneficial to organizational performance. There continues to be significant criticism regarding the efficacy of most strategies to achieve a well-balanced inclusive and diverse organization. Foremost in this criticism of the current state of diversity and inclusion is Dobbins and Kalev (2011).

Dobbins and Kalev (2011) have been highly critical of government initiatives to improve diversity and inclusion. Specifically, some researchers (Dobbins, 2011) believe that diversity and inclusion programs initiatives including training, networking, and employee resource groups are all problematic in measuring their success. Social scientists (Kalev, Dobbin, Kelley, 2006) point out that even with millions spent on improving diversity and inclusion metrics in most
organizations little has changed. Researchers have also suggested that diversity and inclusion training increase racial tension amongst its participants (Kalev, Dobbin, Kelley, 2006). Additionally, other researchers lament the vague use of the term inclusion and the little research that unequivocally proves the critical role inclusion provides in organizational success.

Many researchers (Fiedler, K., Messner, C., & Bluemke, M. 2006) have subsequently provided severe criticism regarding the validity and accuracy of implicit biases. Some researchers (Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. 2005) have criticized the validity of the most used measure of unconscious bias. The Implicit Association Test (IAT) has faced relentless push back with some researchers identifying severe flaws in the administration of the test, what it correctly measures, and its predictability of the correct individual biases. Further, another line of research has criticized diversity and inclusion efforts as providing saliency to aspects of identity that lead to the collective retrenchment of identity groups into respective tribe’s dependent upon unimportant attributes in the success of the collective society. Following are specific areas of diversity and inclusion barriers identified by a review of the literature.

**Overuse of Traditional Social Categories.** The continued use of traditional racial categories (Dobbins, 2011) reinforces mental barriers that serve to the detriment of not only researchers but also American citizens. It’s been noted consistently in scientific articles, books, and by various scientists that race is a social construction that has no real biological meaning. Subsequently, some researchers argue that the continued use of improper racial categories obscures other potentially more meaningful group descriptors that could offer improved intergroup cooperation.

**Limited use of Network Theory.** Few researchers have combined the use of small world
networks and the optimal execution of goals at the group and community levels. Neal (2012) has done important work in this area by using an agent-based model to identify the optimal structure of connections within a group or community that promotes the highest levels of intergroup cooperation or what could be known as social capital. Uzzi (2007) has also done some important work in the efficacy of small world networks and the resulting increase in creativity. Additionally, West (2017) has identified small world networks as the pattern of connections which allow ideas to scale. In other words, West makes the point that cities are really scaled up communities which are scaled up neighborhoods, which in fact are streets nested within neighborhoods and communities.

**Minimal Use of Social Physics.** An additional branch of social science has become popular as a strategy to quantify and predict using what researchers call tracking “the bread crumbs” of human behavior. Pentland (2015) has identified in his research that the primary predictor of successful teams, cities, countries, and companies is what he calls “idea flow.” Idea flow is the optimal flow of ideas throughout any type of ensemble. It’s this flow of ideas that create the fertile conditions that promote creativity, productivity, and cooperation. Not only is idea flow important to the success of ensembles, but other researchers (Neale, 2015; Putnam, 1999; Page, 2016) have highlighted the critical importance of the flow of identities and information. These three combined provide a powerful new way to measure and dedicate resources. Instead of achieving equality based on ineffective measurements researchers have begun to focus on eliminating barriers that prevent the flow of ideas, identities, and information.

**The Identification of Inclusive Behaviors.** Most of the diversity and inclusion literature provide very little relevant and concrete behaviors that help to create a more inclusive environment. This lack of definition and subsequent measurement ability creates significant
roadblocks toward progress in the establishment of communities where social capital can thrive. Recent research has identified an intriguing archetype of character attributes that when housed by individuals improve team performance. These archetypes are called “charismatic connectors” and the more charismatic connectors on a team the better team outcome.

**Conclusion**

The comprehensive literature review provided a detailed view of the current science and research around inclusive diversity. Beginning with a deep and technical look at diversity as a performance enhancer while alternatively producing the *Diversity Paradox* which states that diversity can be both a boost to performance but also be a detriment to productivity because of increased conflict. Inclusion was defined as the next logical step in realizing the potential of diversity. However, very few key inclusive behaviors have yet to be identified. Alternatively, the New IQ was discussed as a new approach to improving federal government performance by viewing inclusiveness as a form of intelligence that could be learned and taught thus applied in organizational settings. Finally, the small world network approach provided a theoretical framework with explanatory power on why New IQ inclusive behaviors preliminarily seem to have a positive impact on federal government discriminatory complaints and increased scores of engagement and diversity perception.

**Summary of Chapter Two**

Although diversity has been at the forefront of research for improving workforce efficiency and effectiveness, there is a new and emerging field focused solely on inclusion that has derived from research based upon the critical work of Mor Barak, Neal, and Pentland. According to these scholars, to include Nishi and Shore diversity is necessary for inclusive efforts to be successful, but it is not enough by itself to benefit the company to new levels of success (Roberson, 2006).
Only in concert with inclusion will a company to take advantage of a diverse workforce by improving the employee performance across the board, instead of targeting a specific subset of individuals within the workforce.

The logic of focusing on behaviors which promote belonging, unique value, psychological safety, and optimal social capital and flows through a network of connections is a new theory in this study termed “The Small World Theory of Inclusion.” This theory predicts that organizations which sustain the optimal combination of strong and weak ties will have higher rates of diversity, inclusion, and engagement scores. Furthermore, this optimal combination of strong and weak ties will also produce lower discrimination and reprisal complaints. Several researchers in many disciplines have established the importance of optimal strong and weak ties which have also been described by various researchers as bonding and bridging social capital. This best combination of ties results in increased inclusive behaviors as measured and described by the New IQ as a measure of inclusive intelligence. But, the true impact of this inclusive intelligence is most fully realized in a Small World network structure of relationships and connections.
Chapter Three: Methodology

The following section describes the study methodology utilized to conduct this study. First, a description of the research approach and study design will be discussed. Then a brief description of the prior factor analysis process used to revalidate the five dimensions of the New IQ will be reviewed. Followed by a description of the correlational study process used to conduct the multiple regression analysis of respective variables that provided the best r squared values. Next, a description regarding the importance of researcher positionality is addressed followed with a brief discussion on the importance of study reliability and validity.

Research Approach and Design

The primary goal of this correlational study is to identify the relationship, if any, between federal government inclusion practices known as the New IQ (independent variable) and the dependent variables (the number of discrimination and minority composition and scores of engagement and diversity perception). The preliminary hypothesis is that Federal Agency New IQ scores are highly correlated to the number of EEO discrimination and minority composition, employee engagement and diversity perception scores. To assess the impact of inclusion strategies on the federal workplace environment federal employee discrimination complaint data was used. This data was housed by the Equal Employment Opportunity Commission (EEOC) which is one of the agencies identified by the Civil Service Reform Act of 1978 as one of the responsible parties in adjudicating discrimination complaints. Similarly, EO 13583 required the oversight agencies to provide a set of best practices and innovative strategies that can be scaled to implement in a coordinated manner across the federal sector.

Inclusion as a predictor of performance has been studied with positive results. Several studies in the private sector point to a robust nexus between inclusion, employee engagement, and