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## Meaning Makers: A Mixed-Methods Case Study of Exemplary Chief Executive Officers of Engineering Technology Organizations and the Behaviors They Use to Create Personal and Organizational Meaning

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Meaning Makers: A Mixed-Methods Case Study of Exemplary Chief Executive Officers  
of Engineering Technology Organizations and the Behaviors They Use to  
Create Personal and Organizational Meaning

A Dissertation by  
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Brandman University  
Irvine, California  
School of Education

Submitted in partial fulfillment of the requirements for the degree of  
Doctor of Education in Organizational Leadership

April 2017

Committee in charge:

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BRANDMAN UNIVERSITY

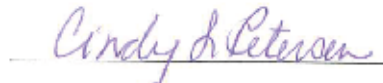
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Meaning Makers: A Mixed-Methods Case Study of Exemplary Chief Executive Officers  
of Engineering Technology Organizations and the Behaviors They Use to  
Create Personal and Organizational Meaning

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The journey of a thousand miles begins with one step.

—Lao Tzu, *Brainy Quotes*

My first step in this journey was done with the encouragement of my long-time friend, Kathy Thompson, who insisted that I return to college in 2008 to earn my bachelor's degree. When that step was accomplished in December 2011, it was quickly followed by earning my graduate certificate in human resources development in October 2013 and my master's degree in December 2013. Thank you, Kathy, for encouraging me!

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I can do all things through Christ who strengthens me.

—Philippians 4:19, NKJV

## ABSTRACT

Meaning Makers: A Mixed-Methods Case Study of Exemplary Chief Executive Officers  
of Engineering Technology Organizations and the Behaviors They Use to  
Create Personal and Organizational Meaning

by Sandra Kay Hodge

**Purpose:** The purpose of this thematic, mixed-methods case study was to identify and describe the behaviors used by exemplary chief executive officers of engineering technology organizations to create personal and organizational meaning for themselves and their followers through the five variables of character, inspiration, relationships, vision, and wisdom. Additionally, followers were surveyed to determine the degree to which they perceive the behaviors related to character, inspiration, relationships, vision, and wisdom help to create personal and organizational meaning.

**Methodology:** Exemplary chief executive officers of engineering technology organizations were interviewed to determine their perception of which behaviors they utilize to employ character, inspiration, relationships, vision, and wisdom to bring meaning to their lives, their followers, and the organization. Followers completed electronic surveys delivered to them by email.

**Findings:** There has been significant research done on leadership skills, traits, and behaviors, as well as on meaning; however, there is a gap in the literature describing the behaviors used by exemplary chief executive officers of engineering technology organizations when employing the five variables to bring meaning to themselves, their followers, and the organization. The review of literature revealed the importance of character, inspiration, relationships, vision, and wisdom as leadership skills and in



building personal and organizational meaning. The study revealed that exemplary leaders create meaning for themselves, their organizations, and their followers through behaviors that exhibit positive character, inspiration, relationships, vision, and wisdom. Of these five variables, relationships, vision, and character were the most-cited behaviors in creating meaning.

**Recommendations:** Further research is advised by replicating the study in other engineering technology organizations. Further research is advised by researching female chief executive officers in engineering technology organizations.

**Conclusions:** By identifying and describing the behaviors associated with character, inspiration, relationships, vision, and wisdom by exemplary chief executive officers of engineering technology organizations, researchers can provide information to leaders, trainers, and organizations so that best practices may be developed to benefit all leaders, their followers, and the organizations in which they work.

## PREFACE

Following discussions and considerations regarding the opportunity to study meaning making in multiple types of organizations, four faculty members and 12 doctoral students discovered a common interest in exploring the ways exemplary leaders create personal and organizational meaning. This resulted in a thematic study conducted by a research team of 12 doctoral students. This mixed-methods case study investigation was designed with a focus on the ways in which top executives in engineering create personal and organizational meaning for themselves and their followers through character, inspiration, relationships, vision, and wisdom. Exemplary leaders were selected by the team from various public, profit, and nonprofit organizations to examine the leadership behaviors these professionals used. Each researcher interviewed three highly successful professionals to determine what behaviors helped them to make meaning; the researcher then administered a survey to 12 followers of each exemplary chief executive officer to gain their perceptions about the leadership behaviors most important to create meaning in the organization. To ensure thematic consistency, the team cocreated the purpose statement, research questions, definitions, interview questions, survey, and study procedures.

Throughout the study, the term “peer researchers” is used to refer to the other researchers who conducted this thematic study. My fellow doctoral students and peer researchers studied exemplary leaders in the following fields: Barbara E. Bartels, presidents of private, nonprofit universities in Southern California; Kimberly Chastain, CEOs of charter school organizations; Candice Flint, presidents or CEOs of nonprofit organizations in Northern California; Frances E. Hansell, superintendents of K-12 schools in Northern California; Stephanie A. Herrera, female CEOs of private sector

companies in Southern California; Ed Jackson, exemplary technology leaders in Northern California; Robert J. Mancuso, managing partners in consulting firms; Zachary Mercier, professional athletic coaches in NCAA Division I institutions; Sherri L. Prosser, CEOs of healthcare organizations in California; Jamel Thompson, superintendents of K-12 schools in Southern California; Rose Nicole Villanueva, police chiefs in California and Utah; and I studied CEOs of engineering technology organizations.

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## CHAPTER I: INTRODUCTION

The search for meaning in life weaves itself throughout history from Ancient Greece through the works of Socrates, Plato, and Aristotle nearly 2,500 years ago and has been interwoven with happiness, purpose, and altruism. Socrates understood that life and person are irrevocably entwined and thus influence the meaning of life (Schwegler, 2014). Plato believed that finding the meaning of life was the highest form of knowledge (Benn, 1912; Marshall, 1891; Schwegler, 2014). Aristotle (trans. 1893) regarded the attainment of happiness as being the highest goal in life. Their philosophical framework of meaning paved the way for scientific, pragmatic, metaphysical, theological, naturalistic, and even mathematical perspectives. It was during the period of existential philosophy, where individual existence and the futility of life was prominent, that a change in viewpoint came from Viktor Frankl (2006).

Frankl's (2006) book, *Man's Search for Meaning*, is perhaps the most widely known book on the subject. While his book was born from tragic circumstances, it was those circumstances that caused Frankl to question his existence and why he was spared death in the concentration camps when so many others had died. He concluded that the meaning of life differs for everyone and will even change many times over a lifetime, but it requires looking outside of oneself and contributing to the common good of others (Frankl, 2006; Pearson, 2015; Pytell, 2000; Rath, 2015).

A person is able to look to the needs of others only after his or her own basic needs have been met. According to Seligman (2011), "Human beings, ineluctably, want meaning and purpose in life. The Meaningful Life consists in belonging to and serving something that you believe is bigger than the self" (p. 12). This can be found in

Maslow's (1954) hierarchy of needs as described in his book, *Motivation and Personality*. The model lists physiological needs such as hunger and thirst first; safety needs such as housing and protection from danger second; social needs such as belonging, acceptance, love, and social life third; esteem needs such as self-respect, achievement, status, and recognition fourth; and self-actualization needs such as growth, accomplishment, and personal development fifth. Toward the end of his life, he developed the theory of metamotivation (Maslow, 1967), which added a sixth level of intrinsic values to his hierarchy of needs. At this level, a person "working under the best conditions tends to be motivated by values which transcend his self" (Maslow, 1969, p. 4).

Transcending or reaching beyond self as a component of meaning is echoed by others when describing relationships as being foundational to finding meaning in life (Avolio, Walumbwa, & Weber, 2009; Cutler, 2014; Folkman, 2013; Gunkel, Lusk, Wolff, & Li, 2007; Kahn & Fellow, 2013; Kristof-Brown & Billsberry, 2013; Moore, 2008; Seligman, 2011; Siuty, 2014). Relationships with others provide a person with a way to connect with others and to reach beyond the self. Seligman (2011) believed, "It is accepted without dissent that connections to other people and relationships are what give meaning and purpose to life" (p. 17).

Csikszentmihalyi (1990) described the happiness found in living a meaningful life as being in a state of flow. He began his book, *Flow*, by describing how people have been seeking happiness, or meaning, since recorded by Aristotle in Ancient Greece. Seligman (2011) used the word *flourish* to describe a life in flow—a life being lived with meaning. This search for meaning in peoples' lives can be found in flow, which then

allows them to flourish (Csikszentmihalyi, 1990; Frederickson, 2009, 2016; Seligman, 2002, 2006, 2011). People search for meaning in all aspects of their lives. The search for a meaningful life does not cease when they enter the workplace; it is part of who they are.

The search for meaning in life manifests itself at work as people look to leaders to inspire, challenge, and guide them (Michaels, Handfield-Jones, & Axelrod, 2001; Moore, 2008; Steptoe-Warren, 2014). This is achieved through the leader's inspiration, which in turn provides the foundation for a shared vision and validates why one works (Knight-Wallace, 2014; Kouzes & Posner, 2007, 2012; Moore, 2008; Northouse, 2010; Sinek, 2009; Ulrich & Ulrich, 2010). The *why* of work for knowledge workers, such as engineers, is driven by curiosity, challenge, innovation, imagination, creativity, and technology (Armstrong, 2010b; Bell, 2013; Michaels et al., 2001; Siuty, 2014). It is through the innovation, imagination, and creativity of engineers that communities, societies, and the world are driven into the future (Garland, 2007; B. C. Johnson, Manyika, & Yee, 2005). Engineers change the world through their inventions. Thomas Edison gave us electric light, sound recording, and the stock ticker; Raytheon engineer, Percy Spencer, discovered how to cook with high-frequency radio waves, which led to the invention of the microwave oven; George Devol, Jr., developed the first programmable industrial robot, Unimate; Sir Tim Berners-Lee created hypertext markup language (HTML) and Uniform Resource Locator (URL) which created the foundation for the World Wide Web (WWW); Nick Holonyak, an electrical engineer working at General Electric, developed the light-emitting diode (LED) that emits visible red light for computers to relay information (Bell, 2013; Hutchinson, 2005).

B. C. Johnson et al. (2005) stated, “Specialization, globalization, and technology are making interactions far more pervasive in developed economies” (para. 8). When working to devise creative solutions to complex social, economic, and environmental problems, it is vital that engineers have a good understanding of the context of the problems they are trying to solve. Engineers must possess leadership skills that are necessary to translate problem solutions into reality for society. This requires that engineers develop the skills to handle complex interactions with clients, users, vendors, partners, communities, and other stakeholders to establish a clear understanding of needs, constraints, and potential impacts of proposed solutions by using a high level of judgment while drawing on experience (Butler et al., 1997; B. C. Johnson et al., 2005). However, leadership skills, high level of judgment, and experience are insufficient without the drive and initiative of the leader and the support of followers. When leaders and followers are motivated by meaning in what they do, initiative, support, and engagement follow. Therefore, it is imperative to understand how engineering leaders create personal and organizational meaning that leads to engagement and support.

### **Background**

The unexamined life is not worth living.

—Socrates, as recorded by Plato

During the trial preceding his death, Socrates proclaimed that meaning must be found to make life worthwhile (Brickhouse & Smith, 1996; D. M. Johnson, 2011; Price, 1889). For some people, this means finding meaning through the expression of music, painting, spirituality, science, education, or other pursuits fitting their skills and talents. For other people, finding meaning is a more esoteric pursuit that is unique to their lives.

The direction that meaning takes can be influenced and shaped by cultures, religions, value systems, traditions, and habits for the community, for organizations, for family, for self, and for life. To understand how meaning has been woven through the tapestry of life since the beginning of time, it is necessary to review the history of meaning and leadership, followership, leadership variables, and how meaning is created.

### **History of Meaning**

While both Western and Eastern philosophers have inquired into the nature of water, air, the world, and the supernatural from ancient times, man's search for the meaning of life can be traced back to the great Greek philosophers, Socrates, Plato, and Aristotle. However, for about "a thousand years after the schools of Athens were closed, Justinian philosophy made no real advance; no essentially new ideas about the constitution of nature, the working of the mind, or the end of life were put forward" (Benn, 1912, p. 1). World religions influenced and changed how people looked at meaning. The Renaissance brought about a rebirth of Greek philosophy, and once again, the concern and focus on life's meaning emerged (Copenhaver & Schmitt, 2002; Copleston, 1953; Gracia, 1996). Contrary to creationism, naturalism provoked thought on how there could be no meaning to life without an afterlife. Existentialism, or the lack of meaning, became the predominant philosophy during the late-19th and 20th centuries.

It was Viktor Frankl's (2006) book, *Man's Search for Meaning*, and his work in logotherapy that brought the subject of meaning in life back to the forefront of then-current thinking. While living in the concentration camps of Nazi Germany, Frankl noticed that some people died and some people lived. The only variable was the will to live, the thought that life had meaning. All other variables, food, living conditions,

economics, and social standing were the same for all prisoners. Frankl concluded that it is when one rises up beyond his or her circumstances to find meaning in everyday occurrences that brings importance and purpose to life.

When the search for meaning is combined with technological advances and the job-structure changes associated with modern technology, work and personal life became integrated with little differentiation between the two (Leider, 2015; Pearson, 2015; Pink, 2006; Rath, 2015). As people continue to balance work and life, they expect to find meaning in work that is congruent with living meaningful lives. People look to leaders to create meaning in organizations that help bridge meaningful work with meaningful lives for themselves and others.

## **Leadership**

The earliest leadership theories focused on the leader's traits, skills, and style (Cutler, 2014; Mendez-Morse, 1992; Northouse, 2010). It was originally thought that people were born leaders (i.e. the "great man" theory) and that certain traits or personality characteristics made leaders who they were. The skills approach emphasizes the leader's capabilities or what he or she has learned through experience and education, while the style approach focuses on the leader's behavior or method of leading (Cutler, 2014; Northouse, 2010).

The next generation of leadership theories focused on the follower's ability, readiness, and context such as situational, contingency, and path-goal theories (Bass & Bass, 2008; Brown, 2003; Cutler, 2014; Northouse, 2010). Interactions between leaders and followers became the foundation of relational theories such as leader-member exchange (LMX), transformational, authentic, and team leadership (Bass, 1990; Cutler,



2014; Northouse, 2010). Current theories focus on the relationships and interactions between followers and leaders (Chemers, 1984; Cutler, 2014; Northouse, 2010). They include theories such as LMX, authentic, team, transactional, and transformational leadership.

Leadership theories have evolved in part to reflect the then-current technology, business practices, and thought processes of that time period. Developmental and transitional change occurred during the mid-1900s (Ackerman-Anderson & Anderson, 2010; Cutler, 2014). This type of change can be managed and predicted; transformational change must be guided, revised, and adapted throughout the process (Anderson & Ackerman-Anderson, 2010; Bass, 1990; Holmes & Marra, 2006). For this to happen, it takes a new type of leader who can adapt, learn, evolve, and transform during the process of change.

### **Followership**

While there are many leadership theories, “followership has no widely recognized theories providing a roadmap for followers to guide their behaviors” (Grayson & Speckhart, 2006, p. 4). As a consequence, followers have taken a secondary role to the leader; paradoxically, they share many of the same characteristics that are found in leaders (Goleman, Boyatzis, & McKee, 2013; Raelin, 2003). Followers do not exist in a vacuum; their behavior, attitudes, and relationship with the leadership influences and affects both leaders and followers (Amar, 2001; Goleman et al., 2013; Howell & Shamir, 2005; Raelin, 2003; Riggio, Chaleff, & Lipman-Blumen, 2006). Followers look for guidance and direction from leaders (Baker, 2007; Riggio et al., 2006). Followers are

more willing to follow leaders who display characteristics such as character, inspiration, relationship, vision, and wisdom.

### **Five Leadership Variables**

The theoretical framework for the five domains of “meaning” explored in this research was first introduced by Dr. Keith Larick and Dr. Cindy Petersen in series of conference presentations and lectures to school administrators in the Association of California School Administrators (ACSA) and to doctoral students at Brandman University. This initial research and work by Larick and Petersen (2015, 2016), coupled with their leadership experience as school superintendents, inspired the need to explore what exemplary leaders do to develop personal and organizational meaning leading to high achievement. The five domains of leadership explored in this research include character, vision, relationships, wisdom, and inspiration. The framework proposed by Larick and Petersen suggests that while each domain has merit, it is the interaction of the domains that supports the making of meaning in organizations. In a 2015 ACSA State Conference presentation, Larick and Petersen proposed that leaders with character, vision, relationships, wisdom, and inspiration have the integral skills to create personal and organizational meaning. In recent presentations at Brandman University, Larick and Petersen further asserted that creation of personal and organizational meaning is fundamental to leading innovation and transformational change. The theoretical framework suggests that exemplary leaders who have developed behavioral skills in each domain have the capacity to create personal and organizational meaning for followers. The 12 thematic studies are designed to explore the Larick and Petersen theory to determine if exemplary leaders across a variety of professional fields have developed the

leadership behaviors that fuse the five domains and actualized meaning in their organizations.

**Character.** Leaders play a critical part in promoting ethical conduct and serving as role models to followers. Being a role model encompasses many attributes; however, good character is a foundational attribute in being a positive role model. Bass and Steidlmeier (1999) described character as “a moral compass and, over the long term, both personal development and the common good are best served by a moral compass that reads true” (p. 193). Having a moral compass is described as the leader’s moral center (George, 2003; Moore, 2008; Sankar, 2003). A moral center is comprised of character dimensions such as moral discipline, moral attachment, moral autonomy, and moral behavior (Bass & Bass, 2008; Bass & Steidlmeier, 1999; T. A. Wright & Quick, 2011). Trust is foundational to character and exemplary leaders must be able to build trust for others to follow them (Bass & Bass, 2008; Bass & Steidlmeier, 1999). Followers need to believe in the leader and know what they stand for. This is achieved through action, consistency, and reliability, which is “the main determinant of trust” (Bennis, 1989, p. 37). Kouzes and Posner (2007) described this trait as *credibility*. Being able to build trust is a foundational component of character.

**Inspiration.** “Our chief want in life, is, somebody who shall make us do what we can” (Emerson, n.d., loc. 10728 of 17081).

Having someone believe in us, cheer us on, and inspire us to action can be very motivational. Working for a leader who inspires and motivates others is a highly valued skill. Based on results from 360-degree-feedback assessments, the single most powerful leadership quality or competency is *inspires or motivates* (Gallo, 2007; Kouzes & Posner,

2012; Northouse, 2010; Zenger & Folkman, 2013b). In order to inspire or motivate followers, a leader must have a relationship with them as individuals. With trust and good relationship skills, leaders are able to inspire others; it is through inspiration that people are motivated and engaged.

**Relationships.** J. L. Smith (2010) encouraged leaders to develop relationships by showing a sincere interest in their employees, their career development, and for their safety. Interest in employees and their careers can be shown by individual consideration, empathy, listening, praising, and recognizing positive behavior (Bass, 1985a; Dovidio, Gaertner, & Esses, 2008; Gallo, 2007; Ranieri, 2015; J. L. Smith, 2010). Employees become more engaged and productive in their work when they feel as if leaders care about them as individuals, their work is recognized, and they are valued and respected in an organization. Trust and solid relationships are essential to the success of leaders; employees are reluctant to follow leaders that do not care about them as individuals.

**Vision.** A leader with vision looks to the future in a manner that is mindful of present circumstances, of resources, and of being overly optimistic or authoritarian while focusing on the success of the organization and the individual. Farrell (2015) used a sports analogy to explain:

Wayne Gretzky noted this talent when he stated, “I skate to where the puck is going to be, not where it has been.” Athletes develop this sense of predicting plays and knowing how to be on the offensive or defensive according to their knowledge. It may appear to be intuition and sometimes it is but such knowledge comes after years of playing, studying the opposition, and knowing your team.  
(p. 122)

It is not enough for leaders to know what direction they are going; they must also anticipate changes in industry, technology, and the economy before they happen. Then, leaders must be able to share their vision with others so everyone can work together toward a common goal. Absent that, the organization becomes like a ship adrift at sea without direction.

**Wisdom.** Wisdom is often credited to older individuals; however, it is not unique to them. The contributing factors for wisdom include experience and knowledge, which often take years to obtain. Wisdom is the ability to utilize cognitive, affective, and reflective intelligences to discern unpredictable and unprecedented situations with beneficial action (Baltes & Staudinger, 2000; Kekes, 1983; Pfeffer, 2010; Spano, 2013; Sternberg, 1998). Knowledge serves as the foundation for wisdom and is reflected through humility, empathy, and the understanding of different perspectives, judgment, ambiguity, and complexity, as well as the ability for self-reflection and self-awareness (Brooks, 2015a; Kobert, 2016; Moore, 2008; Sandell, 2015). Leaders must display wisdom in order to inspire others to follow them; people do not willingly follow unwise or foolish leaders. Merrick and Ventegodt (2012) described wisdom as “existential knowledge, which is related to being genuinely present in life” (p. xi).

### **Creating Meaning**

People are searching for meaning in all aspects of their lives now more than ever before (Pearson, 2015; Rath, 2015). People can be found interacting and searching for meaning globally, nationally, and locally. For example, people strive to solve global warming through deforestation and reduced heat-trapping emissions. The search for meaning occurs nationally as individuals and groups work to solve increased financial

needs caused by an aging population and an overburdened health-care system. Many scientists, agriculturists, and individuals have found meaning in the quest for new and efficient ways to save water in California. Community leaders, schools, and parents find meaning in ensuring the safety and prosperity of their communities. Families find meaning in community, church, and school activities. Individuals find meaning when they rise above their own needs by helping others. It is through reaching out to others and looking toward improving lives that meaning is created (Baumeister, Vohs, Aaker, & Garbinsky, 2013; Bennis, 1989, 1991; Collins, 2011; Mautz, 2015; Rath, 2015; Seligman, 2011).

As this world grows increasingly more complex and stressful, meaning is critical to people's capacity for dynamic balance in their lives, work, and relationships. With a focus on meaning, it is important to look to what has been done in the past and in examining future trends in order to plan strategically for an effective workplace that engages employees with meaningful work (Gill, 2012; Hollis, 2012; Ladika, 2013; Moore, 2008; J. L. Smith, 2010). Without meaning or a reason why their work is important, employees will not be content to remain in unfulfilling jobs for long (Hollis, 2012; Pearson, 2015; Rath, 2015). This is especially true of younger employees. When leaders bring meaning to an organization, everyone, regardless of position, generation, or gender, performs better and becomes engaged with their work (Amabile & Kramer, 2011; Beyer, Hannah, & Milron, 2000; Hollis, 2012; Morrison, Burke, & Greene, 2007; Pearson, 2015; Rath, 2015; J. L. Smith, 2010).

## **Leaders of Engineering Technology**

Engineering is pervasive in modern society. It enables every sector of life, from communication and entertainment to finance and healthcare as well as its more visible applications in construction, manufacturing, and transport to exist. Engineering is central to the well-being and economic development of every nation (Gabarro, 1991; Royal Academy of Engineering, 2015). Creative and dynamic, it continuously evolves to meet the needs of human civilization. “Progress is driven, as it has always been, by human curiosity and experimentation, but resources are finite and the art of engineering is to devise affordable solutions to problems” (Royal Academy, 2015, p. 1).

In today’s world where innovation is valued and supported, the importance of meaningful work is imperative. Engineers do not work in a typical office environment and most often work in teams on specific projects (Florman, 1989). For research and development teams to be successful, a work environment where there is challenge and purpose to work is essential.

Because of its power, technological advance comes with great social responsibility:

In a powerful sense, programmers and the corporate officers who employ them are the new urban planners, shaping the virtual frontier into the spaces we occupy, building the boxes into which we fit our lives, and carving out the routes we travel. The choices they make can segregate us further or create new connections; the algorithms they devise can exclude voices or bring more people into the fold; the interfaces they invent can expand our sense of human possibility or limit it to the already familiar. (Taylor, 2014, para. 42)

Leaders will need to rely on skills such as character, inspiration, relationship, vision, and wisdom to create meaning that develops the spirit to expand their sense of human possibility. This environment of meaning is critical to the development, training, hiring, and retaining engineers in their respective fields. It is particularly important with engineering as it is one of the most difficult areas to recruit qualified employees.

ManpowerGroup (2015) reported that in 2015 “engineers dropped on the list [of top 10 jobs most difficult to fill] from the eighth to tenth position, but have been on the list nine times in the past 10 years, holding the number one position in both 2008 and 2009” (p. 5).

Globally, the position of engineer was the third most difficult position to fill in 2015.

Those positions become more attractive when meaning and significance can be found in the work that is done (Amabile & Kramer, 2011; Bennis, 1991, 1999; Collins, 2011;

Kouzes & Posner, 2007; Rath, 2015). Therefore it is critical for today’s leaders to model a culture of meaning that is nurtured personally and can be cultivated throughout the organization so that innovation and creativity can happen every day.

### **Statement of the Research Problem**

Gordon (2009) stated, “We are in the midst of a global job and talent upheaval, the most remarkable of any job and talent change since the Industrial Revolution and encompassing every aspect of the global economy” (para. 2). This change in the job market is due in part to mass global retirement, global competition for talent, advanced technology, and growth of knowledge-based industries (Garland, 2007; Gordon, 2009; ManpowerGroup, 2006; Manyika et al., 2015). The 2015 Talent Shortage Survey found, worldwide, the percentage of employers who are experiencing difficulties filling job vacancies continues to rise in 2015. When compared with 2014 job



vacancies, the proportion [of job vacancies] increases from 36 to 38%. This is the highest [job vacancy] figure reported prior to the global economic recession that started in 2008. In 2007, 41% of employers were facing a talent shortage, falling to a low of 30% in 2009. (ManpowerGroup, 2015, p. 4)

Thirty-two percent of employers reported difficulty filling jobs in 2014: “This means more than one in three employers is still experiencing difficulty filling positions” (ManpowerGroup, 2015, p. 4). Garland (2007) of Competitive Futures, Inc. reported in the STEEP report that an aging population, international competition for talent, an increase in knowledge-based industries, and younger generations entering the workforce are reasons for the talent shortage. In addition, birth rates have been declining, educational programs are inadequate, entrepreneurial practices such as outsourcing and on-demand employment have increased (Dobbs et al., 2012; ManpowerGroup, 2006).

Of the top 10 positions that are the hardest to fill, eight fall into both global and U.S. hardest-to-fill lists (ManpowerGroup, 2015). These include skilled trade workers, drivers, sales representatives, administrative professionals, management positions, technicians, accounting and finance staff, and engineers (ManpowerGroup, 2015). Engineers are the third most difficult position to fill globally in 2015 and 10th in the United States at this time (ManpowerGroup, 2015). ManpowerGroup stated, “But [engineers] have been on the list nine times in the past 10 years, holding the number one position in both 2008 and 2009” (p. 5). The United States is looking primarily to China and India for engineering, technicians, and other professional talent; however, their education systems are not up to the same standard that exists in the United States (“The Battle for Brainpower,” 2006; Gordon, 2009). Gordon (2009) agreed, “Multiple studies

have shown that China graduates about 600,000 engineers each year, but only 60,000 are educated at world standards. India graduates 400,000 new engineers each year, but only 100,000 are educated at world standards” (para. 9). According to a statement from the Ewing Marion Kauffman Foundation (2013),

High-tech startups are a key driver of job creation throughout the United States, according to research by [the] technology policy coalition, Engine, and the Ewing Marion Kauffman Foundation. Though they start lean, new high-tech companies grow rapidly in the early years, adding thousands of jobs along the way. (para. 1)

High-tech company start-ups increased by 69% between 1980 and 2011 and Information and Communications Technology (ICT) company start-ups increased by 210% during that same time frame, while the private sector start-ups decreased by 9% between 1980 and 2011 (Hathaway, 2013).

With industries becoming more knowledge based than ever before, unskilled and uneducated workers are facing unemployment while technology, economics, and the sciences are faced with a shortage of human resources. According to the U.S. Department of Education, “60% of all new jobs in the 21st century will require skills that are possessed by only 20% of the current workforce” (Garland, 2007, slide 20). Pink (2006) opined,

We are moving from an economy and a society built on the logical, linear, computer-like capabilities of the Information Age to an economy and a society built on the inventive, emphatic, big-picture capabilities of what’s rising in its place, the Conceptual Age. (Pink, 2006, p. 7)

To remain competitive in the Conceptual Age, organizations must be able to recruit and retain the right employees. To do this, it must be recognized that people are looking to the holistic sum of what they experience within an organization (Avolio et al., 2009; Michaels et al., 2001). This includes “everything from the intrinsic satisfaction of the work to the environment, leadership, colleagues, compensation, and more. It’s about how well the company fulfills people’s needs, their expectations, and even their dreams” (Michaels et al., p. 43). The most significant way to do this is through meaning (Amabile & Kramer, 2011; Bennis, 1989, 1991; Collins, 2011; Moore, 2008; Pearson, 2015).

Employees are more energized, motivated, and engaged with their work when they feel valued, respected, supported, empowered, believe their job matters, and when their work is meaningful (Bennis, 1989, 1991, 1999; Collins, 2011; Kouzes & Posner, 2002, 2012; Moore, 2008; Pearson, 2015). Establishing a culture of personal and organizational meaning creates an environment where engineers feel valued, connected, included, and encouraged, which then provides them the freedom to express their curiosity and creativity. This results in motivation, high morale, and engagement. Such an innovative, meaningful culture will attract and retain engineers who are prepared to change the world.

### **Purpose Statement**

The purpose of this mixed-methods case study was to identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration. In addition, it was the purpose of this study to determine the degree of importance to which followers

perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help create personal and organizational meaning.

### **Research Questions**

1. What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?
2. To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?

### **Significance of the Problem**

Technology is central to people's way of life; it affects everything they do including how they live, work, and learn. They use engineering and technology at home, at work, at school, and in their communities (Dias, 2014; National Science Board, 2014). However, the engineers that design and develop the technology that is ubiquitous to people's daily lives are ill-equipped to handle the human side of management as they move into leadership positions (Grogan, 1991; Hargreaves, 2011; "This Is What Impactful Engineering," 2015). The gap in literature points to a need for engineers to develop leadership skills in addition to the technical skills they already use (Gurke, 2011; Hargreaves, 2011).

As many of the "more than two million practicing engineers in the U.S." (National Society of Professional Engineers, 2016, para. 5) move into leadership, it is imperative that they have the skills to lead others. This is important because "the future

of the engineering industry is closely tied to the future prosperity of America.

Revamping the way the nation looks at engineers and the way engineers look at business leadership positions is undoubtedly a large endeavor” (Gurke, 2011, para. 9).

The results from this study will be instrumental in developing leadership training programs specific to engineers. Because engineers work in the private sector, education, and government, there are very few organizations that would not benefit from leadership training. While studies have focused on leadership for many years, none have identified how leaders in the field of engineering create personal and organizational meaning for themselves and their followers. This study is significant in identifying the behaviors used by exemplary chief executive officers of engineering technology organizations to develop meaning through character, vision, relationships, wisdom, and inspiration.

### **Definitions**

For the purpose of this study, the following theoretical and operational definitions were used.

#### **Theoretical Definitions**

Theoretical or conceptual definitions define a word through the use of other words such as from a dictionary or the works of accepted scholars (McMillan & Schumacher, 2010). The peer research team collaborated and selected the following theoretical definitions.

**Character.** The moral compass by which a person lives his or her life (Bass & Bass, 2008; Bass & Steidlmeier, 1999; Moore, 2008; Sankar, 2003; Quick & Wright, 2011).

**Exemplary.** Someone set apart from peers in a supreme manner, suitable behavior, principles, or intentions that can be copied (Goodwin, Piazza, & Rozin, 2014).

**Follower.** Followers are organizational members who are responsible for the work performance of other organizational members. They are managers with formal authority to use organizational resources and to make decisions. In organizations, there are typically three levels of management: top level, midlevel, and first level.

**Inspiration.** A source of contagious motivation that resonates from the heart, transcending the ordinary, and that drives leaders and their followers forward with confidence (Kouzes & Posner, 2007; I. H. Smith, 2014; Thrash & Elliot, 2003).

**Meaning.** A sense of purpose as a fundamental need, which leads to significance and value for self and others (Ambury, n.d.; Bennis, 1999; Csikszentmihalyi, 1990; Frankl, 2006; Kouzes & Posner, 2007, 2012, 2016; Mautz, 2015; Moore, 2008; Pearson, 2015; Varney, 2009; Yeoman, 2014).

**Relationships.** The bonds that are established between people through encouragement, compassion, and open communication, which lead to feelings of respect, trust, and acceptance (Bermack, 2014; Frankl, 2006; George, 2003; George & Sims, 2007; Kouzes & Posner, 2007, 2012, 2016; Liborius, 2014; Mautz, 2015; McKee, Boyatzis, & Johnston, 2008; Reina & Reina, 2006, 2007; Seligman, 2011; Ulrich & Ulrich, 2010).

**Vision.** A bridge from the present to the future created by a collaborative mindset, adding meaning to the organization, sustaining higher levels of motivation and withstanding challenges (Kouzes & Posner, 2008, 2012; Landsberg, 2003; Mendez-Morse, 1993; Nanus, 1992).

**Wisdom.** The ability to utilize cognitive, affective, and reflective intelligences to discern unpredictable and unprecedented situations with beneficial action (Baltes & Staudinger, 2000; Kekes, 1983; Pfeffer, 2010; Spano, 2013; Sternberg, 1998).

### **Operational Definitions**

Operational definitions assign meaning to words by listing activities or procedures used to identify, recognize, and measure the variable in a consistent manner thus making it the standard measurement (McMillan & Schumacher, 2010; Patton, 2015). The peer researcher team collaborated and selected the following operational definitions.

**Character.** The alignment of a value system, which promotes ethical thoughts and actions based on principles of concern for others through optimism and integrity while being reliable, transparent, and authentic.

**Exemplary.** For purposes of this research exemplary leaders are defined as those leaders who are set apart from peers by exhibiting at least five of the following six characteristics:

- Evidence of successful relationships with followers;
- Evidence of leading a successful organization;
- A minimum of 5 years of experience in the profession;
- Articles, papers, or materials written, published, or presented at conferences or association meetings;
- Recognition by their peers;
- Membership in professional associations in their field.

**Follower.** For the purpose of this study, a follower is defined as a member of the leadership team who has responsibilities for managing different aspects of the

organization. This group of followers could include chief information officer, assistant superintendents, director, chief financial officer, director of personnel services, coordinators, administrators, and so forth.

**Inspiration.** The heartfelt passion and energy that leaders exude through possibility thinking, enthusiasm, encouragement, and hope to create relevant, meaningful connections that empower followers.

**Meaning.** The result of leaders and followers coming together for the purpose of gathering information from experience and integrating it into a process, which creates significance, value, and identity within themselves and the organization.

**Relationships.** Authentic connections between leaders and followers involved in a common purpose through listening, respect, trust, and acknowledgement of one another.

**Vision.** Foresight demonstrated by a compelling outlook of the future shared by leaders and followers who are engaged to create the future state.

**Wisdom.** The reflective integration of values, experience, knowledge, and concern for others to accurately interpret and respond to complex, ambiguous, and often unclear situations.

### **Delimitations**

This study was delimited to three exemplary chief executive officers and 12 followers in engineering technology organizations in California. To be considered as an exemplary leader, the leader must display or demonstrate five of the following six leadership criteria:

1. Evidence of successful relationships with stakeholders;



2. Evidence of leadership behaviors promoting a positive and productive organizational culture;
3. A minimum of 5 years of experience in the profession;
4. Articles, papers, or materials written, published, or presented at conferences or association meetings;
5. Recognition by their peers;
6. Membership in professional associations in their field.

### **Organization of the Study**

This study is organized into five chapters, with tables, figures, references, and appendices. Chapter I provided the definitions and background of meaning, leadership, and followership by using character, inspiration, relationships, vision, and wisdom as the theoretical framework. The target population, exemplary chief executive officers of engineering technology organizations, was introduced. Chapter II provides a comprehensive review and synthesis of literature regarding meaning in leadership and followership with focus on character, inspiration, relationships, vision, and wisdom as applied to exemplary chief executive officers of engineering firms. Chapter III describes the methodology, research design, population, sample, instrumentation, and data collection and analysis as well as the limitations of the study. Chapter IV describes the research methods, data collection procedures, and the presentation and analysis of data. Chapter V presents the major findings of the study along with unexpected findings, conclusions, implications for action, and recommendations for further research, followed by concluding remarks and reflections.

## CHAPTER II: REVIEW OF THE LITERATURE

Life is meaningful only if you give it a meaning.

—T. Harv Eker, *The Secret Psychology of Wealth*

Chapter II provides an extensive review of the literature and research conducted on meaning in the workplace as well as the associated behaviors exemplary leaders use through character, relationships, vision, inspiration, and wisdom to achieve a meaningful workplace. The literature review begins with the history of meaning and how meaning is associated to the workplace and in society as a whole. Research on leadership and followership is then reviewed. Five variables including character, relationships, vision, inspiration, and wisdom are investigated along with how they are used by exemplary leaders. The review of literature concludes with the history of engineering executives and the impact of their contribution to society. The literature review provides the researcher a theoretical framework from which to understand the behaviors exemplary leaders, specifically chief executive officers of engineering technology organizations, use to create meaning for themselves and their followers through character, relationships, vision, inspiration, and wisdom.

People have been searching for the meaning of life since the beginning of time. The search for meaning was first recorded by ancient philosophers and has been pursued ever since that time (Benn, 1912; Marshall, 1891; Robinson, 1999; Schwegler, 2014). On a very basic level, meaning is a concept rather than anything tangible as evidenced by the wide-ranging viewpoints of researchers, writers, and philosophers (Baggini, 2004; Baumeister, Vohs, Aaker, & Garbinsky, 2013; Benn, 1912; Marshall, 1891; Robinson, 1999). The thoughts associated with meaning vary from music, painting, and film to love

and care for others, to dreams, goals, and passion, to attitude and perception, to life and death. Meaning can be derived from the creation of, or occasionally contemplation of, physical objects such as art and architecture; however, meaning is primarily associated with life, or more accurately, the meaning of life (J. Johnson, 2010; MacLeod, 2016).

To understand how meaning has evolved from a philosophical concept into a workplace consideration, the review of literature is presented in five sections. The first is the history of meaning and how it has evolved over time; the second explores leadership theories that provide an understanding of meaning; the third section focuses on followers; the fourth section of the literature review examines the five leadership variables of meaning: character, inspiration, relationships, vision, and wisdom; and the fifth section examines how meaning is created, with emphasis on meaning in the workplace.

### **History of Meaning**

Challenging the meaning of life is the truest expression of the state of being human.

—Viktor Frankl, *Man's Search for Meaning*

The origin of meaning can be traced back to ancient philosophers. It is commonly accepted that the history of philosophy began with Thales of Miletus (640-550 B.C.) during the pre-Socratic period (Benn, 1912; Hegel, 2009; Marshall, 1891; Schwegler, 2014). During this time, life's focus was on nature and the state of being. They examined and contemplated material things such as water, fire, earth, and air, which later developed into the natural sciences (Marshall, 1891; Schwegler, 2014). As philosophy begins to develop concepts away from the material to that of free will, self-conviction,

and character, a transition is made into the second period of Greek philosophy (Schwegler, 2014).

### **Socrates, Plato, Aristotle**

Three distinct philosophical systems developed during this time beginning with Socrates (469–399 B.C.) and were further developed with the successive generations of Plato and then Aristotle (Schwegler, 2014). Socrates introduced the concept of character, the first variable, with his belief that man is a thinking, rational being where life and belief cannot be separated (Schwegler, 2014). He sought to find truth by continually questioning people about the individual, intellect, morality, conviction, thoughts, and actions (Hegel, 2009; Marshall, 1891; Schwegler, 2014). Socrates argued for immortality of the soul by reasoning that individuals know information they had not yet been taught (Marshall, 1891).

Socrates's most recognized student, Plato (429–348 B.C.) chose to study philosophy rather than enter politics and is credited for gathering differing philosophical thoughts from all prior philosophers and organizing them into three branches of philosophy: logic, physics, and ethics (Hegel, 2009; Marshall, 1891; Schwegler, 2014). Plato's philosophy was "balanced in justice, courage, moderation, and wisdom," another variable in this study (Johns, 2016, para. 5). Plato's theory of forms, more recently known as the theory of ideas, differentiates constant, nonphysical, universal properties (e.g., thought) with changeable material things (Marshall, 1891). In Platonism, the meaning of life is viewed as the highest form of knowledge (Benn, 1912; Marshall, 1891; Schwegler, 2014).

Plato's disciple, Aristotle (385–322 B.C.) described virtue as seeking good in everything one does (Aristotle, trans. 1893). He described the highest good, or goal, as the attainment of happiness, which is a result of living a good life (Aristotle, trans. 1893). The Greek word for this is *Eudaimonia*, which translates to *happiness* or *welfare*; however, *human flourishing* is thought to be a more accurate translation (Robinson, 1999).

### **Post-Aristotelian**

During the medieval ages, the search for the meaning in life focused on the supernatural through Christianity, Judaism, and Islam religious beliefs (Copleston, 1950). The focus was on human relationships with a Supreme Being rather than a meaningful life. From the naturalists' philosophy, one can argue that without a Supreme Being, life has no purpose and is a "meaningless accident of nature . . . human life is a purposeless, insignificant accident" (Baggini, 2004, pp. 3-4).

This is the conclusion often associated with the late-nineteenth and early-twentieth-century existentialist philosophers. A superficial reading of their key texts might support this interpretation. Friedrich Nietzsche described himself as "the first perfect nihilist of Europe"; Albert Camus's most famous idea is that life is "absurd"; and Jean-Paul Sartre talked about "anguish, abandonment and despair." (Baggini, 2004, p. 4)

Sartre departs from his pessimistic thoughts to conclude that a Supreme Being does not predetermine people's lives, but that a person has the power to determine his or her own purpose in life (Baggini, 2004). There was later a return to classical works with the

emphasis on the purpose of man, virtues, and meaning in life during the Renaissance period (Copenhaver & Schmitt, 2002; Copleston, 1953; Gracia, 1996).

## **Industrial Age**

The Industrial Revolution marks a major turning point in history; almost every aspect of daily life was influenced in some way. In particular, average income and population began to exhibit unprecedented sustained growth. Some economists say that the major impact of the Industrial Revolution was that the standard of living for the general population began to increase consistently for the first time in history (Galor & Weil, 1999; Lucas, 2004; Sen, 1988). At the same time, when the standard of living was increasing, people often worked 70 to 80 hours per week and had little to no time to contemplate meaning in their lives much less in the workplace (Fisk, 2003; Library of Congress, n.d.). They spent their lives working for life's basic needs: food, water, shelter, and safety, with little time for anything else. Americans wanted standard, reliable goods so products were engineered to be efficient and durable (vonTunzelmann, 1996).

During this time, Adam Smith promoted his belief that people found meaning in life through money and were motivated to work only for money, and that there was no other reason for working (Schwartz, 2015). Based on this belief, Frederick Taylor devised a system focused on improving productivity, and thus capital, by analyzing work flows, simplifying physical movements, creating best practices, scientifically selecting the best workforce, and training specific to the job (Crossman, 1965; Klein, 2008). This process became known as Taylorism and was seen as a logical part of American capitalism; however, socialists believed it lacked concern for the individual worker (Crossman, 1965; Klein, 2008). Meaning had no place in the workforce during this time;

the greater issues for the employer during the industrial age were wages, working conditions, physical dangers, health hazards, hours, and trade unions (Crossman, 1965; Klein, 2008).

### **Technological Age**

A shift in labor from production to professional, technical, and service along with much better working conditions occurred during the 20th century (Fisk, 2003; Library of Congress, n.d.). However, during war times, 1914–1918 and 1939–1945, there was a shortage of workers and supplies, still leaving little time to search for meaning in life. Finding meaning in life and at work focused instead on survival.

One of the first in-depth studies on finding meaning in life was begun in the 1920s with Viktor Frankl's years as a medical student when working with suicidal teenagers (Pytell, 2000). During this time, he developed a treatment he termed *logotherapy* (Rath, 2015). Logotherapy focused on people finding and setting goals for themselves, assisting others, and taking steps to develop meaning, as it meant to them. Frankl's theory continued to develop during his 5-year stay in the Nazi concentration camps. He noticed that the traditional motivation theories did not seem to apply. The one thing that seemed to make the difference was meaning. Those who had meaning in their lives survived and those who did not having something to live for, perished. In 1946, he shared his findings in his book, *Man's Search for Meaning*. Frankl's theory was in contrast to Freud's theory that people sought pleasure instead of meaning and to Nietzsche's theory which was based on the search for power, not on meaning. Much of the Western world's philosophical thought has been based on existentialism or the lack of meaning (Pearson, 2015; Rath, 2015), which was challenged by Frankl's theory of

logotherapy. With better working conditions, the end of World War II, and Frankl's (1946) work, the search for meaning was focused on personal lives.

In 1945, former British Prime Minister Winston Churchill declared, "The United States stand, at this moment, at the summit of the world" (para. 8). America had a booming economy, it was the world's greatest military power, and consumer goods were available. It was a time when people of color and women fought for equal rights as those held by men. The second wave of feminism brought about many changes including a focus on careers outside the home with the expectation of finding meaning outside of the home (Echols, 1989; Hanisch, 1997).

### **Information Age**

During the Information Age, technology ruled. Computers double their capabilities every 18 to 20 months as do the information technologies that use them (Kurzweil, 2015; The Emerging Future [TEF], 2016). Ray Kurzweil used historical trends of exponential growth to predict the future where 18 to 20 years from the time of this study, technological advancements will be hundreds of thousands to a million times more advanced (Kurzweil, 2015; TEF, 2016). As technology has been advancing exponentially, creativity and innovation have become the vehicle to bring meaning to work.

### **Conceptual Age**

Three social and economic forces—abundance, Asia, and automation—are moving the world into the Fourth Industrial Revolution, which is also known as the Conceptual Age (Pink, 2006; Schwab, 2016; Silva, 2016). It is based on the interaction between technology and humanity where both continually change each other (Schwab,



2016; Silva, 2016). The technological imperative for the future will require lifelong learners, creators, and empathizers (Duffy, 2014). Pink (2006) stated, “We’ve progressed from a society of farmers to a society of factory workers to a society of knowledge workers. And now we are progressing yet again—to a society of creators and empathizers, of pattern recognizers and meaning makers” (p. 49). Leider (2015) referred to this as the “Purpose Age” as he described the necessity of purpose to fulfil meaning in people’s lives, thus making them whole. This viewpoint emphasizes recognizing patterns in life, unplanned events, who one is, what his or her values are, and how he or she reacts to what life gives him or her that brings purpose to his or her life. Another viewpoint comes from a theory known as spiral dynamics, which emphasizes values, individual and collective actions, and examining the impact on societies and cultures (Beck & Cowan, 1996; Buchanan, 2012; Butters, 2015; Pesut, 2001).

### **Importance of Meaning**

People are searching for meaning in all aspects of their lives now more than ever (Leider, 2015; Pearson, 2015; Rath, 2015). Leider (2015) stated,

One reason for the improvisatory nature of life now may be that a growing number of people are expecting their path to provide daily meaning as well as their daily bread. They want work that integrates their unique gifts and talents with the practical realities of surviving and making a living. (p. 29)

The focus on living meaningful lives has changed drastically with Generations X and Y. Their values are not focused on money but instead on purpose and meaning (Erickson, Alsop, Nicholson, & Miller, 2008; Garland, 2007; Hollis, 2012; Leider, 2015; Pelton & True, 2004; Rainer & Rainer, 2011; Stanley, 2010). Nikravan (2014) asserted,

There is no “one-size-fits-all” approach to anything today which is evident in the diverse nature of today’s employees. Employees find that their personal and private lives have blurred immensely, with mobile technology and our always on, 24/7 culture. . . [due to] the influence of the youngest generation in the workforce, Generation Y. (para. 11)

When looking at what has been done in the past and examining future trends, strategic planning can form an effective workplace that engages employees with meaningful work (Gill, 2012; Hollis, 2012; Ladika, 2013; Moore, 2008; J. L. Smith, 2010). Without meaning or a reason why their work is important, employees will not be content to remain in unfulfilling jobs for long (Hollis, 2012; Pearson, 2015; Rath, 2015). Everyone, regardless of generation or gender, performs better when engaged, and becomes engaged in their work when it has meaning (Amabile & Kramer, 2011; Beyer, Hannah, & Milron, 2000; Hollis, 2012; Morrison, Burke, & Greene, 2007; Pearson, 2015; Rath, 2015; J. L. Smith, 2010).

### **Purpose in Life**

A sense of purpose, significance, and identity is developed through meaning (Leider, 2015; Mautz, 2015; Seligman, 2011). Finding meaning in life is fundamental to human existence—it is at the core of people’s very being (Collins, 2011; Leider, 2015; Mautz, 2015; Rath, 2015; Seligman, 2011). It is what gives them purpose and direction, and fulfills their essential needs as a person (Leider, 2015; Moore, 2008; Pearson, 2015). Leider (2015) stated,

Purpose feeds three deep spiritual hungers: to connect deeply with the power of choice in our lives; to actively know that we have a unique gift to give the world;

and to use our gifts to make a contribution in some meaningful way. (Leider, 2015, p. 45)

Leider (2015) encouraged people to examine their lives by looking at their gifts and passions, values, where they want to make an impact, and why. As a means to finding meaning in life Frankl (2006) encouraged people to allow life to question them rather than them questioning life (Leider, 2015; Pearson, 2015; Rath, 2015). Frankl's meaning in life was developed during the time he spent in the concentration camps. It was not what he planned, not what he wanted to do, and certainly not where he wanted to be. However, in recognizing this, he realized that meaning is discovered "in life in three different ways: by doing a deed; by experiencing a value; and by suffering" (Leider, 2015, p. 56).

During this time, Frankl (2006) discovered that finding purpose in life is an ever-changing and evolving path (Pearson, 2015; Rath, 2015). The path is often described as being a spiral that is a "continuity that coils in one plane around one particular center. . . . think of your life as a spiral staircase, with many steps behind you and many ahead" (Leider, 2015, p. 27). As someone moves through the phases of his or her life toward growth and maturity, he or she finds that the questions he or she asks and their purpose changes as each experience builds on the one that precedes the other. In keeping with Frankl's (2006) idea that life's meaning constantly changes, Leider (2015) agreed that "the secret to a fully alive life is learning how to reframe our questions, letting go of what is no longer relevant, and taking on new questions guided by our growing wisdom" (p. 28). Frankl (2006) stated,

For the meaning of life differs from man to man, from day to day and from hour to hour. What matters, therefore, is not the meaning of life in general but rather the specific meaning of a person's life at a given moment. (p. 108)

### **Value and Belonging**

It is through belonging that one develops a sense of value, identity, and meaning (Mautz, 2015; Seligman, 2011). Mautz (2015) described finding meaning in work by the sense of “connectedness and harmony [they experience] with our coworkers, leaders, and organization” (p. 11). Employees, particularly millennials, will seek out jobs that allow them to align their feelings of belonging and value with those of the organization (Erickson et al., 2009; Hollis, 2012; Pelton & True, 2004; Rainer & Rainer, 2011; Stanley, 2010). Kristof-Brown and Billsberry (2013) connect belonging as serving others to meet a basic human need.

### **Greater Good**

Seeking meaning in life is achieved by pursuing a goal greater than oneself (Leider, 2015; Mautz, 2015; Pearson, 2015). Seligman (2011) furthered this concept from pursuing to “serving something that you believe is bigger than the self” (p. 16). The manifestation of what is considered to be greater or bigger than oneself is unique to each individual and is based on the perception of meaningfulness by the individual. Mautz (2015) explained, “We can find significance and fulfillment in the work itself depending on the impact it has on who and what is important to us and its congruence with who we are” (p. 11).

## **Leadership**

People buy into the leader before they buy into the vision.

—John C. Maxwell, “Teamwork and Vision Go Hand-In-Hand”

Leadership has existed since the beginning of civilization as evidenced by Greek heroes, Egyptian rulers, and Biblical stories, such as Moses leading the Jews to the Promised Land (Stone & Patterson, 2005; Wren, 1995). Early leadership was strictly based on who held power, such as kings and subjects, generals and troops, but has evolved into relationships, motive, and resources (Burns, 2010). However, while situations may differ, people may change, and culture may influence leadership styles, there are basic elements of leadership that stand the test of time.

There has never been a single, clear, precise definition of leadership (Buell, 2012; Burns, 1978; Jackson, 2006; C. E. Johnson, 2007; Northouse, 2010; Senge, 2006; Thompson, 2011; Wren, 1995). However, “a recent study turned up 130 definitions for the word [leadership]” (Burns, 2010, p. 4). In its very basic form, leadership is the ability to influence others (Grenny, Patterson, Maxfield, McMillan, & Switzler, 2013; Unsworth, 2016). Hughes, Ginnett, and Curphy (1993) described leadership as a multifaceted, complex structure involving the leader, followers, and various situations (Hughes et al., 1993). Cronin (1984) cautioned that “leadership can be exercised in the service of noble, liberating, enriching ends, but it can also serve to manipulate, mislead and repress” (p. 27). However, it is generally agreed that leaders must follow a moral compass that they live by; they must be willing to do what they ask of others; and they must be accountable for their actions (Bass & Bass, 2008; Bass & Steidlmeier, 1999; Hannah & Avolio, 2011; Kouzes & Posner, 2007).

Leaders are change agents and function in no less than three facets of change: foreseeing change, directing it, and implementing change (Ackerman-Anderson & Anderson, 2010; Collins, 2011; Joiner, 1987; Kouzes & Posner, 2012). Regardless of the situation, great leaders possess humility, honesty, self-control, and integrity (Bennis, 1989; Kouzes & Posner, 2007; Peterson & Seligman, 2004; Singh, 2016). They are persistent, dependable, emotionally stable, intelligent, and trustworthy (Bennis, 1989, 1991; Hicks, 2014; Kouzes & Posner, 2012; Seligman, 2011). Covey and Merrill (2006) described trust as “the one thing that changes everything” (p. 4). Without trust, followers will not follow others, doubt and suspicion reign, and there will be no shared vision.

Many leadership theories developed in the 1900s. Formal, or scientific, study of leadership did not begin until the early 20th century and can be divided into three periods: “the trait period, from around 1910 to World War II, the behavior period, from the onset of World War II to the late 1960s, and the contingency period, from the late 1960s to the present” (Chemers, 1984, p. 83). In the subsequent 30 years since that statement, society has moved into a fourth period of transformational “New Leadership” beginning in the early 1980s (Northouse, 2010).

### **Great Man Theory**

The great man theory is based on the premise that great leaders are born, not made and will rise to the occasion when presented with a difficult situation. Because most business leaders were male during this time, the “great man” leadership theories developed (Kirkpatrick & Locke, 1991; Northouse, 2010; Thompson, 2011). It was thought that leaders were born, not made (Cutler, 2014; Kirkpatrick & Locke, 1991; Northouse, 2010). Thompson (2011) explained, “Strict proponents of the Great Person

theory claim that people are either born leaders or born followers: They either have it or don't" (p. 263). This theory gave no consideration to followers, skills, or experience.

Thompson continued, "Several theories share a belief that leadership is largely an inborn characteristic of a person and therefore is largely inflexible or at least not something that can be easily developed, learned or acquired" (p. 263).

### **Trait Theory**

Trait theories focus on the leader's characteristics and abilities (Kirkpatrick & Locke, 1991; Northouse, 2010; Robbins & Judge, 2013; Thompson, 2011). It was not until the 19th and early 20th centuries that theorists began to define or describe what makes a person a leader (Kirkpatrick & Locke, 1991). Some traits and characteristics are well suited for various types of leadership. For example, a leader with an outgoing, gregarious personality would most likely feel comfortable in industries such as sales, broadcasting, or the performing arts. On the other hand, a leader with a more introverted, reflective personality would perhaps find engineering, construction, or banking a better fit (Folkman, 2013; Hannah & Avolio, 2011; Kouzes & Posner, 2007; Petersen & Seligman, 2004).

While current schools of thought no longer attribute leadership to "being born to lead," certain traits or innate characteristics remain prevalent in leaders. Northouse (2010) stated, "Jung and Sosik (2006) found that charismatic leaders consistently possess traits of self-monitoring, engagement in impression management, motivation to attain social power, and motivation to attain self-actualization. In short, the trait approach is alive and well" (p. 16). Various leadership trait theories are summarized in Figure 1; however, intelligence, self-confidence, determination, integrity, and sociability are

considered to be the major leadership traits (Cutler, 2014; Northouse, 2010). Leadership traits can “reflect people’s characteristic patterns of thoughts, feelings, and behaviors” (Diener & Lucas, 2016, para. 1).

Stogdill (1948)	Mann (1959)	Stogdill (1974)	Lord, DeVader, and Alliger (1986)	Kirkpatrick and Locke (1991)	Zaccaro, Kemp, and Bader (2004)
Intelligence Alertness Insight Responsibility	Intelligence Masculinity Adjustment Dominance	Achievement Persistence Insight Initiative	Intelligence Masculinity Dominance	Drive Motivation Integrity Confidence Cognitive ability Task knowledge	Cognitive abilities Extroversion Conscientiousness Emotional stability  Openness  Agreeableness Motivation Social intelligence Self-monitoring Emotional intelligence Problem solving
Initiative	Extraversion	Self-confidence			
Persistence Self-confidence Sociability	Conservatism	Responsibility Cooperativeness Tolerance Influence  Sociability			

Figure 1. Studies of leadership traits and characteristics. From “The Bases of Social Power,” by J. R. P. French, Jr. and B. Raven, 1960, in D. Cartwright and A. F. Zander (Eds.), *Group Dynamics: Research and Theory* (3rd ed., pp. 259-269). Copyright 1960 by Harper and Row.

### Behavioral Theories

While taking all of these traits into consideration, skills that can be learned and developed were added. Katz (1974) broke these into three parts: technical, human or interpersonal relationships, and conceptual. Technical skills involve things such as physical objects, procedures, techniques, or processes. Human skills, also known as interpersonal relationships, involve the ability to work with people, such as within a team or group. Conceptual skills involve working with ideas and being able to visualize the inter-relatedness of situations as related to the whole organization. Equally important, Mumford, Zaccaro, Harding, Jacobs, and Fleishman (2000) formulated a skill-based model of leadership . . . characterized as a capability model because it demonstrated the



relationship between a leader's knowledge, skills and performance. Mumford et al. claimed that leadership capabilities can be developed over time through education and experience. This theory states that individual attributes, such as motivation, personality, and cognitive ability, combined with competencies such as problem-solving skills, social-judgment skills, and knowledge, result in leader outcomes, such as effective problem solving and performance (Cutler, 2014; Northouse, 2010). Finally, experience and environmental factors influence leader competencies (Cutler, 2014; Northouse, 2010; Robbins & Judge, 2013).

Blake and Mouton's managerial (leadership) grid demonstrates management styles based on a concern for task accomplishment or a concern for relationships. Northouse (2010) explained the leadership grid as a leader's natural inclination toward one axis over another, which then dictates their style as follows:

- Authority-compliance exists when there is a heavy emphasis on the task and less on people;
- Country-club management emphasis interpersonal relationships over task accomplishment;
- Impoverished management demonstrates a lack of concern for both task and persons;
- Middle-of-the-road management describes compromisers who have concern for both task and people and strive to reach an equilibrium of balancing the two;
- Team management places high emphasis on both tasks and relationships through participation and teamwork. (p. 74)

## **Situational Leadership**

From the idea of task orientation versus people orientation, situational leadership provides that leaders can change their leadership style as the situation warrants. They do this by delegating, supporting, coaching, or directing followers, depending on the followers' needs, readiness, and development level (Cutler, 2014; Northouse, 2010). The task then is for the leader to ascertain the follower's development level for a particular task and then employ the leadership style that matches that situation (Northouse, 2010; Robbins & Judge, 2013). An additional challenge with situational leadership is the fluid nature of any organization as "personal problems arise, new tasks are assigned, or new goals are established, the level of readiness may change" (Hersey & Blanchard, 1977, p. 207).

## **Contingency Theories**

Situational leadership develops into a contingency leadership style when "effective leadership is *contingent* on matching a leader's style to the right setting" (Northouse, 2010, p. 111). Rather than the leader changing his or her style of leadership to match the situation, he or she would change the situation to match his or her style of leadership. Finally, relational theories of leadership emphasize the interpersonal relationships between the leader and followers. Burns (1978) stated, "The genius of leadership lies in the manner in which leaders see and act on their own and their followers' values and motivations" (p. 100).

## **Transactional Leadership Theories**

Transactional leadership refers to the bulk of leadership styles and is perhaps the most common, wherein there is an exchange, or transaction, of one thing for another

between leader and follower, for example, pay for services rendered, jobs for votes (Bass, 1990; Burns, 2010; Holmes & Marra, 2006; Kouzes & Posner, 2007; Northouse, 2010). Transactional leaders are not concerned about individual consideration but rather in influencing the follower to advance the needs of the leader. They are influential because it is generally in the best interest of the follower to do what the leader wants (Bass, 1990; Northouse, 2010).

Transactional leadership involves contingent reward and management-by-exception. Contingent reward is based on receiving an agreed-upon type of compensation for a specific performance, such as being paid a specific amount of money for coming to work a set number of days and performing the tasks specific to that position. Management-by-exception focuses on what followers do wrong and involves corrective criticism, negative feedback, and negative reinforcement (Bass, 1990; Kouzes & Posner, 2007; Northouse, 2010). When done actively, there is immediate feedback; when done passively, there is no feedback until an unrelated time such as during an annual performance evaluation.

Transactional leadership works best when there are clear instructions, enough resources to do the work, and immediate, positive feedback (Bass, 1990; Burns, 2010; Northouse, 2010). There are several drawbacks to transactional leadership (Bass, 1985b, 1990; Burns, 2010; Holmes & Marra, 2006; Kouzes & Posner, 2007; Northouse, 2010). Leadership often fails to deliver and then develops the reputation of not delivering the promised rewards. Employees may take shortcuts to receive the award, thus affecting the quality of production. The employee may begin to react defensively, and in some cases, withdrawal, hostility, or passive-aggressive behavior may develop (Bass, 1985b, 1990;

Burns, 2010; Kouzes & Posner, 2007). Transactional leadership promotes “self” rather than “other,” which has created a culture where power, position, prestige, pleasure, and prosperity reign (Weisman, 2016).

### **Transformational Leadership Theories**

“The term *transformational leadership* was first coined by Downton (1973). Its emergence as an important approach to leadership began with a classic work by political sociologist James MacGregor Burns titled *Leadership* (1978)” (Northouse, 2010, p. 172). Transformational leadership is the ability to connect with people and develop working relationships that inspire others to work toward a common goal or shared vision through influence “that moves followers to accomplish more than what is usually expected of them” (Northouse, 2010, p. 171) without coercion.

Burns (1978) introduced a continuum with transformational and transactional leadership at opposite ends; however, studies by Bass and Avolio (1993) later demonstrated correlations between the two forms of leadership (Avolio, Bass, & Jung, 1999). Specifically, transactional leadership forms the foundation upon which transformational leadership is built as shown in Figure 2 (Unsworth, 2016).

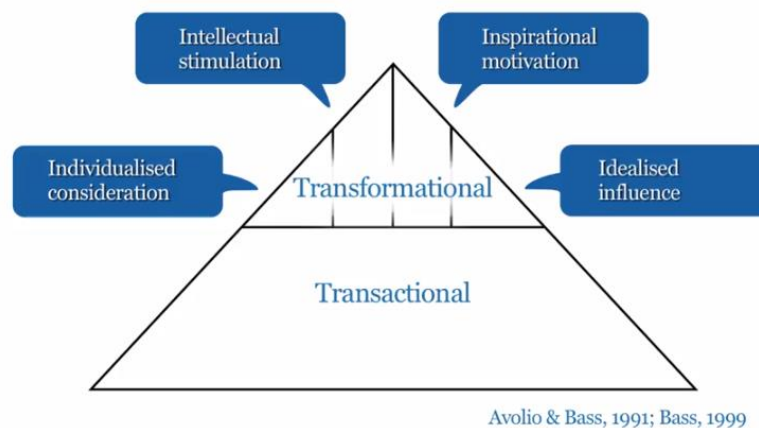


Figure 2. Transactional leadership and transformational leadership. From “Leadership Emergence,” by K. Unsworth, 2016, in *Psychology at Work* (week 4) [Lecture], slide 5, University of Western Australia.

Bass (1985a) originally presented a multifactor concept of charisma, inspiration, intellectual stimulation, individualized consideration, contingent reward, management-by-exception, and laissez-faire leadership, which was later changed to the six-factor model of leadership when it was decided that charisma and inspirational characteristics were not distinguishable through measurement (Avolio et al., 1999). When viewed through the lens of follower development and engagement, Bass's model was condensed to four aspects that motivate leaders and support the greater good (Northouse, 2010). They are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Steidlmeier, 1999; Northouse, 2010).

Transformational leadership brings about radical change that has the potential to transform organizations (Ackerman-Anderson & Anderson, 2010; Anderson & Ackerman-Anderson, 2010). Joiner (1987) stated, "Effective change requires skilled leadership that can integrate the soft human elements with hard business actions" (p. 1). An effective transformational leader increases followers' confidence and motivates them to accomplish more than what was asked of them (Anderson & Ackerman-Anderson, 2010; Bass & Avolio, 1990; Burns, 2010; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). The studies of Bennis and Nanus (1985) focused on the transformational strategies of having a clear vision of the future, being social architects to create environments, establishing trust, and positive self-regard in leaders (Anderson & Ackerman-Anderson, 2010; Bennis & Nanus, 1985; Northouse, 2010). Kouzes and Posner (1987, 2002) further developed transformational leadership by interviewing leaders throughout private and public sector organizations (Northouse, 2010). Their model is comprised of five practices for transformational results: model the way, inspire a

shared vision, challenge the process, enable others to act, and encourage the heart (Kouzes & Posner, 1987, 2002).

While there have been many theories on what constitutes a transformational leader, it is generally accepted that transformational leaders identify and articulate a vision and share it with others (Ackerman-Anderson & Anderson, 2010; Bass & Avolio, 1990; Bennis & Nanus, 1985; Podsakoff et al., 1990). They lead by example by living their values and modeling congruent behavior (Carless, Wearing, & Mann, 2011; Collins, 2011; Moore, 2008). They develop staff through individualized consideration such as coaching and continually developing the skills of others (Bass, 1985a, 1998; Bass & Steidlmeier, 1999; Bradford & Cohen, 1997). Transformational leaders provide inspirational motivation by empowering staff to act and they increase employee engagement (Bass, 1985a, 1998; Bass & Steidlmeier, 1999; Kouzes & Posner, 2012; Liu, Siu, & Shi, 2010). Bennis (1989), however, stated that significance and meaning are developed through empowerment.

Transformational leaders provide individualized support by recognizing the accomplishments of others and they encourage the heart of others, increasing morale (Bass & Steidlmeier, 1999; Kouzes & Posner, 1987, 2002; Liu et al., 2010).

Transformational leaders provide intellectual stimulation by challenging processes and encouraging innovation (Bass, 1985a; Bass & Steidlmeier, 1999; Holmes & Marra, 2006; Northouse, 2010). They display charismatic characteristics that inspire others, known as idealized influence (Bass 1985a, 1998; Liu et al., 2010; Northouse, 2010).

**Charismatic leadership.** There are several schools of thought concerning the similarities and dissimilarities of charismatic and transformational leadership (Avolio &

Yammarino, 2002). House (1971) published his theory of charismatic leadership, which has some characteristics of transformational leaders; however, it is focused entirely on the leader, whereas transformational leadership theories encompass both leaders and followers (Northouse, 2010). Charismatic leaders are seen as being courageous and are often called upon during times of crisis (Antonakis & House, 2002). With charismatic leadership styles, the leader is in front with the followers coming behind them, not unlike following a “pied piper,” whereas transformational leaders support followers from behind and exhibit servant leadership (Unsworth, 2016).

**Servant leadership.** Servant leadership is defined as serving others first (Greenleaf, 2008; Northouse, 2010). The focus is on the follower and making sure that his or her “highest priority needs are being served” (Greenleaf, 2008, p. 15). Servant leaders are successful when their followers “grow as persons . . . become healthier, wiser, freer, more autonomous, and more likely themselves to become servants” (Greenleaf, 2008, p. 15). The servant leader listens, empathizes, and accepts others as they are. They possess foresight, intuition, awareness, perception, conceptualization, and can persuade and influence others (Greenleaf, 2008; Northouse, 2010).

**Change theories.** One of the key components of transformational leadership is change. Anderson and Ackerman-Anderson (2010) emphasized change frameworks such as their conscious change leadership accountability model, which provides key areas and levels in which action must occur to bring about change. However, they are quick to point out change process models such as Conner’s cycle of change from 1998 and Nadler’s cycle of change from 1998 as representing processes where one step leads to another rather than change frameworks (Anderson & Ackerman-Anderson, 2010).

Kotter’s eight-stage process of creating large-scale change in 1996, as shown in Figure 3, is one of the few change theories that includes both a framework and a process for change (Anderson & Ackerman-Anderson, 2010).

Step	Action	New Behavior
1	Increase urgency	People start telling each other, “Let’s go, we need to change things!”
2	Build the guiding team	A group powerful enough to guide a big change is formed and they start to work together well.
3	Get the vision right	The guiding team develops the right vision and strategy for the change effort.
4	Communicate for buy-in	People begin to buy into the change and this shows in their behavior.
5	Empower action	More people feel able to act, and do act, on the vision.
6	Create short-term wins	Momentum builds as people try to fulfill the vision, while fewer and fewer resist change.
7	Don’t let up	People make wave after wave of changes until the vision is fulfilled.
8	Make change stick	New and winning behavior continues despite the pull of tradition, turnover of change leaders, etc.

Figure 3. Kotter’s eight steps for successful large-scale change. From *The Heart of Change: Real-Life Stories of How People Change Their Organizations*, by J. P. Kotter and D. S. Cohen, 2002, p. 6. Copyright 2002 by Harvard Business Review Press.

### **Authentic Leadership Theory**

There are those who believe authentic leadership is not so much a new theory as it is an overlap and synthesis of the best parts of existing theories (Wong & Cummings, 2009). Authentic leadership is defined as “a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development” (Luthans & Avolio, 2003, p. 243). Authentic leadership is based on the authenticity of leaders (i.e., being genuine and “real”; Cutler, 2014; Northouse, 2010) and following a moral compass. Authentic leadership has developed because “people feel apprehensive and insecure about what is going on around



them, and, as a result, they long for bona fide leadership they can trust and for leaders who are honest and good” (Northouse, 2010, p. 205). Uncertainty and suspicion have risen due to corporate scandals at companies like WorldCom and Enron and massive failures in the banking industry (Cutler, 2014; Northouse, 2010). Employees are tired of working their entire lives and then having their lives turned upside down because of the greed and negligence of those running organizations. Global events such as terrorism and the SARS (severe acute respiratory syndrome) crisis have created fear and uncertainty, which demands strong leadership that relies on authenticity (Wong & Cummings, 2009). Authentic and transparent leadership is required for personal and organizational success (Bass & Steidlmeier, 1999; Moore, 2008; Pearson, 2015; Siuty, 2014).

According to Avolio et al. (2009), “There appears to be general agreement in the literature on four factors that cover the components of authentic leadership: balanced processing, internalized moral perspective, relational transparency, and self-awareness” (p. 424). Robbins and Judge (2013) stated,

Authentic leaders know who they are, what they believe in and value, and act on those values and beliefs openly and candidly. Their followers consider them ethical people. The primary quality produced by authentic leadership, therefore, is trust. Authentic leaders share information, encourage open communication, and stick to their ideals. The result: people come to have faith in them. (p. 386)

**Positive organizational behavior.** Luthans and Avolio (2003) integrated leadership development work by Avolio (1999) and positive psychology research by Csikszentmihalyi (1990), Fredrickson (2009, 2016), and Seligman (2002, 2006, 2011) to examine best practices for authentic leadership development by looking at leader

strengths and positive attributes rather than focusing on improving their weaknesses. Positive organizational behavior (POB) is defined as the “study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p. 59). As noted in Figure 4, the constructs are viewed as state-like because they are behaviors that can be changed. POB criteria require that the constructs be positive, relatively unique to organizational behavior, measurable, and capable of being developed and managed to improve performance (Avolio & Luthans, 2006; Luthans, 2002; Snyder et al., 1991).

<p><b>Confidence/Self-Efficacy</b>—<i>one’s belief (confidence) in being able to successfully execute a specific task in a given context.</i></p> <ul style="list-style-type: none"> <li>• Specific, not general</li> <li>• Performance process: involvement, effort, perseverance</li> <li>• Sources: mastery experiences, vicarious learning/modeling, social persuasion, physiological/psychological arousal.</li> </ul>
<p><b>Hope</b>—<i>one who sets goals, figures out how to achieve them (identifies pathways), and is self-motivated to accomplish them, i.e., has willpower and way-power.</i></p> <ul style="list-style-type: none"> <li>• Beyond feelings of things will work out for the best</li> <li>• Brand-new concept for POB with considerable performance potential</li> <li>• Valid measures show a positive link with goal expectancies, perceived control, self-esteem, positive emotions, coping, and achievement</li> </ul>
<p><b>Optimism</b>—<i>positive outcome expectancy and/or a positive causal attribution but is still emotional and linked with happiness, perseverance, and success.</i></p> <ul style="list-style-type: none"> <li>• Beyond “Power of Positive Thinking”</li> <li>• Both motivated and motivating</li> <li>• Seligman’s optimistic explanatory style of bad event: external, unstable, specific</li> </ul>
<p><b>Subjective Well-Being</b>—<i>beyond happiness emotion, how people cognitively process and evaluate their lives, the satisfaction with their lives.</i></p> <ul style="list-style-type: none"> <li>• Beyond demographics to when and why people are happy</li> <li>• Components: life satisfaction, satisfaction with important domains (workplace) and positive affect</li> <li>• SWB leads to job satisfaction but reverse not necessarily true</li> </ul>
<p><b>Emotional Intelligence</b>—<i>capacity for recognizing and managing one’s own and others’ emotions; self-awareness, self-motivation, being empathetic, and having social skills.</i></p> <ul style="list-style-type: none"> <li>• Currently very popular</li> <li>• One of the multiple intelligences</li> <li>• “IQ gets you the job, EQ gets you promoted”</li> </ul>

Figure 4. Representative POB Concepts (CHOSE). From “Positive Organizational Behavior: Developing and Managing Psychological Strengths,” by Fred Luthans, 2002, *Academy of Management Executive*, 16(1), p. 69.

**Emotional intelligence.** New research points to six leadership styles based on emotional intelligence. Goleman et al. (2013) described them as coercive, authoritative, affiliative, democratic, pacesetter, and coaching leadership styles. Leaders who utilize emotional intelligence and move between leadership styles as dictated by the situation have the greatest impact on the organization and with their followers (Goleman, 2000). Goleman (2000) stated, “Leaders who have mastered four or more—especially the authoritative, democratic, affiliative, and coaching styles—have the best climate and business performance” (p. 87).

### **Followership**

Kelley (1992) pointed out that “The qualities that make effective followers are, confusingly enough, pretty much the same qualities found in some effective leaders” (p. 200). Followership experience, skills, maturity, and confidence, as well as information being readily available on the Internet, can lessen the gap between the leader and follower (Brown, 2003; Hersey & Blanchard, 1977; House, 1971; Riggio et al., 2006). Consequently, being a good leader often means knowing when to become a good follower and allow others to lead. According to Burns (2010),

Leadership over human beings is exercised when persons with certain motives and purposes mobilize, in competition or conflict with others, institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers. This is done in order to realize goals mutually held by both leaders and followers. (p. 18)

Some “leadership researchers treat follower attributes as outcomes of the leadership process as opposed to inputs” (Avolio et al., 2009, p. 434). In reality, leadership and

followership involve influence, both on the part of the leader and the follower; the actions, motives, and goals of one influence the other (Burns, 2010; Day & Antonakis, 2012; Shamir, 2007), and clearly, one cannot exist without the other.

To be successful, followers must feel trust and respect toward the leader (Baker, 2007; Liu et al., 2010; Podsakoff et al., 1990) and be inspired by the leader's vision (Garger, 2008; Northouse, 2010; Riggio et al., 2006; Wong & Cummings, 2009).

Authentic leadership emphasizes relationships between leaders and followers. Amar (2001) described the relationships between leaders and followers as connected concepts that are irrevocably entwined and Raelin (2003) cited a number of studies that indicate that followership and leadership are more alike than different. Goleman et al. (2013) described followership as being the same, but with a different structure than leaders. Howell and Shamir (2005) attributed leader success to follower self-concept and collective identity. The connection between leaders and followers can be influenced by many factors; however, for the purpose of this study, character, inspiration, relationships, vision, wisdom, and meaning were examined.

These five variables have been introduced and developed by the leadership theories reviewed over the last 100 years and are essential to leadership. Elements of character, inspiration, relationships, vision, and wisdom can be found in trait, behavioral, situational, contingency, transactional, transformational, and authentic leadership theories as well as in the history and importance of meaning making. This review supports the theoretical framework proposed by Drs. Larick and Petersen, which suggests that while each variable has merit, it is the interaction of the variables that support the making of meaning in organizations.

## **Five Leadership Variables**

Over the last 30 years, Kouzes and Posner (2007) have identified several hundred different characteristics, values, and traits attributed to exemplary leaders. Condensing the list by combining synonyms and through empirical studies, they have come up with 20 leadership characteristics that have remained constant through 30 years of economic growth and recession; massive technological changes; globalization of business and industry; creation, development, and surge of an Internet economy; and ever-changing national and world political environments (Kouzes & Posner, 2007). Kouzes and Posner (2007) stated, “Our research documents this consistent pattern across countries, cultures, ethnicities, organizational functions and hierarchies, gender, educational, and age groups. For people to follow someone willingly, the majority of constituents believe the leader must be honest, forward-looking, inspiring, competent” (p. 29). People want, and need, credible leaders (Kouzes & Posner, 2007). This is possible through exemplary leadership skills. Kouzes and Posner (2012) attributed exemplary leadership to five practices: model the way (character), inspire a shared vision (inspiration), challenge the process (vision), enable others to act (wisdom), and encourage the heart (relationship). This seminal work by Kouzes and Posner supports the theoretical framework developed by Larick and Petersen (2015) for this study and provides the beginning point of exploring the five variables (character, inspiration, relationships, vision, and wisdom) of leadership meaning.

### **Character**

Character is like a tree and reputation like a shadow. The shadow is what we think of it; the tree is the real thing.

—Abraham Lincoln, *Brainy Quote*

From a theoretical viewpoint, character is the moral compass by which a person lives his or her life (Bass & Bass, 2008; Bass & Steidlmeier, 1999; Moore, 2008; Sankar, 2003; Quick & Wright, 2011). Operationally, character is the alignment of a value system, which promotes ethical thoughts and actions. Character is based on principles of concern for others through optimism and integrity while being reliable, transparent, and authentic.

Brooks (2015b) described the necessary route to character development as the “U” curve. In all the case studies he has researched, there was one common occurrence, “they had to go down to go up—they had to descend in to the valley of humility to climb to the heights of character” (Brooks, 2015b, ch. 2). It is when one is at a point of moral crisis, the bottom of the “U” curve, that he or she must address who he or she really is without any pretense or subterfuge. Once at that point of morality, that person begins the process of forming character.

Quick and Wright (2011) opined, “Character speaks to the heart of morality. Morality and character are inextricably linked in our thinking; one cannot exist without the other” (p. 987). Attributes such as integrity, justness, fairness, kindness, gratitude, and a sense of purpose are commonly assigned to character (Bass & Bass, 2008; Hannah & Avolio, 2011; Kouzes & Posner, 2012; Quick & Wright, 2011). These character attributes influence the leader’s vision, goals, self-concept, strategies, work ethic, attitude, perception, code of ethics, behavior, and the search for excellence (Bass & Steidlmeier, 1999; Blanchard & O’Connor, 2003; Sankar, 2003). While having a strong character is normally ingrained into a person’s behavior after years of character

development, leaders must still be continually vigilant to situations that can compromise their character.

Johnson & Johnson made history in 1982 when they demonstrated the moral compass upon which the company is led. Their behavior demonstrated strong, positive character traits. Beginning in September 1982, seven people died in the Chicago area from cyanide-laced capsules of Extra-Strength Tylenol, the company's best-selling product, which generated 17% of the company's net income in 1981 (Rehak, 2002). Their leadership was faced with the decision of recalling the drug and losing millions of dollars or remaining firm in the conclusion that the bottles had been tampered with after delivery and it was therefore not their responsibility. At a cost of more than \$100 million, the leaders of Johnson & Johnson chose to follow their credo values of putting the needs and well-being of the people they serve first (Johnson & Johnson, 2016); they recalled the 31 million bottles of Tylenol capsules nationwide and offered replacement tablets free of charge to those who had Tylenol sitting in their medicine cabinets (Rehak, 2020). This decision stood out because at that time in history, recalls did not happen. John Burke, the company's chairman, demonstrated strong character by being transparent and forthright with the media and their consumers, living by a strong moral compass, demonstrating integrity, and making ethical decisions and actions based on a principle of concern for others.

**Value system (principles of concern for others).** Leader character represents internal aspects of the leader such as personality, values, moral reasoning, identity, and concern for others (Blanchard & O'Connor, 2003; Hannah & Avolio, 2011; Lord, Hannah, & Jennings, 2011). Bass and Steidlmeier (1999) stated, "For Burns, to be

transformational, the leader had to be morally uplifting” (p. 186). A transformational leader creates an organizational culture where personal development is encouraged, endeavor is valued and rewarded, and where people are valued and respected as members of a team (Cutler, 2014; Tyler, 2008). This type of positive, value-driven culture has consistent guiding values, a shared purpose, teamwork, innovation, learning, appreciation, encouragement, and recognition (Kouzes & Posner, 2007, 2012; Lowe, 2010; Tyler, 2008). Every choice someone makes is influenced by values. They contribute to several critical elements of self; values give us purpose, bond us to others, engage us, distinguish us, chart the course of life, are the “why” people do what they do, and the size of the “why” determines their investment (Weisman, 2016).

Bennis and Nanus (1985) observed that “leaders induced (stemming from their own self-regard) positive other-regard in their employees. And this turns out to be a pivotal factor in their capacity to lead” (p. 58). Irwin Federman, former president and CEO of Monolithic Memories, illustrates this brilliantly in the following quote:

If you think about it, people love others not for who they are, but for how they make us feel. We willingly follow others for much the same reason.

It makes us feel good to do so. . . . In order to willingly accept the direction of another individual, it must feel good to do so. This business of making another person feel good in the unspectacular course of his daily comings and goings is, in my view, the very essence of leadership.

(Bennis & Nanus, 1985, p. 58)

**Optimism.** Peterson and Seligman (2004) classified optimism as a positive emotion manifested by hope, confidence, trust, future-mindedness, and future orientation.



Fredrickson's (2009) research links optimism with resiliency, tranquility, and life satisfaction, qualities of particular value to those leading others. Optimism forges connections to the larger universe and provides meaning (Peterson & Seligman, 2004; Seligman, 2006). According to Seligman (2002), "Optimists, in contrast [to pessimists], have a strength that allows them to interpret their setbacks as surmountable, particular to a single problem, and resulting from temporary circumstances or other people" (loc. 489 of 5471), which is foundational to a leader's ability to rise above failure and press forward. In her "broaden-and-build" theory, Fredrickson (2009) proved that positive emotions "allow us to discover and build new skills, new ties, new knowledge, and new ways of being" (p. 23), which broadens a leader's ability to solve problems and find solutions in new and innovative ways.

### **Inspiration**

Our chief want is someone who will inspire us to be what we know we could be.

—Ralph Waldo Emerson, *Brainy Quote*

Theoretically, inspiration is a source of contagious motivation that resonates from the heart, transcending the ordinary, and drives leaders and their followers forward with confidence (Kouzes & Posner, 2007; Thrash & Elliot, 2003). Operationally, inspiration is the heartfelt passion and energy that leaders exude through possibility thinking, enthusiasm, encouragement, and hope. This, in turn, creates relevant, meaningful connections that empower followers.

Leaders who inspire and motivate others share some common traits. Folkman (2013) described six traits used by the most inspiring leaders. He said, "Each of the first four traits were used more than 20% of the time as a primary or secondary approach; and

the last two are used far less frequently” (Folkman, 2013, pp. 4-5). The first four are being able to provide a clear vision and communicate it to the team; creating positive relationships, listening, and connecting emotionally with people; focused pursuit of a goal and being accountable for personal and group performance; and being a positive role model and doing the right things in the right way (Folkman, 2013). The last two are enthusiasm and being able to provide technical direction that comes from experience (Folkman, 2013; Zenger & Folkman, 2013a). Leaders do not need to excel in all six traits; however, they “can’t have a fatal flaw in any of them” (Zenger & Folkman, 2013b, p. 3). Just strengthening two or three of these traits, leaders become more inspiring (Zenger & Folkman, 2013b).

As leaders become more proficient in inspiring others, motivation, performance, and engagement increase. According to Cutler (2014), “Good leadership . . . inspires people to achieve the highest levels of performance” (loc. 87 of 330). Workers who know *why* they are doing what is asked become inspired, motivated, and engaged (Knight-Wallace, 2014; Sinek, 2009). When people are inspired, they feel more satisfied and committed to do their work, often putting in extra hours and effort (Bass, 1990; Gallo, 2007; Zenger & Folkman, 2013b). This engagement is demonstrated with workers being more innovative, working harder, and having a greater sense of belonging (Beyer et al., 2000; Nielsen, Randall, Yarker, & Brenner, 2008). A sense of belonging or being a part of something greater than oneself is foundational to meaning.

Bain & Company surveyed 2,000 Bain employees to rate how inspired they were by their colleagues and to rate what was important in contributing to that sense of inspiration (Horwitch & Callahan, 2016a). The result was a set of 33 behavioral

characteristics they use to create inspiration within the organization. Leading partner, Mark Horwitch, along with senior manager, Meredith Whipple Callahan, direct Bain’s leadership programs based on the behaviors described in Figure 5.

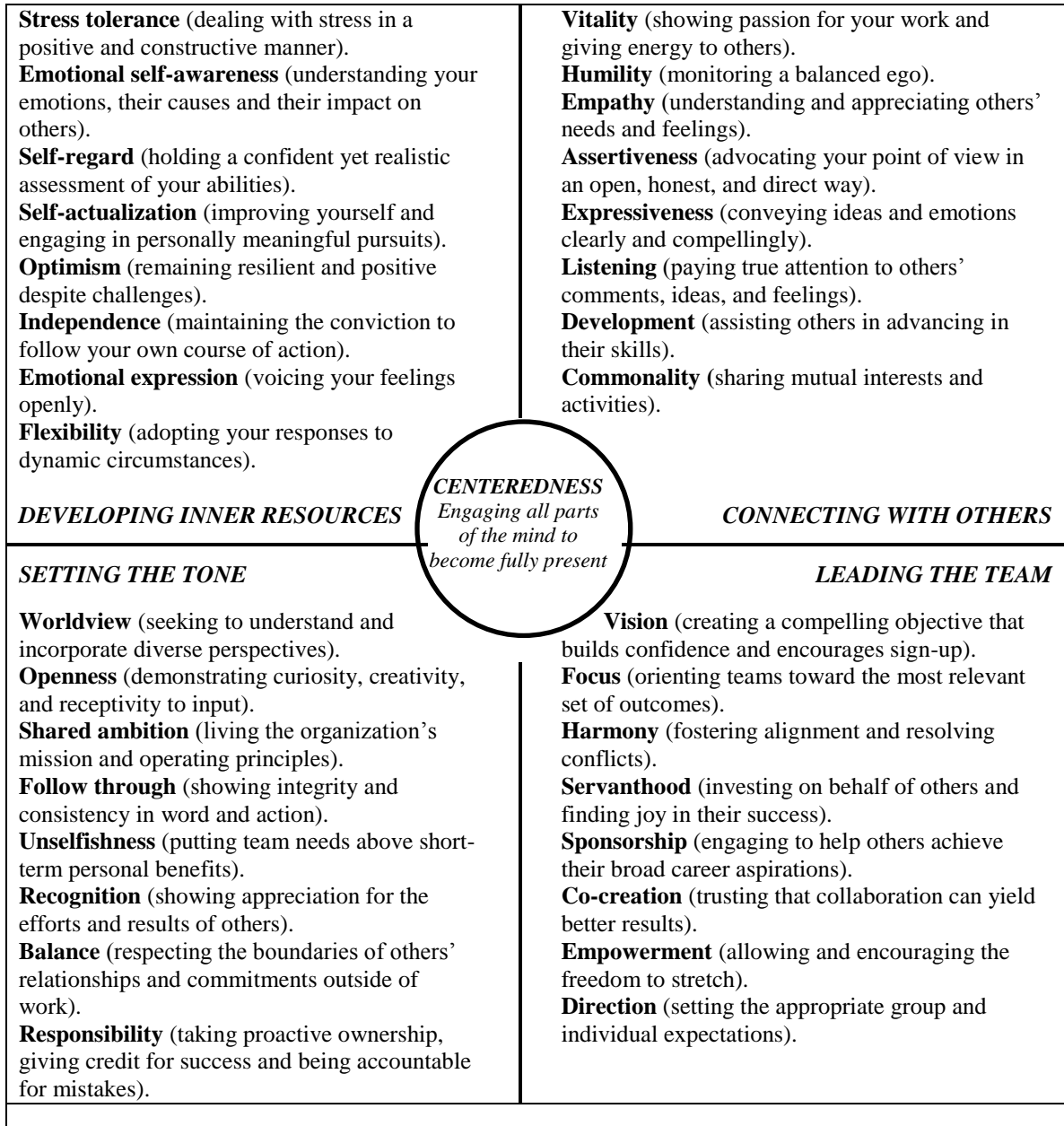


Figure 5. Bain’s 33 characteristics for inspiration. Adapted from “How Leaders Inspire: Cracking the Code,” by M. Horwitch and M. W. Callahan, June 10, 2016, p. 2. Copyright by Bain & Company, 2016.

From the 33 characteristics for inspiration, Horwitch and Callahan (2016a) have developed the Bain inspiration leadership system as shown in Figure 6. This model capsulizes the leadership behaviors relevant to creating meaning within an organization.

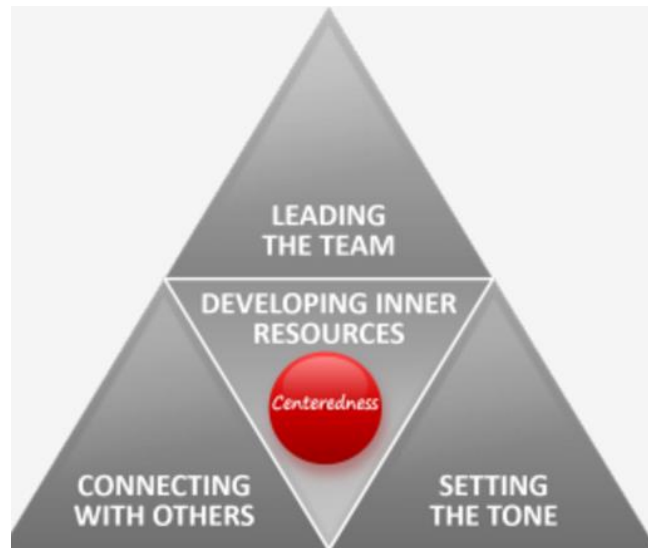


Figure 6. Bain inspirational leadership system. From “Bain Inspirational Leadership System,” by M. Horwitch and M. W. Callahan, June 10, 2016. Copyright by Bain & Company, 2016. Retrieved from <https://www.bainleadership.com/leadership-model/>

Horwitch and Callahan (2016b) have coined the term *centeredness* to mean “being in a space in which we choose how to respond, rather than automatically reacting to a situation. In this space we find the time and awareness to bring our inspirational leadership skills to bear” (Key Concepts, n.p.). They stressed that cognition will not work, instead all parts of the brain must become centered; they call this “The Science of Centeredness.” To bring this concept to life, they encourage the behaviors shown in Figure 7.

Follow these steps:

SETTLE	SENSE	SHIFT
<b>Balance</b> your body. <b>Ground</b> yourself. <b>Breathe</b> into your core.	<b>Notice</b> the physical expression of your emotions. <b>Name</b> these feelings.	<b>Move back</b> from your emotions. <b>Step up</b> to neutral observation. <b>Choose</b> an action.
<i>Other methods for centering:</i> <ul style="list-style-type: none"> <li>• Breathing deeply</li> <li>• Naming a feeling</li> <li>• Asking yourself, “what’s the worst that could happen?”</li> <li>• Getting <i>up from your computer and stretching your legs</i></li> </ul>		

Figure 7. Steps to centeredness. Adapted from *The Science of Centeredness*, by M. Horwitch and M. W. Callahan, July 26, 2016. Copyright by Bain & Company, 2016. Retrieved from <https://www.bainleadership.com/centeredness/>

Horwitch and Callahan (2016a) have taken the data and identified the strengths and weaknesses of each of their leaders based on the survey feedback from their peers. They have found that “even one distinguishing strength nearly doubles your chances of being inspiring—and the more distinguishing strengths you have the more inspirational you can be” (Horwitch & Callahan, 2016a, p. 3). They discovered that the more inspirational characteristics a person possesses, the more inspirational he or she can be. Horwitch and Callahan concluded, “That finding underscores the power of authenticity: No combination of strengths is statistically more powerful than any other. Inspirational leaders come in many varieties” (p. 3).

Horwitch and Callahan (2016b) coached all employees on how to align their behavior with the Bain Inspirational Leadership System by using any combination, but at least four, of the behaviors described in Figure 5. The results have been inspirational:

The number of colleagues cited as inspirational grew by 18% between 2014 and 2015, and their influence is spreading: the percentage of employees who describe themselves as “inspired” has grown since the start of the program, along with corresponding measures of employee engagement. (Horwitch & Callahan, 2016b, p. 4)

## **Relationships**

Relationships are the oceans in which we find meaning.

—Michael Steger, “Meaning and Quality of Life”

Relationships are the bonds that are established between people through encouragement, compassion, and open communication. This leads to feelings of respect, trust, and acceptance (Frankl, 2006; George, 2003; George & Sims, 2007; Kouzes & Posner, 2007, 2012, 2016; Mautz, 2015; McKee et al., 2008; Reina & Reina, 2006, 2007; Seligman, 2011; Ulrich & Ulrich, 2010). Operationally, relationships are authentic connections between leaders and followers involved in a common purpose through listening, respect, trust, and acknowledgement of one another.

The need to belong is a basic human need that can be met through organizational culture and giving individual consideration to others (Curlette & Kern, 2010; Sadri & Bowen, 2011). This is done by acknowledging accomplishments, showing respect, empowering followers, listening, and communicating with them (Armstrong, 2010a, 2010b; Bass & Bass, 2008; Bennis, 1989, 1991; Kouzes & Posner, 2002, 2007). Competence, consistency, candor, concern, and connection to others is what promotes trust which is essential in relationships (Weisman, 2016). According to Bennis and Nanus (1985),

People love others not for who they are, but for how they make us feel. We willingly follow others for much the same reason. It makes us feel good to do so. . . . In order to willingly accept the direction of another individual, it must feel good to do so. This business of making another person feel good in the

unspectacular course of his daily comings and goings is, in my view, the very essence of leadership. (p. 58)

When employees are treated with respect, they feel valued, which then promotes engagement and a sense of belonging (Chang, 2010; Kouzes & Posner, 2002; Moore, 2008). Porath (2014) explained, “Being treated with respect was more important to employees than recognition and appreciation, communicating an inspiring vision, providing useful feedback—even opportunities for learning, growth, and development” (para. 1). David Fairhurst, chief people officer of McDonald’s Restaurants in Europe, creates and sustains relationships by building trust through authenticity and transparency with his followers by avoiding the “temptation to ‘sugar-coat’ bad news and ‘hype’ the good news. [He believes] if leaders communicate well, and communicate often, they will earn the trust of their employees” (Cutler, 2014, p. 149).

Employees at Pricewaterhouse Coopers (PwC) are assigned a *people manager*, who is “responsible for achieving a deeper understanding of that person in terms of expectations and career planning. It is a two-way relationship, with the people manager offering mentoring advice, but also reporting up any identified interests or concerns” (Cutler, 2014, p. 140). In addition to building lasting relationships, opportunities are identified for both the employee and the organization.

## **Vision**

Leadership is the capacity to translate vision into reality and sustain it.

—Warren Bennis and Burt Nanus, *Leaders: The Strategies for Taking Charge*

Theoretically, vision is a bridge from the present to the future. Vision is created by a collaborative mindset, adding meaning to the organization, sustaining higher levels

of motivation, and withstanding challenges (Kouzes & Posner, 2008, 2012; Landsberg, 2003; Mendez-Morse, 1993; Nanus, 1992). Operationally, vision is foresight demonstrated by a compelling outlook of the future shared by leaders and followers who are engaged to create the future state.

Leaders must be able to see that which does not yet exist in others and be able to communicate that to them (Sinek, 2009). Neilsen et al. (2008) believed that “transformational leaders employ a visionary and creative style of leadership that inspires employees to broaden their interest in their work and to be innovative and creative” (p. 16). Leadership behaviors of acknowledging followers, displaying strong moral character, credibility, and inspiring the people they work with, create an atmosphere in which followers are open to and willing to follow the leader’s vision (Bass, 1990; Bennis, 1989, 1991; Cutler, 2014; Kouzes & Posner, 2007).

Leaders must also be able to envision a future that does not yet exist for the organization. Time for critical thinking, contemplation, strategy planning, and risk taking are required to develop and implement a vision (Buell, 2012; Peterson & Seligman, 2004; B. Smith, 2015). The vision must be communicated to the followers. By having affirming, dynamic, and positive relationships with followers, they are open to the leader’s vision. The excitement and passion for the vision is seen and felt by their followers thus inspiring them to action (Bass, 1990). However, the action is not without purpose and direction; the leader must convey high expectations to followers and inspire them to become committed to the shared vision (Northouse, 2010; Porath, 2014). According to Blanchard and O’Connor (2003), “When aligned around shared values and united in a common mission, ordinary people accomplish extraordinary results” (p. 77).



Engage for Success, founded by David MacLeod and Nita Clarke in 2008, and backed by British Prime Minister, David Cameron in 2011, recommended the following leadership behaviors to create vision within an organization.

- Explain how your team's tasks fit into the bigger picture.
- Share the company's business strategy in an interesting and memorable way.
- Invite individuals to question or work out how their everyday tasks fit link to the team and company strategies.
- Give encouragement and praise when you see someone doing something that helps achieve the business strategy.
- Break the business strategy into manageable chunks known as Key Performance Indicators (KPIs).
- Discuss with individuals how their personal objectives link to the team goals and priorities through one-to-one meetings.
- Link new procedures or working practices back to the wider business strategy.
- Celebrate success and let employees know when goals have been achieved.

(Engage for Success, 2012, p. 2)

## **Wisdom**

You, my friend . . . are you not ashamed . . . to care so little about wisdom and truth and the greatest improvement of the soul, which you never regard or heed at all?

—Socrates, defending himself at his trial

The only true wisdom is in knowing you know nothing.

—Socrates, *Brainy Quote*

Theoretically, wisdom is the ability to utilize cognitive, affective, and reflective intelligences. Wisdom is used to discern unpredictable and unprecedented situations with beneficial action (Baltes & Staudinger, 2000; Kekes, 1983; Pfeffer, 2010; Spano, 2013; Sternberg, 1998). Operationally, wisdom is the reflective integration of values, experience, knowledge, and concern for others to accurately interpret and respond to complex, ambiguous, and often unclear situations.

Wise leaders live by personal conviction, have a well-cultivated self-awareness, and possess emotional intelligence (Buell, 2012). Other behaviors include thoughtful, contemplative, and analytical reflection of successes and failures both personally and professionally. Developing an awareness of behaviors that lead to failure is acknowledged and corrected. Wise leaders have a lifelong desire to learn and understand; they remain humble and teachable, knowing that they do not know it all (Brooks, 2015a; Sandell, 2015). Wisdom is cultivated by reading, learning, engaging others in conversation, and participating in forums of discussion. These traits are often found in older people, not necessarily due to age but from experience and how the aging brain performs (Chen, 2015; Parente, 2015; Tecson, 2015). Younger people make choices from the “ventral striatum, which is related to habitual, reflexive learning and immediate rewards: impulsivity. However, as this portion of the brain declines, older adults compensate by using their pre-frontal cortices, where more rational, deliberate thinking is controlled” (Tecson, 2015, para. 9). People spend years acquiring facts, forming patterns and links, going through mental reformation, and critically analyzing knowledge that has been acquired. When exposed to the “rigors of reality, wisdom

dawns. Wisdom is a hard-earned intuitive awareness of how things will flow” (Brooks, 2015a, para. 15).

Brooks (2015b) emphasized the importance of humility and self-reflection in the formation of wisdom. Wisdom is not a body of knowledge, but instead, it is the moral quality of one knowing his or her weaknesses and dealing honestly with them (Brooks, 2015b). Warren Buffet offers wisdom in a “folksy” Midwestern accent with humor, and often, jokes. Many people have benefited from his wisdom over the last 50 years while he has served as the chairman of the board and CEO at Berkshire Hathaway. In the 50th-anniversary edition of his letter to shareholders, he offered the following nuggets of wisdom to leaders:

- Invest in the business, not in growing corporate staff.
- Make sure board members can really relate to shareholders.
- There are benefits to splitting the CEO and chairman role.
- Character is crucial.
- Avoid the “ABCs” (arrogance, bureaucracy, and complacency) of business decay.
- Remember the golden rule.
- Experience is the best teacher—and sometimes the only one.
- Admit your mistakes and stay humble.
- Shower the people who work for you with praise. (McGregor, 2015, paras. 4–12)

Leadership behaviors include leaders having an understanding of themselves, recognition of their strengths and weaknesses, recognition of their blind spots, and an ability to see

the environment and how their behavior and that of their followers interact within the organizational culture (Buell, 2012; Singh, 2016).

### **Creating Meaning**

I have discovered that creating meaning is central not just to my existence but to that of every organization in society today.

—Tom Rath, *Are You Fully Charged?*

Theoretically, meaning is a sense of purpose as a fundamental need, which leads to significance and value for self and others (Ambury, n.d.; Bennis, 1999; Csikszentmihalyi, 1990; Frankl, 2006; Kouzes & Posner, 2007, 2012, 2016; Mautz, 2015; Moore, 2008; Pearson, 2015; Yeoman, 2014). From an operational viewpoint, meaning is the result of leaders and followers coming together for the purpose of gathering information from experience and integrating it into a process that creates significance, value, and identity within themselves and the organization. What drives meaning is purpose ignited by passion unique to the individual. According to Collins (2011), “It is impossible to have a great life unless it is a meaningful life. And it is very difficult to have a meaningful life without meaningful work” (p. 210).

It would seem as if the streets of Calcutta in India, the Nazi concentration camps in Germany, uprisings in South Africa, and a march in Washington, DC, have little in common. They are separated by geography, time, and culture, and yet, they bear one striking similarity. Through the heroic acts of Mother Teresa, Viktor Frankl, Nelson Mandela, and Martin Luther King, Jr., lives were saved, history was changed, and hope was restored from grim and seemingly impossible, worst-case scenarios to life-affirming events. These individuals reached beyond their own needs and found a purpose greater

than themselves, often at great cost to themselves and their families. They share the common thread of individuals living meaningful lives. Meaning comes from living one's intent whether it is on a global, national, local, or workplace level.

### **Globally**

Frankl's (2006) work in the concentration camps still prompts individuals to challenge the meaning of life as a part of being human. The work of Mother Teresa in Calcutta and Nelson Mandela in South Africa continues today; still others search for meaning in the creation of a better world for all. With issues such as climate change, poverty, ageing, AIDS, demining, human rights, war crimes, terrorism, and water scarcity, passionate people can be found creating meaning in their lives as well as in the lives of others.

In his 2009 book, *No Impact Man: The Adventures of a Guilty Liberal Who Attempts to save the Planet, and the Discoveries He Makes About Himself and Our Way of Life in the Process*, Colin Beavan realized that

many of us work so hard that we don't get to spend enough time with the people we love, and so we feel isolated. We don't really believe in our work, and so we feel prostituted. The boss has no need of our most creative talents, so we feel unfulfilled. We have too little connection with something bigger, and so we have no sense of meaning. (p. 8)

This realization prompted him to encourage his family to live for one year without contributing to global warming by having no sustainable, zero impact on the environment. Laura Gabbert and Justin Schein (2009) documented the Beavan family's year-long journey and created a film about the family's experience. The documentary

was released in 2009 and has since created a global movement, the No Impact Project, focusing on climate change, water, and transportation. The weeklong challenge to live with zero impact on the environment has been successfully implemented in colleges, businesses, and communities worldwide.

### **Nationally**

While this nation faces many of the same global issues that other countries face, Richard Moe, former president of the National Trust for Historic Preservation, and organizational members find meaning in working for the protection, enhancement, and enjoyment of places that matter to them such as national parks and historical landmarks (Adelman, 2005; Kennicott, 2009). During his tenure, Moe was successful in weaning the organization from government funding, which allowed them to advocate for the protection of areas such as the Manassas National Battlefield Park in Virginia (Kennicott, 2009).

### **Locally**

Willie Jordan is known for her work at the Fred Jordan Mission (FJM) in downtown Los Angeles. The mission was founded by her husband, Fred Jordan, in 1944, and when he died in 1988, Willie became the only female president of a Skid Row-based ministry (FJM, 2016). She has found meaning in life by serving the poor and is “recognized for her experience and knowledge in the fields of poverty, hunger, homelessness, domestic violence and children’s issues” (FJM, 2016, para. 1).

### **Workplace**

It has become the responsibility of today’s leaders to bring meaning into organizations by finding meaning for themselves and directing their followers to

meaningful work (Kouzes & Posner, 2012; Mautz, 2015; Pearson, 2015; Pink, 2006). Mautz (2015) stated, “William Kahn, professor of organizational behavior at Boston University, has drawn a direct link between meaningfulness and engagement” (p. 8). Engagement is never “on” or “off” but instead, varying degrees of connecting based on the situation, task, emotional state, and personality of the individual (Kahn & Fellow, 2013). Kahn developed three questions that people subconsciously ask themselves before engaging in work, with the first two speaking to human need, safety versus negative consequences and availability of physical and emotional energy. Lastly, finding meaning in work creates a personal return on investment in the form of “physical, cognitive, or emotional energy” (Kahn, 1990, p. 704). Along the same lines, McKinsey consultants have found that peak performance is best achieved when people have a personal stake in something. They refer to this as the Meaning Quotient (MQ) of work (Mautz, 2015). Meaningful work environments drive behaviors related to peak performance; in an article by Cranston and Keller (2013), executives found that “employees were five times more productive than they usually were. Furthermore, more than 90 percent of executives identified the bottlenecks to peak performance in their organizations as meaning-related issues” (Mautz, 2015, p. 12).

Blacksmith and Harper (2011) stated, “Gallup research found that 71 percent of American workers can be coded as either ‘not engaged’ or ‘actively disengaged’ in their work, meaning they are emotionally disconnected from their workplaces and are less likely to be productive” (para. 1). Disengaged employees working without a sense of meaning cost the American economy up to \$350 billion per year in lost productivity (Stanford, 2002, para. 1). Ladika (2013) explained that “actively disengaged workers are

also more likely to steal from their employers, have a negative influence on co-workers, miss work and drive away customers” (para. 7). Engaged workers make a difference! The 2013 Trends in Global Employee Engagement report “examined the link between corporations’ financial performance and employee engagement and found a one percent point increase in employees who became engaged resulted in a 0.6 percent growth in sales” (Ladika, 2013, para. 5).

Leadership behaviors that encourage engagement in followers are praise, acknowledgement of accomplishments, recognition, and rewards for work well done (Gill, 2012; Jackson, Schuler, & Werner, 2012; Ladika, 2013; Seligman, 2011; J. L. Smith, 2010). Further leadership behaviors include encouraging and trusting followers, building relationships, showing concern for others, offering useful feedback, providing opportunities for growth and learning, and allowing autonomy (Bennis, 1991; Porath, 2014; Seligman, 2011; Siuty, 2014). However, it is when leaders convey the importance and significance of a particular job and how that employee is valued, that meaning occurs, which then insures engagement (Bennis, 1989; Kahn & Fellow, 2013; Selgiman, 2011; Zenger & Folkman, 2013a). Keller and Price (2011) recommended three behaviors that leaders can use to increase the MQ of work:

1. Tell five stories at once to inspire the team—not everyone is motivated by the same story. Describe how increased production will benefit the company, society, the customer, the working team, and themselves (Cranston & Keller, 2013).
2. “Let employees write their own lottery ticket”; in other words, “spend more time asking than telling” (Cranston & Keller, 2013, para. 22).



3. “Use small, unexpected rewards to motivate others” (Cranston & Keller, 2013, paras. 27 & 28).

Employee behavior that demonstrates engagement includes increased effort, focus, energy, motivation, and productivity; lower absenteeism and safety incidents; improved attitudes, relationships, product quality, and customer service (Kahn & Fellow, 2013; Siuty, 2014).

When there is a shared vision with great meaning and inclusion, collaboration, purpose, and engagement result. The Manhattan Project provides an example of changed behavior focused on meaning resulting in engagement, purpose, and increased productivity. J. Robert Oppenheimer, the leader of the Manhattan Project, convinced others to allow the scientists to talk freely among themselves even though it meant inclusion, collaboration, and transparency, which was previously unheard of on top-secret military projects. He placed Richard Feynman as the manager of a group of engineers who were tasked with performing endless calculations, which were time consuming, tedious, and seemingly without purpose. Feynman observed that the work proceeded slowly and was full of errors. He discovered that it was not the quality of the engineers, the math itself, or the lack of knowledge that was causing the problem. Instead, it was the lack of meaning. These engineers sat for days on end, working through calculations in Los Alamos, New Mexico, disengaged from their work. This all changed when Feynman convinced Oppenheimer to discuss the details of the project with the engineers and provide them the same inclusion, collaboration, and transparency that was given to the scientists. They were told that they were creating calculations which would “enable them to complete the race to build the atomic bomb before the Germans did. Their work

would win the war. The workplace, the work, and the workers’ performance were completely transformed once the task was imbued with meaning” (Mautz, 2015, pp. 1-2). From that point forward, “Feynman estimated that knowing the nature and importance of their work made the engineers work almost 10 times as fast and with fierce commitment” (Bennis, 2004, p. 2).

**Chief Executive Officers of Engineering Technology Organizations**

A world-class engineer with five peers can out produce 200 regular engineers.

—John Chambers, CEO, Cisco Systems, Inc.

Engineers are, by nature, inquisitive, precise, detail-oriented, analytical, intellectual, determined, imaginative, and conscientious (Hall et al., 2015; Knovel, 2011; Lin, Liang, Chang, & Liang, 2015). Five behavioral factors have been attributed to exemplary engineers as shown in Figure 8. Freund, Toms, and Waterhouse (2005) stated, “Engineers have been characterized as service-oriented professionals with a strong knowledge base in their subject, whose work focuses on completing rather complex tasks and finding solutions to technical problems (Hertzum & Pejtersen, 2000; Leckie et al., 1996)” (para. 6). However, engineers are also often characterized as being passive,

<b>Conscientiousness</b>	<b>Openness</b>	<b>Neuroticism</b>	<b>Agreeableness</b>	<b>Extraversion</b>
Reliable Determined Strong-willed Purposeful Accomplished Self-efficacy	Imaginative Introspective Intellectual Curiosity Willing to entertain novel ideas	Tendency to experience negative effects such as guilt, anxiety, and embarrassment	Altruistic Empathetic toward others Willingness to assist others Assume others will be helpful in return	Talkative Active Being social Assertive Preference for large groups

Figure 8. Factors attributed to exemplary engineers. Adapted from “Normal Personality Assessment in Clinical Practice: The NEO Personality Inventory,” by P. T. Costa and R. R. McCrae, 1992, *Psychological Assessment*, 4, pp. 5-12. <http://dx.doi.org/10.1037/1040-3590.4.1.5>. Copyright 1992 by The American Psychological Association.

wooden, loners, highly trained “geeks” or “nerds,” introverts who are “good in math,” but are lacking interpersonal skills, a depth of interests, and labor away in obscurity (Allaire, 1991; Bergh, 2006; Florman, 1989; Grogan, 1991; Pister, 1991; Weingardt, 1992).

Engineering education and experience emphasize “math, science, and technology in order to design, build, create, improve, and influence just about everything we use in modern society” (Rennie, 2014, para. 5). Engineers have developed their critical-thinking and problem-solving skills; they are capable of looking logically at complex problems, breaking them into workable components to create solutions. While Rennie (2014) believed “it’s no surprise then that engineers elevate to leadership positions where their unique background and experience can be used to improve the broader business” (para. 5), there are others who believe engineers have not developed, or have even neglected, their communication and leadership skills (Florman, 1989; Grogan, 1991; Pister, 1991; The Regents, 2014; Weingardt, 1992). It was not always this way as a brief look at history will reveal.

## **History**

Pyramids, catapults, and aqueducts were designed by engineers and built in both ancient Greece and Rome. While not called *engineers* at that time, they included both structural and mechanical dimensions of the field (Lawton, 2004). Protocols for design and manufacturing were created during the Turkish Artuqid dynasty (Hill, 2002; Rae, 2001). From these processes came water pumps, clocks, robotics, segmented gears, and other mechanisms. Thomas Savery built the first steam engine in 1698, which was the start of mechanical engineering (Jenkins, 1936; Lawton, 2004). This invention provided the means for mass production, which gave rise to the industrial revolution (Lawton,

2004; Rae, 2001; vonTunzelmann, 1996). During the 18th century, engineering evolved into specializations of math and science (Dias, 2014; Florman, 1987; Lawton, 2004; Rae, 2001; Waddell & Skinner, 1928).

**Nineteenth century.** In the 1800s, engineers such as the Roeblings were considered leaders and the “giants” of society (Florman, 1989). John and Washington Roebling, father and son, built the Brooklyn Bridge and were well respected by politicians, press, and community for their character, culture, and moral excellence as well as their technical expertise (Florman, 1987, 1989; Lawton, 2004; Rae, 2001). They were part of the “heroic” engineers who built this nation’s bridges, railroads, power systems, and communications networks during the late 19th and early 20th centuries (Grogan, 1991; Lawton, 2004). Their broad array of interests in the liberal arts including music, poetry, art, history, literature, philosophy, and language gave engineers the reputation as being gentlemen or well-rounded individuals, which today would be considered a broadly educated person (Florman, 1989; Rae, 2001; Waddell & Skinner, 1928). Florman (1989) stated, “The patterns of music, art, and poetry can enrich our imaginations, help us to see connections, inspire us to envision new hypotheses” (p. 86).

During the 1860s, about one third of the engineering curriculum consisted of liberal arts (Florman, 1989; Galloway, 2007; Rae, 2001). As engineering knowledge increased, there was less time for nontechnical courses such as liberal arts. American engineering education was at a crossroads—eliminate liberal arts courses in engineering curriculum or increase the amount of time spent to earn an engineering degree (Florman, 1989; Lawton, 2004; Rae, 2001). Two distinct events occurred that charted the history of engineering.

The Morrill Act was passed by the U.S. Congress and signed in to law by President Lincoln on July 2, 1862, for the purpose of donating federal lands to every state (Library of Congress, 2015). Each state received 30,000 acres of public land per Congressional delegate. The land was then sold and the proceeds were used to establish a total of 69 public agricultural and mechanical arts colleges (Library of Congress, 2015). Mechanical arts colleges emphasized the practical application of engineering (Lawton, 2004).

The second event was the founding of the Thayer School at Dartmouth College in 1867 (Trustees, 2016). General Sylvanus Thayer, an eminent engineering educator known as the father of the U.S. Military Academy, envisioned an engineering graduate school, which he endowed and founded (Trustees, 2016). The 6-year, engineering program at the consisted of 4 years of college engineering courses, followed by a 2-year professional course (Florman, 1989; Trustees, 2016). The program was met with little enthusiasm due to the additional time and cost required to earn an engineering degree (Florman, 1989; Trustees, 2016).

During this time, the United States was growing, investing in railroads, and embarking on the Industrial Revolution. There was urgency for technically trained individuals who specialized in engineering (Rae, 2001). Chemical and electrical engineering were born, and the amount of knowledge was expanding exponentially (Florman, 1989; Rae, 2001). When coupled with the time and cost of 2 additional years of education at Thayer's school, the 6-year engineering degree took a back seat to the 4-year engineering degree; however, there continued to be a push-pull relationship between engineering degrees (Florman, 1989; Galloway, 2007; Trustees, 2016). In 1902, the

founding president of Stanford University, David Starr Jordan, complained that “we cannot make an engineer in four years if we do anything else with him, and there are very many things besides engineering which go to the making of a real engineer” (Florman, 1989, p. 84).

While Americans were striving to produce talented engineers in rapid fashion, Britain developed engineers through apprenticeships, which were lacking in the finer arts, but proficient in the technical aspects of their trade (Florman, 1989; Galloway, 2007; Rae, 2001). British aristocrats attended “Oxford and studied Greek. They considered engineering a proper calling for lower classes. . . . This snobbish attitude was conveyed across the Atlantic, from Oxford and Cambridge to Harvard and Yale, and became endemic in American society” (Florman, 1989, p. 84). By this time, American engineering education had dropped courses in classical studies and “in 1916 a professor at M.I.T. observed that engineers viewed ‘culture’ as ‘a pose, impressive perhaps with some women, but scarcely effective among men.’ And so the die was cast” and engineering curriculum was devoid of liberal arts studies (Florman, 1989, p. 84).

**Twentieth century.** Aeronautical engineering, aerospace engineering, and computer engineering developed during the 1900s. Engineers had leading roles in the 1900s, such as John Franks Stevens who managed the construction of the Panama Canal; Thomas Edison who engineered many devices such as the phonograph, the motion picture camera, and the electric light bulb; Henry Ford designed the first automobile; and Herbert Hoover and Jimmy Carter were presidents of the United States (Florman, 1987, 1989; Gurke, 2011; Lawton, 2004; Rae, 2011). During the 1950s and 1960s, there was a

shift from industrial-focused careers to business (Florman, 1987, 1989; Rae, 2011).

Gurke (2011) stated,

We started to see big businesses running the economy, and this has increased as time has passed. Through this transformation, engineers began to lose their positions as leaders of the great businesses they had helped to create, replaced by professional business managers. As a result, a leadership mentality was slowly stripped away from engineers and the engineering mentality started to play a lesser role in business decision making. (para. 2)

**Twenty-first century.** Today's American engineers enjoy intellectual and technical status; however, "they find that their country is being run by lawyers and business people. Among the members of Congress there are never more than one or two percent with engineering backgrounds" (Florman, 1989, p. 84). Only one of 44 American presidents were engineers (Florman, 1989). European engineers have historically been trained at the elite polytechnic institute and are well versed in math, science, engineering, theory, and classical courses with the purpose of producing technically trained leaders who serve in academia, industry, and government (Florman, 1989; Lawton, 2004; Rae, 2001).

Paradoxically, people in general, businesses specifically, find themselves at the junction of what has been done and find that it no longer works for what needs to be done (Goldsmith & Reiter, 2007). As technology has increased, so has the need for engineers to communicate so as to convey their ideas succinctly (Florman, 1989; Gurke, 2011). Engineers find themselves working in teams instead of being chained to a drafting board. They must know how to speak and write clearly and effectively, how to listen and to

empathize, how to understand and explain, how to persuade and how to defend their ideas (Florman, 1989; Gurke, 2011; Hargreaves, 2011). What has been done is no longer sufficient; engineers can no longer exist in the vacuum that they had become accustomed to living in (Florman, 1989; Gurke, 2011). In a global marketplace that experiences rapid change, they must have a broader view of the world, an understanding of culture, and expertise in working with others (Florman 1987, 1989; Kennedy, 2006).

### **Education**

The engineering curriculum includes a robust collection of science and math courses with little room for anything else; however, it is generally agreed that engineering education must be reformed (Bergh, 2006; Galloway, 2007; Grogan, 1991; Gurke, 2011; Kennedy, 2006; Kirschenman & Fasano, 2012; Weingardt, 1992). According to the National Academy of Engineering (2005), “The practice of engineering needs to change further because of the demands for technologies and products that exceed existing knowledge bases and because of the changed professional environment in which engineers need to operate” (p. 13).

Communication skills can be improved by using a Socratic method of teaching, which would focus on understanding why formulas work and why a particular solution was selected over another (Bergh, 2006; Galloway, 2007; Gurke, 2011; Kennedy, 2006). This method has been used successfully in legal and medical schools where just having the right answer is insufficient; how the answer is derived is equally important (Bergh, 2006; Kennedy, 2006). Engineering students must be held to the same standard. In addition to changing the method of teaching engineers, two schools of thought continue to exist concerning engineering curriculum: expand engineering programs to include



leadership training or create graduate programs that emphasize leadership training (Grogan, 1991; Gurke 2011; Kennedy, 2006).

Proponents of expanding current programs emphasize a cross-disciplinary perspective through dual degrees such as the B.S. in mechanical engineering combined with a B.A. in liberal arts or social science at Purdue University (Laurendeau & Incropera, 1991). Alternatively, William Grogan, dean emeritus of Worcester Polytechnic Institute, suggested a national scholarship program, Reserve Engineering Training Corps (RETC), which was similar to the military's Reserve Officers Training Corps (ROTC; Grogan, 1991). After receiving an engineering degree, students in RETC would serve several years employed in civilian government agencies (Grogan, 1991).

Advocates of graduate engineering programs include Patricia Galloway, Ph.D., P.E., F.ASCE (2007), who has proposed a master of professional management degree that would include courses in “globalization, diversity, world cultures and languages, communication, leadership and ethics as core components of the engineering program” throughout the program (p. 46). The current society lives in a knowledge-based, global economy that is diverse and constantly changing. In the past, education would remain current for the 20 to 40 years that an engineer might work following graduation (Galloway, 2007). That is no longer true. Lifelong education has become the norm and “in the 21st century . . . the success of engineers and firms will be measured against how well they can adapt to new conditions and technologies” (Galloway, 2007, p. 46).

A 5-year, professional engineering master's degree (PEM) focuses on a fifth-year curriculum of management, team building, public policy, and business and public administration (Galloway, 2007; Grogan, 1991). The advantage of the PEM is that it

addresses the current lack of leadership ability in the engineering industry, there are no accreditation hurdles, it meets the ASCE Civil Engineering Body of Knowledge (BOK-2) requirements, and it does so quickly (Kirschenman & Fasano, 2012). UC Santa Barbara's College of Engineering offers a Master of Technology Management (MTM) degree that blends classroom and real-world experience in budgeting, risk management, communication, and innovation as engineering students meet with executives during brown bag lunch and learn sessions, lectures, and mentoring (The Regents, 2014).

Both schools of thought agree that the field of engineering must expand to demonstrate "how the practice of engineering fits into the larger context of business and government and societies here and abroad" (Pister, 1991, p. 25) so students might "better understand the relationship of technology to culture, the role of technical and political solutions to societal problems, and the need for ethics in the engineering profession" (Laurendeau & Incropera, 1991, p. 26). Engineers must develop an understanding of history, geography, political science, psychology, literature, the arts, and find a leader that is willing to mentor them (Weingardt, 1992). Additionally, they need to develop the soft skills such as communication, management, and self and other-awareness to develop empathy and insight to working with others mixed with a "deep knowledge of business processes and the capacity to recognize and capitalize on entrepreneurial and intrapreneurial opportunities" (The Regents, 2014, para. 5). When all of these factors come together, creativity and innovation occurs as shown in Figure 9; this is where engineers of the 21st century must reside (The Regents, 2014). This is possible when leaders implement behaviors specific to the factors shown in Figure 9.

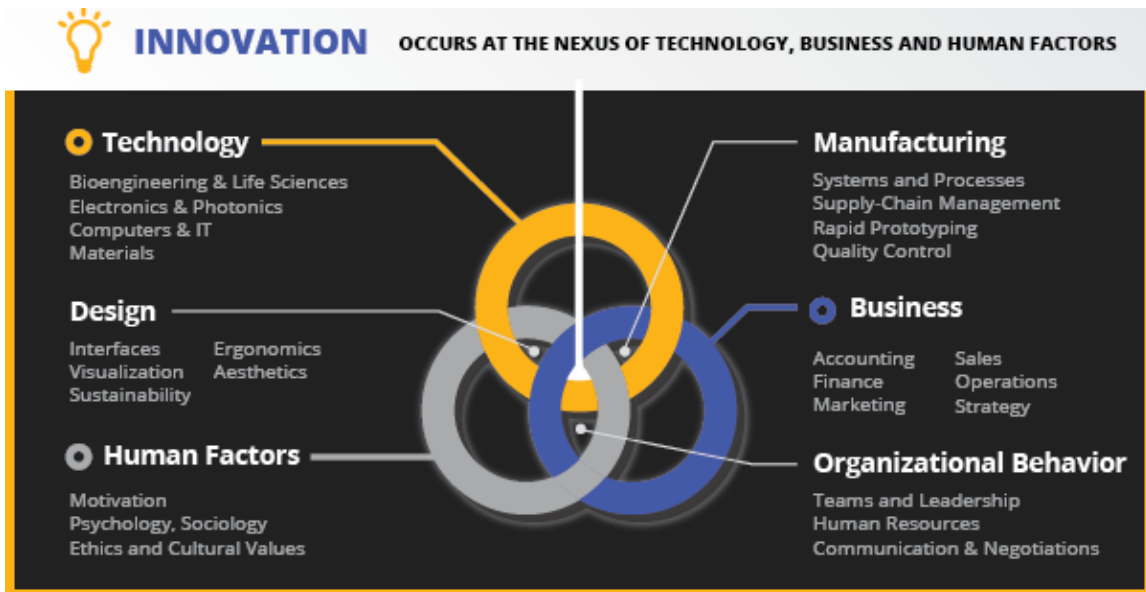


Figure 9. Twenty-first century engineering. From “In a World of Talented Engineers, Where Are All the Leaders”[Web log post], by The Regents of the University of California, para. 12. Retrieved from <https://tmp.ucsb.edu/blog/world-talented-engineers-where-are-all-leaders>. Copyright 2014 by College of Engineering, UC Santa Barbara.

According to The Regents of the University of California (2014), “More than just good engineers, technology companies sorely need more leaders who can position their companies to overcome a world of increasing uncertainty” (para. 3). When the Soviet Union launched the Sputnik on October 4, 1957, Americans recognized that this country’s national security was at risk, and at the very least, the United States was no longer the leader in technology (Gabarro, 1991; Galloway, 2007). A radical set of initiatives was implemented to promote engineering education and professions. Gabarro (1991) stated, “The stakes are even higher now. Today’s race is not for the moon; it is for economic survival” (p. 26).

### **Engineers as Leaders**

Kirschenman and Fasano (2012) believed that “to be successful, the 21st-century engineer must be prepared to lead” (p. 189). He or she must be able to speak to an audience of one or of thousands to make a point, sell an idea, a concept, a study, an

alternative while empathizing with the audience and adapting engineering terms into common language (Copeland, 2014; Gurke, 2011; Kennedy, 2006). Many of the routine, repetitive aspects of engineering have become a commodity and are frequently outsourced overseas, making it more important for young engineers to have the skills to “move up the design leader and managerial positions faster” (Kennedy, 2006, p. 15).

According to Waddell and Skinner (1928),

It is conceded that the engineer must take his proper place in society as a leader and manager rather than as merely a follower of the lawyer, the businessman, and the politician; and when he does so, an important step in the advancement of the engineering profession will have been taken.

(p. 186)

“This was written nearly 80 years ago. However, the statement is still true today” (Kirschenman & Fasano, 2012, p. 189). Great strides have been made during the last 80 years. Twenty-four out of the top100 CEOs in the world hold engineering degrees (Harvard Business Review staff [HBR], 2014). Recruiting firm, Spencer Stuart, found that 33% of the of S&Ps 500 CEOs have engineering degrees with only 11% having degrees in business administration (Rennie, 2014). These figures are understandable for technology firms, but many of the organizations are not in that category (Rennie, 2014).

According to Galloway (2007),

In an article entitled “Twenty-First Century Leadership Challenges,” published in May 2005 in *Engineering Times*, the magazine of the Engineers, Ralph R. Peterson, the chairman and chief executive officer of CH2M Hill, a global engineering firm, wrote: It’s not enough to simply design and build projects. We

must 1) grasp the totality of our client's mission, 2) develop solutions that add value to the client's mission, and 3) link our compensation to the value-added outcomes as defined by our clients. (p. 47)

To achieve these objectives, Lau (2015) recommended a process he called *leveraging*. It starts with a growth mindset. Exemplary engineering leaders invest in their own learning by carving out time for growth. They develop a deeper understanding of areas already being worked on, something "Steven Sinofsky, the former head of Microsoft's Windows division calls 'adjacent disciplines'" (Lau, 2015, p. 33). Using the word *leadership*, W. S. Wright (2013) has created a mnemonic for the 10 key behaviors for successful leaders in the engineering industry as shown in Figure 10.

The future prosperity of America is tied to the future of engineering; technology is the vehicle that will carry this country through this century and into the next century (Grogan, 1991; Gurke, 2011; Hall et al., 2015). To do this, engineers must have excellent character and the ability to inspire followers (Hall et al., 2015; Hargreaves, 2011; Kirschenman & Fasano, 2012). They must have an understanding of empathy, communication, and trust as building blocks of sustainable relationships (Gurke, 2011; Hall et al., 2015; Hargreaves, 2011; Kirschenman & Fasano, 2012). Engineers must have the ability to convey a vision, and they must possess technical knowledge, experience, and wisdom to lead others (Gurke, 2011; Hall et al., 2015; Hargreaves, 2011; Kirschenman & Fasano, 2012). It is important to know and understand how engineers can learn these behaviors and develop the skills necessary to become exemplary leaders.

<p><b>Love it to lead it:</b> <i>A leader who enjoys their work and learns something new each day is a pleasure to work with. We all carry a passionate place inside us. To lead people in the science, architecture, and engineering practices today, you must know and understand where you passion lies and demonstrate openly how much you love what you are doing.</i></p>
<p><b>Engage enthusiastically:</b> <i>Enthusiasm is contagious. If you engage people enthusiastically, it generates more energy, passion, drive, and many good things at work. This is what sets people, teams, and companies apart. Leaders need to engage each person tuned to their unique skills and attributes. Not everyone is an extrovert and good leaders need to temper and time their enthusiasm to get the most from their team.</i></p>
<p><b>Aware and available:</b> <i>It is hard to lead from behind a closed door. This includes making yourself unavailable because of a heavy workload or being distracted by things such as the bottom line, weekend plans, or advancing your career more than advancing the team you are leading. Being aware of the teams' needs means knowing their strengths and weaknesses; what stimulates and what distracts them; and when to jump in and help. Walk through the office, offer a random "how are you?" are great ways to keep aware of your team personally and professionally.</i></p>
<p><b>Direct the drive:</b> <i>Openly help the team achieve their goals. Every employee has a career objective and a goal whether they realize it or not. These objectives and goals stem from the individual personality and drive behind their work. To be effective, the engineering leader must understand the drive that resides in each member of the team. By helping junior employees vision their career path, you become their partner.</i></p>
<p><b>Encourage:</b> <i>Delivery matters—it is everything. Giving orders, shouting direction, freaking out, and micro managing are not good ideas in today's workplace. Encouragement is more than the way you say something. It includes what you say and how you follow up. Check in often with your team both as a group and individually. Be aware of lapses in judgment or loss of enthusiasm. Encourage careful risk-taking early on in a project to vet new ideas. Set challenges that are fun and meaningful.</i></p>
<p><b>Realistically reward:</b> <i>While money motivates employees, it is not as strong a motivator as it was thirty years ago. Today's professionals have deeper interests than a paycheck. Many have side businesses and want flexible hours, some want to work from home; others want the newest and most advanced tools. Take the time to build a toolbox of options that match the vision of your firm and the goals and objectives of its employees.</i></p>
<p><b>Success breeds success:</b> <i>Great leaders never stop being successful in their profession. Always keep some time for clients and practicing your chosen skill sets. Leaders demonstrate by example when they stay engaged with work that their team perceives as relevant.</i></p>
<p><b>Help honestly:</b> <i>From time to time, you will need to jump in, roll your sleeves up and help your team out. This does not mean rewriting every report to "make it your own" during the final review. Be honest and accurate with the help you offer. Check the work, offer suggestions, encourage rewrites or redesigns if needed. If you suggest design alternatives, do it early in the process to avoid schedule and budget demands that last minute ideas create. Never fake a review or be disingenuous with your teams. Be the guru your team expects you to be.</i></p>
<p><b>Inspire to innovate:</b> <i>Not everyone is a self-started. People and teams need inspiration. Your job as a leader is to provide that inspiration. Clearly communicate the company's vision of its business mission to your team. Simply being "the best" or "the highest quality" does not cut it. Teams respond when they know what they're doing will make a difference, effect positive change or address big picture problems. Leaders provide the threads of connection between each daily assignment to the bigger picture.</i></p>
<p><b>Patience—it is personal:</b> <i>You and your team will spend more time together than you will at home with your friends and families. Business and working together is personal – our lives depend on it. So find the pleasure in working with all your teammates. Show patience and understanding with all things your team experiences. Leaders never freak out. Leaders always have a path forward. Leaders hold the vision of where we are going and how we will get there. Your team counts on you every day for these attributes. They watch and learn from what you do and say.</i></p>

Figure 10. Ten key behaviors for exemplary engineering leaders. From "Top 10 Attributes for Successful Leaders in the Engineering Industry," by W. S. Wright [Web log post], July 25, 2013. Retrieved from <http://www.geoengineers.16penny.net/blog/top-10-attributes-successful-leaders-engineering-industry>

One organization that has successfully made this bridge is, Cisco Systems, Inc. This company has been able to attract and retain some of the best engineers by empowering others and sharing CEO John Chambers's vision and meaning in life "to change the way the world works, lives, and plays" (Byrne, 2000, p. 212). By sharing a vision, such as Chambers has done, people become engaged in their work, have a sense of purpose, and find that they contributing to something greater than themselves. These attributes create meaning at work.

### **Summary**

Work gives you meaning and purpose and life is empty without it.

—Steven Hawking, *Psychology Corner*

Leadership has never had a concrete definition, although it does rely on influence and followers to exist. Many scholars have described the traits, skills, personalities, behaviors, and cultures that contribute to the success or demise of leaders. Each theory has built on the one before it by evaluating the weaknesses and challenging the strengths. From the continued push and pull of leadership theories, a full-range of theories exist, from laissez faire to transactional to transformational to authentic leadership. Likewise, meaning takes many forms and is unique to each individual person because of values, personalities, culture, need to belong, and service to others. However, at its core, purpose must exist. It is what gets us out of bed in the morning and moving through the inevitably difficult times in life.

The literature has revealed that these two totally different subjects have not run parallel to each other throughout history, but instead, have now converged into the same location—the workplace. People look to their leaders to find meaning at work that is

authentic to who they are. People are no longer content to live lives that are not congruent with their beliefs and their perception of themselves—of who they want to be—how they want to live their lives. Leaders must have authentic transformational leadership skills to manage this convergence of leadership and meaning. There are many leadership attributes, with character, inspiration, relationships, vision, and wisdom being among the most important ones for authentic transformational leaders to possess. Rather than being individual components on a linear scale, these attributes are part of a multidimensional framework from which leaders must lead.

To lead others, leaders must be trustworthy because people will not follow those they do not trust. When trust and respect are established, relationships can be formed based on strong character and sustained through active listening, recognition, and acknowledgement of one another. Within the relationship, individual goals are expressed, a common vision is shared, and knowledge is exchanged through wisdom. Sharing a common vision and working toward a goal greater than oneself in a wise, directed manner motivates, inspires, and provides meaning in work. This is true for all leaders; however, chief executive officers of engineering technology organizations have unique opportunities in leading followers.

As technology continues to lead this country into the future while advancing at logarithmic speeds, engineering leaders must quickly and efficiently integrate meaning for themselves, their followers, and the organization. They must be ready to change direction and redirect with little notice, often and quickly while simultaneously sustaining employee engagement and retention. This increases the urgency of creating meaning in the workplace and sharing a common vision with followers. Equipping engineering



leaders now with the ability to enhance their character, wisdom, and ability to inspire others; form solid, positive relationships; and create shared visions will help ensure the stability of the workforce, organizations, communities, this nation, and the world.

## CHAPTER III: METHODOLOGY

This chapter describes the methodology of the study. It includes the introduction, the purpose statement, research questions, and a description of the research design, the research methodology, and a description of the population and sample, instrumentation, data collection, and limitations as well as a summary. The researcher sought to identify the behaviors used by exemplary chief executive officers of engineering technology organizations to bring meaning to themselves, their followers, and the organization. Additionally, the researcher looked at follower perception of the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning.

### Overview

Every discourse, even a poetic or oracular sentence, carries with it a system of rules for producing analogous things and thus an outline of methodology.

—Jacques Derrida, *Brainy Quote*

Methodology is the plan or design that describes the procedure used to answer the research questions (Patton, 2015; Roberts, 2010). When determining the methodology of a study, the purpose is used to identify the type of research. For this study, “questions deemed important by one’s discipline or personal intellectual interest” are described as basic research (Patton, 2015, p. 250). Once the type of research and purpose statement are articulated, questions that support the purpose statement are developed. Cox and Cox (2008) referred to these as the *guiding questions* which “establish a focus” (p. 2) and are referenced in this study as the research questions. When developing the research questions, the type of question will guide the choice of research method. Questions that

ask *how* and *what* are indicative of qualitative research and questions that ask *can*, *will*, and *do*, as well as questions that quantify the data, generally lead to quantitative research. When both methods are used together in research, it is then identified as a mixed-methods study.

### **Purpose Statement**

The purpose of this mixed-methods case study was to identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration. In addition, it was the purpose of this study to determine the degree of importance to which followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help create personal and organizational meaning.

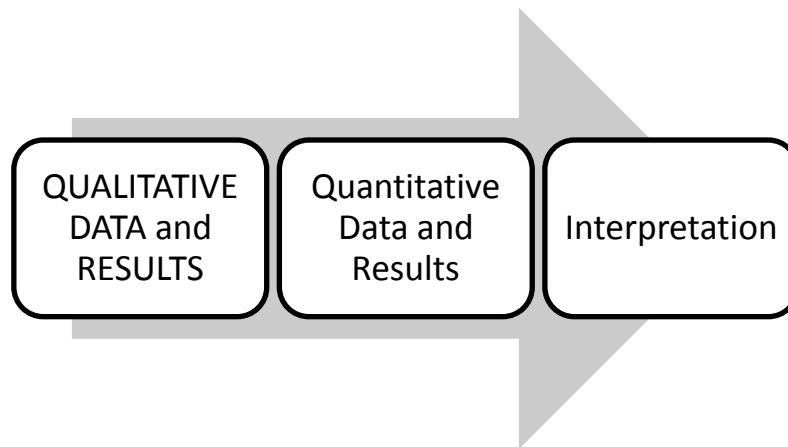
### **Research Questions**

1. What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?
2. To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?

### **Research Design**

Research design is the procedure used for data collection, analysis, evaluation, and report writing. The “decisions about design, measurement, analysis, and reporting all

flow from purpose” (Patton, 2015, p. 248). This research design was a descriptive, exploratory mixed-methods, multiple-case study of what behaviors are exhibited by exemplary chief executive officers of engineering technology organizations when creating meaning for themselves, their followers, and the organization. The intent of this study was to observe and inquire about types of behavior used to bring meaning to organizations. By using an exploratory mixed-methods design, the priority was placed on the qualitative data and results. It was followed up with quantitative data and results to support the qualitative data and aid in interpretation as shown in Figure 11.



*Figure 11.* Exploratory mixed-methods design. Adapted from *How to Design a Mixed Methods Study*, by J. W. Creswell and V. L. Plano Clark, July 2004, symposium conducted at meeting for Andrews University, Battle Creek, Michigan. In “Overview of Mixed Methods Research Design” June 2016 Immersion, Brandman University, presented by Doug DeVore, Ed.D.

The group of 12 peer researchers collaboratively decided that open-ended questions in the form of interviews with three exemplary leaders would provide qualitative data from which to generate inductive analysis on the specific behaviors used when creating meaning. Likewise, the peer researchers decided that close-ended survey questions would allow deductive analysis to compare and contrast with the qualitative data obtained during the interviews. The purpose statement, type of research, and

guiding questions required a mixed-methods design that used both qualitative and quantitative methods.

A case study is an in-depth, empirical investigation of the complexity of a current phenomenon within real-world context especially when the relationship between the phenomenon and the context is not clearly defined (Bromley, 1986; Stake, 1995; Yin, 2009). Merriam (1988) emphasized case study as being a *bonded* system where the “unit of analysis, not the topic of investigation, characterizes a case study” (p. 41). Yin (1994) stressed the importance of vigorously investigating characteristics in a small number of cases to learn features of the phenomenon and the circumstances under which they differ. He recommended using case study method for investigative research (Yin, 1994).

### **Research Methods**

The 12 peer researchers collaboratively selected a mixed-methods case study consisting of both qualitative and quantitative research methods. The qualitative portion consisted of in-depth interviews of three exemplary leaders within specific fields selected by each peer researcher. The quantitative portion consisted of electronic surveys sent to 12 followers of the chief executive officers of engineering technology organizations.

### **Qualitative Methods**

Qualitative research “is based on the philosophical orientation, called phenomenology, which focuses on people’s experience from their perspective” (Roberts, 2010, p. 143). There are three main forms of data collection in qualitative research, which typically come through interviews, observations, and review of a variety of documents and artifacts (Patton, 2015; Roberts, 2010). The qualitative research for this study was conducted with three exemplary chief executive officers of engineering

technology organizations. The qualitative process involved searching for understanding and meaning and was descriptive, inductive, consisted of interviews and used purposive sampling for the collection of intensive data (Creswell, 2014; Roberts, 2010). Because the research questions for this study looked at what behaviors are used by exemplary chief executive officers in technology engineering, and the data were obtained through in-depth interviews, the research is qualitative in nature.

### **Quantitative Methods**

Quantitative research tests the relationships between variables, and is explanatory, deductive, consists of standardized measures, and uses large, random sampling to measure a limited set of variables (Creswell, 2014; Roberts, 2010). Patten (2012) stated that quantitative research has the potential to reach larger sample populations because questionnaires are easy to administer to a large number of participants at the same time. Quantitative data can be collected in a short amount of time and can easily be reduced to statistical analysis. The quantitative research was conducted by providing a survey to the followers of the exemplary chief executive officer of technology engineering firms who were chosen to participate in the qualitative interviews. The followers were asked to state their perception of the degree of importance of the behaviors related to character, vision, wisdom, relationships, and inspiration to create meaning within organizations. The quantitative approach allowed researchers to determine the degree of importance the followers perceived the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning.

## **Mixed Methods**

A mixed-methods design “emphasizes the overall problem, purpose, and research questions that are guiding the study” (Creswell & Plano Clark, 2011, p. 60). When using both qualitative and quantitative data together in research, the study becomes a mixed-methods study, is richer, and provides a more complete understanding of the data (Creswell, 2014; Roberts, 2010). The premise was that both qualitative and quantitative methods have strengths and weaknesses, and mixed-methods provide a means for triangulating the data from both methods for greater accuracy and insight (Creswell, 2014).

## **Research Procedures**

Three chief executive officers of engineering technology organizations were selected to answer qualitative, open-ended questions. The questions were prepared by and collaborated with the 12 peer researchers under the guidance of the faculty leadership team. The criterion-based, purposeful sampling strategy of selecting case examples “provides rich and deep understanding of the subject and breakthrough insights, and/or has distinct, stand-out importance” (Patton, 2015, p. 273).

The population of exemplary chief executive officers of engineering technology organizations was identified after completion of the National Institutes of Health (NIH) Office of Extramural Research program, “Protecting Human Research Participants” (Appendix A) and following approval of Brandman University’s Institution Review Board (BUIRB; Appendix B). After selecting a population of exemplary chief executive officers of engineering technology organizations, three exemplary leaders were selected from the list using purposeful sampling based on the selection criteria and accessibility

for face-to-face or telephone interviews based on the CEO's schedule. The student researcher contacted the exemplary chief executives officers of engineering technology organizations via telephone or e-mail, depending upon the CEO's preference. A 60-minute, face-to-face meeting or telephone interview, depending on the CEO's schedule, was scheduled with each of the three exemplary chief executive officers of engineering technology organizations. As explained during the telephone conversation, through email correspondence, and prior to the meeting with the student researcher, the following documents were e-mailed to the exemplary chief executive officer of engineering technology organizations for review:

- Informational letter (Appendix C)
- Research study invitation letter (Appendix D)
- Research Participant's Bill of Rights (Appendix E)
- Informed consent form sample (Appendix F)
- Audio release form sample (Appendix G)
- Script Question Instrument (Appendix H)

A follow-up phone call or e-mail was made 24 hours prior to the appointment for confirmation and clarification of any questions the participant may have had. Once at the appointment, the student researcher collected two each of the following forms, signed and dated by the participant:

1. Informed consent form
2. Audio release form

The student researcher also signed and dated both forms, leaving one set of the fully executed forms with the participant and retaining the second set for research purposes.



The researcher worked directly with the selected executives to identify 12 followers who were part of the leadership team. Confidentiality procedures were followed by omitting identifying documents from the research paper and by locking any identifying documents in a file cabinet (McMillan & Schumacher, 2010; Patton, 2015; Roberts, 2010).

The quantitative survey instrument was administered electronically through SurveyMonkey® to 12 purposefully selected, criteria-based followers of the exemplary chief executive officers of engineering technology organizations. For the purpose of this study, a follower was defined as a member of the leadership team who had responsibilities for managing different aspects of the organization. The group of followers included chief information officers, directors, chief financial officers, director of personnel services, coordinators, administrators, and so forth.

### **Population**

In research, the population is the entire group of “individuals, objects, or events, that conform to specific criteria and to which we intend to generalize the results of the research” (McMillan & Schumacher, 2010, p. 129). The thematic study focused on exemplary leaders who create meaning for themselves, their followers, and their organization. Each researcher on the thematic team selected a specific organization of exemplary leader to study. This study’s population focused on exemplary chief executive officers of engineering technology organizations.

In 2016, the National Society of Professional Engineers estimated that there were over 2 million practicing engineers in the United States; however, the 2014 Congressional Research Service estimated that there were 6.2 million scientists and engineers employed in the United States in 2012. They broke this into two occupational

groups: computer engineering technology occupations (3.6 million) and engineers (1.5 million) with the remaining 1.1 million accounted for in management, physical scientists, life scientists, and mathematical occupations (Sargent, 2014).

A population of 6.2 million engineers was still too large to study. Both computer engineering technology occupations and engineering occupations are closely related and bear many similarities (ABET, n.d., para. 2). Therefore, the study was narrowed to a general population of 3.6 million people working in computer engineering technology organizations.

### **Target Population**

Roberts (2010) stated, “Ideally, an entire population would be used to gather information. However, this is usually not feasible as most groups of interest are either too large or are too scattered geographically” (p. 149). A target population is the entire set of individuals chosen from the overall population for which the study data are to be used to make inferences (Creswell, 2014; McMillan & Schumacher, 2010; Patton, 2015). The target population defines the population to which the findings of a survey are meant to be generalized. It is important that target populations are clearly identified for the purposes of the research study (McMillan & Schumacher, 2010).

The general population of 3.6 million computer engineering technology individuals was still too large and scattered to work with effectively, so the target population was narrowed to engineering technology organizations in California. The target population of engineering technology organizations in California was obtained by using the Altius Directory of California technology companies which lists more than 700 organizations with more than 100 employees each. Roberts (2010) stated, “Ideally, an

entire population would be used to gather information. However, this is usually not feasible as most groups of interest are either too large or are too scattered geographically” (p. 149).

### **Sample**

The sample is a group of participants in a study selected from the population from which the researcher intends to generalize (McMillan & Schumacher, 2010; Patton, 2015; Roberts, 2010). It is typically not feasible to study large groups due to time and/or cost constraints; therefore, the researcher used purposeful sampling of accessible population samples from within the larger group of chief executive officers of engineering technology organizations in California. The challenge was in limiting the sample to a workable number that still represented the entire population. Again, a target population of 700 California technology organizations was too large for the purposes of this study. In addition to the Altius Directory (2016) of California list of technology organizations, a secondary source, Glassdoor, identified 25 of the best technology companies to work for in 2016 (Bort, 2016).

A purposeful sampling selects specific, “information-rich cases for in-depth study” (Patton, 2015, p. 264). Roberts (2010) stated, “The idea behind qualitative research is to purposefully select participants . . . that will best help the researcher understand the problem and the research question” (p. 189). Further, “theory-focused and concept sampling [uses] select cases for study that are exemplars of the concept or construct that is the focus of inquiry to illuminate the theoretical ideas of interest” (Patton, 2015, p. 269). It was decided that purposeful sampling was the best sampling

method for understanding the behaviors used by exemplary leaders in bringing meaning to themselves, their followers, and the organization.

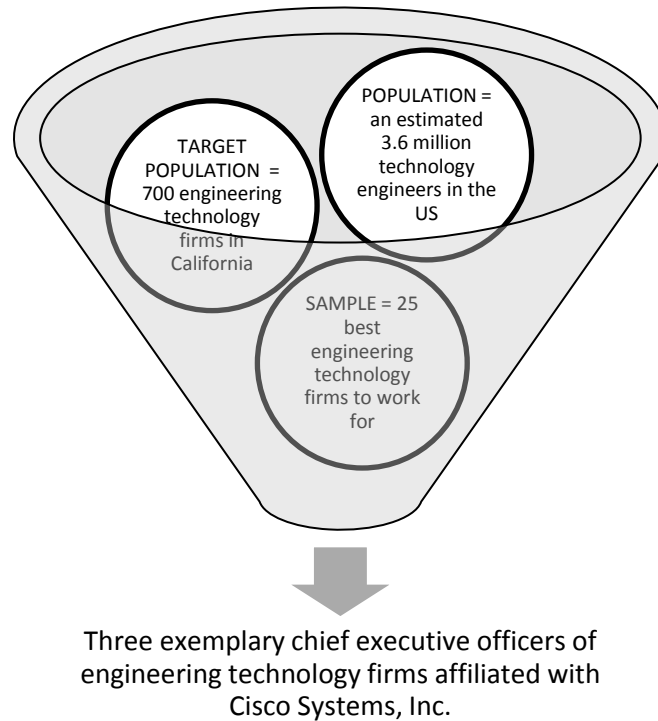
A review of organizations listed by Glassdoor and the Altius Directory of California identified a Southern California organization, Cisco Systems, Inc., as meeting the criteria of being a large, engineering technology organization that would provide “information-rich cases—cases from which one can learn a great deal about the focus of inquiry and which therefore are worthy of in-depth study” (Patton, 2015, p. 308).

Therefore, Cisco Systems, Inc. and its affiliate companies were selected as the sample population. For purposes of this study, an expert familiar with technology companies affiliated with and within Cisco Systems, Inc. was asked to nominate three technology executives perceived to meet the selection criteria. The expert worked within the Cisco organization, had more than 10 years of experience in technology engineering and sales, and was familiar with a larger number of executives who would meet the study criteria. The researcher worked directly with the selected executives to identify 12 followers who were part of the leadership team.

For purposes of this research, exemplary leaders are defined as those leaders who are set apart from peers by exhibiting at least five of the following six characteristics:

- Evidence of successful relationships with followers;
- Evidence of leading a successful organization;
- A minimum of 5 years of experience in the profession;
- Articles, papers, or materials written, published, or presented at conferences or association meetings;
- Recognition by their peers;

- Membership in professional associations in their field.



*Figure 12.* Graphical representation of the population and sample funnel.

### **Instrumentation**

Both qualitative and quantitative instruments were developed collaboratively by the thematic research team, faculty advisors, and instrumentation expert, Dr. James Cox. The 12 student researchers were divided into four teams. Each team of three researchers developed a databank of behavior-related questions based on the literature review and specific to the two variables assigned to their team. Five questions for each of the variables were then submitted to Dr. Cox and the faculty advisors for review and preliminary instrument creation. Upon completion of the initial draft, all 12 thematic team members, the faculty advisors, and the instrument expert, reviewed, revised, and finalized both the qualitative and quantitative instruments.

The qualitative data from the interviews with the test participant exemplary leaders and the quantitative data from the surveys given to the field-test participants were used to validate the questionnaires. Validity and reliability for both qualitative interview questions and quantitative survey questions were established by following the nine basic steps for questionnaire development:

1. Establishing the guiding questions
2. Operationalizing the guiding questions
3. Writing items and formatting responses
4. Designing the questionnaire
5. Writing directions
6. Categorizing respondents
7. Conducting the alignment check (Appendix I)
8. Validating the questionnaire
9. Marketing the questionnaire. (Cox & Cox, 2008, pp. xi-xii)

A script created with open-ended questions, including scripted yes/no alternatives for clarification, and generic probes (Appendix J), was developed by student researchers and reviewed and validated by faculty advisors and instrumentation expert to aid the student researchers during the interview process. All researchers used the same interview questions and read from the script verbatim to maintain interrater reliability (Patton, 2015).

### **Reliability Field Test**

Qualitative reliability is of particular importance in thematic research as it is essential that each researcher's approach matches the others and that the approach

remains the same with different projects (Creswell, 2014; Gibbs, 2007). More simply stated, “A test is said to be reliable if it yields consistent results” (Patten, 2012, p. 73). All 12 peer researchers conducted a field-test interview with an exemplary leader in their field of study during September 2016. This researcher interviewed an engineer with similar characteristics of the sample group on September 8, 2016 (Appendix K). The test interviewee was not used in the final study. The interview questions were created and decided upon in advance under the guidance and direction of faculty researchers and Dr. Jim Cox. All peer researchers read the same questions verbatim so as to maintain consistency and reliability.

Quantitative reliability was maintained with a test-retest measure. Five to 7 days following the administration of the survey, the same test was administered to the same group of five people. The results were then evaluated for consistency and reliability. The survey responses were then sent to a third-party evaluator for collection through SurveyMonkey®.

### **Validity Field Test**

Patton (2015) stated, “In qualitative inquiry, the researcher is the instrument. The credibility of qualitative methods, therefore, hinges to a great extent on the skill, competence, and rigor of the person doing the fieldwork” (p. 22). By conducting a test interview and field-test feedback review with a participant who possesses similar characteristics of the sample population, the validity of the instrument was evaluated and changes were made to it as agreed upon by the research team. A consistent method of interviewing was established by requiring each peer researcher to conduct a field test of

the interview script questions with an observer present and then to reflect on the experience with the observer (Appendix L).

Patton (2015) explained, “Validity in quantitative research depends on careful instrument construction to ensure that the instrument measures what it is supposed to measure. The instrument must then be administered in an appropriate, standardized manner according to prescribed procedures” (p. 22). In short, validity is how well your instrument measures what you are trying to measure (Roberts, 2010). Following the second test, all participants were asked to evaluate the quality of the survey based on clarity, appropriateness, validity, reliability, and ease of use. The results of the participant evaluation were sent to the faculty advisors and instrument expert for review, evaluation, and revision as needed. The final survey, titled Leader Behaviors 2.0 (Appendix M) was entered into SurveyMonkey® by the third-party evaluator for use during the data collection phase of research.

### **Data Collection**

Data collection did not begin until completion of the “Protecting Human Research Participants” web-based training course through the National Institutes of Health (NIH) Office of Extramural Research (Appendix A) and after receiving approval (Appendix B) from Brandman University Institutional Review Board (BUIRB). Data were collected using two different methods. The qualitative data were obtained through face-to-face or via telephone interviews, depending on the CEO’s schedule, transcribed, and approved by the participant before being analyzed. The quantitative data were obtained through an electronic survey questionnaire administered online through SurveyMonkey®.



## **Researcher as an Instrument of the Study**

When piloting qualitative research, the researcher is known as the instrument (Patten, 2012; Patton, 2015). Due to the researcher being the instrument in a qualitative study, Pezalla, Pettigrew, and Miller-Day (2012) contended that the unique personalities, characteristics, and interview techniques of the researcher may influence how the data are collected. As a result, the study may contain some biases based on how the researcher influenced the interviewee during the qualitative interview sessions.

For this study, the researcher was employed in a multidiscipline engineering firm. As a result, the researcher brought a potential bias to the study based on personal experiences in a similar setting to those which were studied. The researcher conducted qualitative interviews with the research participants. The interview questions and responses were conducted face-to-face or via telephone depending on the CEO's schedule and were recorded digitally via a handheld recording device supplemented by note taking. The researcher was an experienced transcriptionist and therefore, did not hire a confidential transcriptionist to transcribe each interview. All interviews were transcribed by the researcher.

## **Qualitative Data Collection**

Qualitative data were collected during 30- to 60-minute, face-to-face or via telephone interviews with exemplary chief executive officers of engineering technology organizations. To maintain consistency and reliability, the open-ended questions were read verbatim from the script of questions created collaboratively by the thematic researcher team and faculty advisors. The interviews were digitally recorded using the Express Dictate app on the iPhone concurrently with the NCH Express Dictate Digital

Dictation software on the iPad. The student researcher used the NCH Express Scribe Transcription software to transcribe the interviews. Themes and patterns were identified and coded for analysis. Using another peer researcher to identify themes and patterns as well as coding insured the reliability of the evaluation and analysis of the data.

### **Quantitative Data Collection**

Quantitative data were collected through a survey questionnaire developed by the thematic research team, faculty advisors, and instrumentation expert. The questions were entered into an electronic survey questionnaire housed in the SurveyMonkey® software system. The system automatically collects the data as questions are answered and records them for later analysis. Each researcher was assigned a code, which was given to each participant to enter into the survey. The code ties the survey answers to the specific field of study being conducted by each of the 12 researchers. The researcher can access the system and filter the responses with the code specific to his or her participants rather than by participant-identifying information. The pass code ensures participant confidentiality.

### **Data Analysis**

Qualitative data were collected through face-to-face or telephone interviews, based on the CEO's schedule, from a script of open-ended questions that was later transcribed and evaluated for common themes and patterns. The quantitative data were collected through an electronic survey instrument. After all data were collected, they were analyzed using the following methods.

### **Qualitative Data Analysis**

The researcher used the NCH Express Scribe Transcription software to transcribe the interviews. To insure accuracy, the transcriptions were sent to the participant for

review, comment, and approval. All transcripts were typed and reviewed by the researcher. Using interrater reliability practices, the researcher and a peer researcher independently and then jointly examined the material for themes and patterns as related to the five variables, character, inspiration, relationships, vision, and wisdom. This process was performed by the researcher and peer researcher twice for each transcript. NVIVO, a qualitative data software program was used for coding and frequency measurement. The behavior codes showing a greater frequency indicate a greater strength of the coded behavior. Following the analysis of the qualitative data collected from the interviews, the quantitative data were analyzed and compared to the qualitative data using interrater reliability procedures with the researcher and a peer researcher.

### **Quantitative Data Analysis**

The quantitative data were collected through the use of deploying an electronic survey questionnaire through SurveyMonkey®. It was administered to 12 followers of each of the three exemplary engineering chief executive officers of engineering technology organizations for a total of 36 surveys per peer researcher. Descriptive statistics were then used to answer the second research question, “To what degree do followers perceive the behaviors related to character, inspiration, relationships, vision, and wisdom help to create personal and organizational meaning?” Descriptive statistics allowed the researcher to analyze the quantitative results obtained from the survey given to the followers of the chief executive officers of engineering technology organizations. McMillan and Schumacher (2010) added, “Descriptive statistics are used to transform a set of numbers or observations into indices that describe or characterize the data” (p. 149). Descriptive statistics therefore provide simple summaries about the measures.

Together with simple graphics analysis, descriptive statistics were the fundamental way to present data and to interpret the results in this quantitative research study (McMillan & Schumacher, 2010). This process allowed the researcher to summarize the quantitative data and analyze them within the framework of Research Question 2.

Through the use of inferential statistics, the student researcher was able to estimate the behaviors of the population of exemplary chief executive officers in engineering technology organizations. McMillan and Schumacher (2010) explained, “Inferential statistics, on the other hand, are used to make inferences or predictions about the similarity of a sample to the population from which the sample is drawn” (p. 149).

### **Central Tendency**

The central tendency provides a numerical index of a data set and its associated distribution. Central tendency includes three indices: mean, median, and mode. The mean is the most common of the central tendencies and is used to determine the average of all scores. The median describes the center score of the data set whereby half of the scores fall above and half fall below the middle score. The mode is the score which occurs most frequently (McMillan & Schumacher, 2010). This study used mean and frequency of response.

### **Limitations**

The limitations of the study are those characteristics that may negatively affect the results of the study. They are generally areas outside of the control of the researcher (Roberts, 2010). Limitations may exist in the research design, methods, and/or methodology that set limits on the application or interpretation of the results of the study.

Limiting the sample to a specific area in California may not accurately reflect the behaviors of technology engineers as a population, especially at a national or global level. Additionally, culture, gender, ethnicity, and age were not considered for this study; however, it is recognized that they may individually or collectively affect the results of the research. Because the researcher served as the instrument of the qualitative portion of the study, there may be limitations to the consistency of qualitative data. Additionally, there may be unintended researcher biases.

### **Summary**

This chapter discussed the methodology for the research on what behaviors exemplary chief executive officers of engineering technology organizations use to create meaning for themselves, their followers, and the organization through character, inspiration, relationships, vision, and wisdom. The group of 12 peer researchers used the same purpose statement, research questions, research design, instrumentation, and data collection. The population of exemplary leaders was narrowed to 12 different fields and then further reduced by geographical location. Each peer researcher researched one of the 12 fields. This study focused on exemplary chief executive officers of engineering technology organizations in California.

## CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

This mixed-methods case study identified and described the behaviors associated with character, inspiration, relationships, vision, and wisdom as they relate to how exemplary chief executive officers of engineering technology organizations create meaning for themselves, their followers, and their organizations. Additionally, this study identified the degree of importance to which followers believe these behaviors create meaning within the context of the five variables. This chapter describes the qualitative data obtained through interviews with exemplary chief executive officers of engineering technology organizations and the quantitative results procured through an electronic survey e-mailed to their followers. This chapter begins with a review of the purpose statement, research questions, population, sample used for the study, and methodology used in the study. The data collected from the qualitative interviews address Research Question 1 and the data from the quantitative surveys address Research Question 2. The qualitative data are presented in a narrative format including direct quotes from the interviewees. The quantitative data are also presented in narrative form, including tables and figures. This chapter then concludes with a presentation of the data and a summary of the findings.

### **Purpose Statement**

The purpose of this mixed-methods case study was to identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration. In addition, it was the purpose of this study to determine the degree of importance to which followers

perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help create personal and organizational meaning.

### **Research Questions**

1. What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?
2. To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?

### **Research Methods and Data Collection Procedures**

This study used an exploratory mixed-methods case study research design. It used both qualitative and quantitative methods to obtain data from different vantage points, thus providing richer and more comprehensive data (Creswell, 2014; McMillan & Schumacher, 2010; Patten, 2012; Patton, 2015). However, the priority was placed on the qualitative data and resulted with the quantitative data aiding in the interpretation of the data as shown in Figure 11.

Case studies obtain qualitative data through an in-depth investigation of a current phenomenon within real-world context (Creswell, 2014; Merriam, 1988; Yin, 2009). The qualitative data were obtained from three exemplary chief executive officers from engineering technology organizations affiliated with Cisco Systems, Inc., through face-to-face or telephone interviews, depending on the CEO's schedule. The questions, developed by the peer researchers, were open-ended and were guided by the Script

Question Instrument for the participant (Appendix H) and the script with prompts and generic probes for the researcher (Appendix J). Prior to interviewing any of the participants, a field test of the interview script was conducted by the researcher, and observed by a colleague, to ensure instrument validity.

Following the qualitative interviews, the participants were asked to forward a link containing the quantitative survey and a researcher-specific code to 12 of their followers. The survey was titled Leader Behaviors 2.0 (Appendix M) and was managed through the SurveyMonkey® software program. The survey asked close-ended questions to determine the degree to which followers perceived the behaviors related to character, inspiration, relationships, vision, and wisdom helped create personal and organizational meaning.

### **Interview and Survey Data Collection**

The researcher scheduled three face-to-face interviews with exemplary chief executive officers of engineering technology organizations; however, due to two of the chief executive officer's schedules, the interviews had to be rescheduled and conducted over the telephone. All three chief executive officers received the informational letter (Appendix C), research study invitation letter (Appendix D), Research Participant's Bill of Rights (Appendix E), informed consent form (Appendix F), audio release form (Appendix G), and Script Questions Instrument Participant Copy (Appendix H) via e-mail for review prior to the interview. All identifying information was coded to protect the identity and privacy of each participant. The codes were password protected and are located on the researcher's computer, which is also password protected. The signed and dated informed consent forms and audio release forms were converted to PDF format,



password protected, and are located on the researcher's password-protected computer. No hard copies of transcripts or participant information exist.

Each chief executive officer was asked the same interview questions as the questions were read verbatim from the Script Question Instrument for the participant (Appendix H) with researcher referencing the script with prompts and generic probes for the researcher (Appendix J) as needed. All interviews were recorded using a digital recording device and also with Voice Memos, an iPhone app. The telephone interviews were done over speakerphone so as to utilize the aforementioned recording methods. Additionally, the researcher took handwritten notes throughout the interview. The audio recordings were then transcribed by the researcher and coded by theme using the NVivo 11 software program.

Following the interviews, the researcher discussed the procedure for deploying the quantitative survey to 12 followers. A follower was defined as a member of the leadership team who has responsibilities for managing different aspects of the organization. This group of followers could include chief information officer, director, chief financial officer, director of personnel services, coordinators, administrators, and so forth. The quantitative survey, administered through SurveyMonkey®, assessed the degree of importance to which followers perceive the behaviors related to character, inspiration, relationships, vision, and wisdom. All three exemplary chief executive officers of engineering technology organizations were hesitant to release e-mail addresses of their followers, but agreed to forward an e-mail from the researcher to their followers. After leaving the interview, the researcher sent an e-mail containing the survey link and researcher-specific reference code with a brief explanation of the study as shown in

Appendix N to each CEO with the request that he forward it to his followers. After an unanticipated delay, all three participants confirmed that the e-mail had been released. This was verified when 33 out of 36 surveys were answered within a few days following each CEO interview. All responses were coded and results were sent directly to a third-party representative who was responsible for monitoring the returned responses. The numerical results were then sent to the researcher with mean and response frequency values. All data were stored electronically and password protected to ensure confidentiality.

### **Intercoder Reliability**

Gibbs (2007) stated that qualitative reliability exists when “the researcher’s approach is consistent across different researchers and different projects” (p. 98). For the purpose of this study, a peer researcher volunteered to code the three transcripts independently of the researcher’s work. The peer researcher’s codes were similar to those of the researcher’s codes and the number of references placed the five variables in the same order of importance as that of the researcher’s coding.

### **Population**

A research population consists of an entire group of “individuals, objects, or events, that conform to specific criteria and to which we intend to generalize the results of the research” (McMillan & Schumacher, 2010, p. 129). The general population for this study was exemplary chief executive officers of engineering technology organizations. The 2014 Congressional Research Service estimated that there were 3.6 million people employed in computer engineering technology occupations in the United States, which was too large a population for this study.

It was necessary to narrow the general population to a target population. A target population is the group of individuals selected from the general population for which the study data are to be used to make inferences (Creswell, 2014; McMillan & Schumacher, 2010; Patton, 2015). The target population was narrowed to engineering technology organizations in California by using the Altius Directory of California technology companies. It listed more than 700 companies with more than 100 employees each. From the 700 companies in the target population, a secondary source, Glassdoor, was used to narrow the target population enough to select a sample.

### **Sample**

The Altius Directory of California technology companies and technology firms rated by Glassdoor as being the “best to work for,” were referenced for organizations that would meet the criteria of being a large, engineering technology organization that would provide “information-rich cases—cases from which one can learn a great deal about the focus of inquiry and which therefore are worthy of in-depth study” (Patton, 2015, p. 308). Cisco Systems, Inc., and its affiliate companies were selected as the sample population. An expert familiar with technology companies affiliated with and within Cisco Systems, Inc., was asked to nominate three technology executives perceived to meet the selection criteria. The expert worked within the Cisco organization, had more than 10 years of experience in technology engineering and sales, and was familiar with a larger number of executives who would meet five of the six the study criteria as shown in Table 1.

Table 1

*Criteria Selection for Exemplary Chief Executive Officers of Engineering Technology Organizations*

	Participant 1	Participant 2	Participant 3
Evidence of successful relationships with followers	✓	✓	✓
Evidence of leading a successful organization	✓	✓	✓
A minimum of 5 years of experience in the profession	✓	✓	✓
Articles, papers, or materials written, published, or presented at conferences or association meetings	✓	✓	✓
Recognition by peers	✓	✓	✓
Membership in professional association in their field	✓	✓	✓

**Demographic Data**

All three participants for the qualitative interviews were identified as being exemplary chief executive officers of engineering technology organizations who met the criteria in Table 1. As shown in Table 2, all three leaders were male and each had 30 years of work experience in the field of technology. All three had bachelor's degrees with one being in the field of management information systems and marketing.

Table 2

*Demographic Data for Exemplary Chief Executive Officers of Engineering Technology Organizations*

	Participant 1	Participant 2	Participant 3
Gender	M	M	M
Years in current position	12	10	9
Approximate years in technology industry	30	30	30
Education degree	BS	BA	BS

The chief executive officers of engineering technology organizations forwarded this researcher's e-mail with the researcher-specific code and link to the Leader Behaviors 2.0 survey to 12 of their followers for a total of 36 quantitative surveys. The survey asked the followers to rate the degree of importance to which they believe

character, inspiration, relationships, vision, and wisdom help create personal and organizational meaning. There were 33 surveys completed for a 92% response rate. One of the respondents completed all survey questions, but declined to respond to the demographic questions, resulting in 32 demographic respondents as shown in Table 3. One respondent answered all of the survey questions and all the demographic questions, but omitted the number of years he or she had worked with the current leader. This resulted in 31 out of a possible 36 responses for the number of years worked with the current leader.

Table 3

*Demographic Data of Followers*

	# of Respondents	% of Respondents
Gender (32 respondents)		
Female	6	19%
Male	26	81%
Declined to respond	1	
Age (32 respondents)		
20-30 years	3	9%
31-40 years	8	25%
41-50 years	12	38%
51-60 years	8	25%
61+ years	1	3%
Declined to respond	1	
Years in organization (32 respondents)		
0-5 years	13	41%
6-10 years	8	25%
11-20 years	11	34%
21+ years	0	0%
Declined to respond	1	
Time with current leader (31 respondents)		
0-2 years	13	42%
3-5 years	7	23%
6-10 years	6	19%
11+ years	5	16%
Did not respond	2	

## **Presentation and Analysis of Data**

The data in this chapter were obtained qualitatively from three exemplary chief executive officers of engineering technology organizations through face-to-face interviews or telephone interviews, depending on the CEO's schedule. Quantitative data were obtained from 12 followers of each CEO by using an electronic survey instrument. Both qualitative and quantitative data are found in the following paragraphs as they relate to the research questions.

Following the interviews, the transcriptions were coded using the NVivo 11 Pro software. The five variables were established as parent nodes with child nodes created as various themes emerged. The theoretical and operational definitions of each variable as set forth in this study were used as guides for theme placement within the parent nodes. When comments such as "relationships are highly important," "vision is important for market leaders," and "character is probably the most important for me" could not be placed within a child node, they were placed directly into the parent node of that particular variable.

### **Data Results for Research Question 1**

The first research question asked, "What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?" For the purpose of this study, an exemplary leader was defined as someone set apart from peers in a supreme manner, suitable behavior, principles, or intentions that can be copied (Goodwin et al., 2014). Followers are organizational members who are responsible for the work performance of other

organizational members. They are managers with formal authority to use organizational resources and to make decisions. In organizations, there are typically three levels of management: top level, midlevel, and first level.

Theoretically, meaning is described as having a sense of purpose as a fundamental need, which leads to significance and value for self and others (Ambury, n.d.; Bennis, 1999; Csikszentmihalyi, 1990; Frankl, 2006; Kouzes & Posner, 2007, 2012, 2016; Mautz, 2015; Moore, 2008; Pearson, 2015; Varney, 2009; Yeoman, 2014). For the purpose of this study, the operational definition of meaning is the result of leaders and followers coming together for the purpose of gathering information from experience and integrating it into a process. This in turn creates significance, value, and identity within themselves and the organization.

When queried about the importance of character, inspiration, relationships, vision, and wisdom in creating meaning, all participants responded similarly, such as Participant 1, “Yes, for me they are all important.” He went on to say, “The importance of each depends on what your goal is. None is more important than another; however, they may be applicable to different situations in different degrees of importance at the time.” This was the beginning of a theme common to all three leaders—the challenge of continual innovation and change. Participant 3 stated, “Yes, we solve problems, but we don’t think of ourselves as problem solvers—we want to be ahead of any problems.”

When asked if any of the five variables jumped out as being absolutely essential, Participant 1 said, “Relationships are highly important as they are foundational in all aspects of leadership regardless of the situation or the goal.” Participant 2 stated “Vision is essential with character coming in close to that.” Participant 3 said, “Character is

probably the most important for me, but they all apply.” The data support relationship, vision, and character as being the most important for the participants with ratings of 26.9%, 21.9%, and 20.8% respectively as shown in Figure 13.

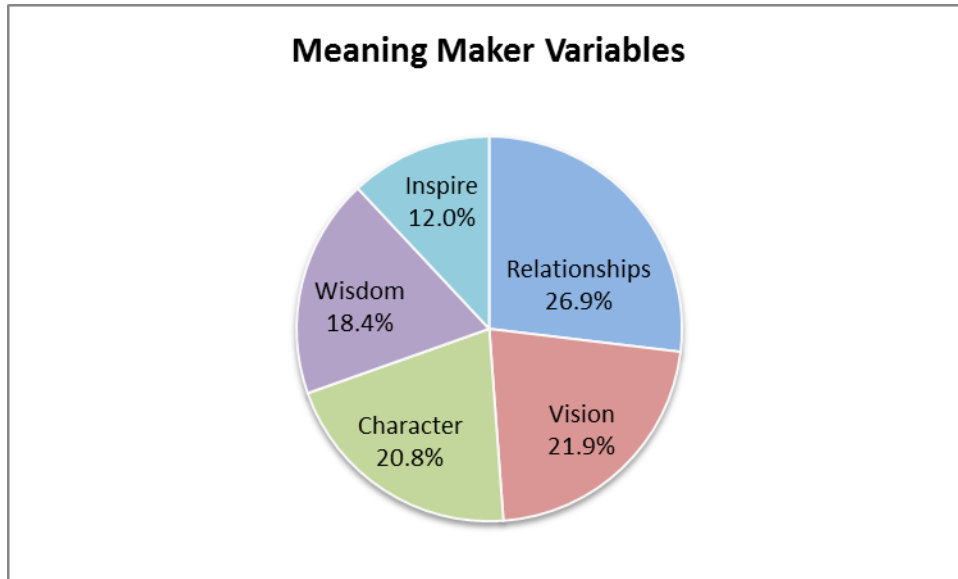


Figure 13. Meaning maker variables as a total percentage from a total of 342 references.

Relationships garnered the greatest number of responses in this study with a 26.9% response rate across all nodes. According to Porath (2014), “Being treated with respect [relationship] was more important to employees than recognition and appreciation, communicating an inspiring visioning, providing useful feedback—even opportunities for learning, growth, and development” (para. 1). It is interesting to note that Participant 2 stated that “relationships are probably my personal weakest area” and yet he referenced relationships 39 times, resulting in a 29.49% coverage, while Participant 1 referenced relationships 19 times (10.65% coverage) and Participant 3 referenced relationship 34 times (24.79% coverage).



Based on a response rate of 21.9% across all the nodes, the data coded for vision were seen as the second most important variable for the exemplary chief executive officers of engineering technology organizations. Bennis (1989) and Carless et al. (2000) would disagree and would place vision as the most important variable rather than second. Bennis (1989) believed that “the first leadership competency is management of attention through a set of intentions or a vision, not in a mystical or religious sense, but in the sense of outcome, goal, or direction” (p. 37). Cutler (2014) stated, “To me, leadership is fundamentally a basic human capability--how to inspire others to share and contribute to your vision” (p. 1).

At 20.8%, the data for character ranked third in this study. However, Kouzes and Posner (2012) and Peterson and Seligman (2004) placed character, including integrity, kindness, trust, and honesty, as the most foundational variable of exemplary leadership. Sankar (2003) stated, “Character influences his/her vision, goals, self-concept, strategies, work ethic, attitude, perception, code of ethics, behavior, and the search for excellence” (p. 48). All three chief executive officers of engineering technology organizations agreed that character weaves itself through the other variables affecting them all to some degree.

While the differences are slight, it should be noted that the literature review revealed that qualities such as trust and honesty were used interchangeably in relationships and character by Bass and Bass (2008), Bennis (1989), Kouzes and Posner (2007, 2012), Peterson and Seligman (2004), and Seligman (2011), thus accounting for some of the variation. Participant 3 commented that the one variable he “did not see on the list was motivation, which is very important.” He continued, “I guess it crosses over there with inspiration and everything else, so that should cover it in our discussion.”

Lastly, participant perception of the variables and how they utilized them to create meaning varied, such as Participant 2 previously stating that relationships are his weakest area, and yet during the interview, and based on the number of responses, it was evident that relationships were very important to him.

### **Major Finding for Relationships**

Theoretically, relationships were defined as the bonds that are established between people through encouragement, compassion, and open communication. This leads to feelings of respect, trust, and acceptance (Bermack, 2014; Frankl, 2006; George, 2003; George & Sims, 2007; Kouzes & Posner, 2007, 2012, 2016; Liborius, 2014; Mautz, 2015; McKee et al., 2008; Reina & Reina, 2006, 2007; Seligman, 2011; Ulrich & Ulrich, 2010). Operationally, relationships were defined as authentic connections between leaders and followers involved in a common purpose through listening, respect, trust, and acknowledgement of one another.

Behaviors related to relationships occurred in 26.9% of the thematic codes with 92 out of a total of 342 codes obtained from the interviews with the exemplary chief executive officers of engineering technology organizations as shown in Figure 13. This represents the greatest number of responses for the five variables. Two of the three participants emphasized that they have had to develop boundaries between personal and professional relationships. They expressed difficulty in doing so as the people in mind had been with them for a long time, often as stated by Participant 3, “they had started the company in the basement of someone’s home.” Participant 2 stated, “I am trying to transition my personal relationships with my long-term employee. I am not trying to change them; I am trying to make it about the company, not me.” Participant 3 similarly

stated,

I don't want to blur the lines. At the beginning of this organization, some of those lines got a little blurry and I realized that there has to be a separation. Although you try to keep everything amicable, but I think maybe some people don't realize that is the best for them as well.

Farson and Keyes (2002) explained,

Engaging with employees is demanding and risky; it can threaten a manager's [leader's] authority. The more involved you get with employees, the harder it becomes to reprimand them when necessary. Although not the same as personal friendships, engaged professional relationships resemble them in ways that can hinder the supervisory process. The challenge is to learn how to get closely involved with an employee's work without presuming to be pals. (para. 17)

While these exemplary leaders expressed an understanding of the importance of relationships, they also expressed an understanding of the importance and necessity of boundaries.

It is necessary to learn how to communicate and not dictate. All three chief executive officers of engineering technology organizations cited passion, communication, respect, and trust as important components in relationships. Prime and Salib (2014) cautioned, "Engage in dialogue, not debates" (para. 8). Farson and Keyes (2002) said,

That process is more collaborative than supervisory. Failure-tolerant managers [leaders] show interest, express support, and ask pertinent questions. . . .

Conversations are less about whether the project is succeeding or failing than about what can be learned from the experience. (para. 12)

None of the leaders expressed a distinction between client and employee when discussing communication, respect, trust, and honesty as part of building and maintaining relationships.

### **Consistent Themes Within Relationships**

The most consistent theme within relationships was forming a connection or bond with employees and with customers. With a total of 28 references representing 30.4% of the relationship theme, connection and bond is more than double that of any other theme within relationships as shown in Figure 14. All three participants expressed that forming and keeping good relationships with customers as well as employees is imperative, as they want both customers and employees to remain with them for life. The proprietary nature of the technology industry makes it even more important for them to achieve this

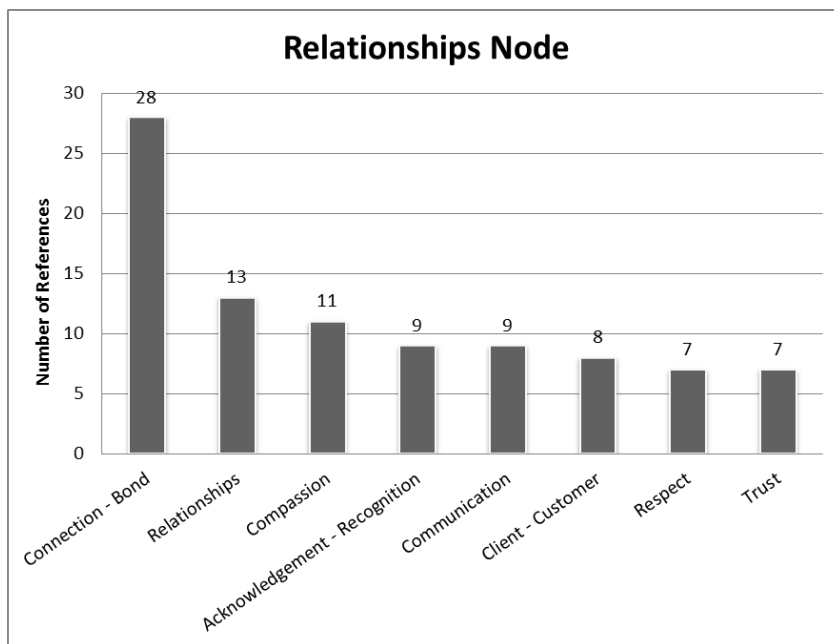


Figure 14. Relationship themes within a total of 92 coded responses.

goal. Participant 2 explained that it was important enough to incorporate the concept into his company's core values. He stated,

The key values of the company start with fair play. Fair play meaning fair to the customer, fair to the company, and fair to the employee. It is like a three-legged stool and it has to balance on all three areas. We are relentless with this one.

Participant 1 creates connections and relationship bonds by removing barriers, remaining transparent, and using a servant-leader model of leadership to promote relationships with his followers. He stated, "Titles don't make you important. I believe in working for those I lead. Leadership is not about filling your ego." Participant 2 is an active participant in company events such as the company's summer event and its Christmas event. The company also has a "take care of your own" program where employees can donate vacation time to other employees in need, such as if the other employee or a family member has cancer. He was very excited about a newly instated employee stock ownership plan (ESOP) as a way to build relationships and encourage long-term employment within the organization. Participant 3 uses communication as the means to build connections and bonds within relationships, often checking in with his followers to discuss the "day-to-day business from a 'how's it rolling' perspective." He also meets with his direct reports individually to develop relationships and they are expected to do the same with their direct reports. Additionally, they have weekly operations meetings and weekly sales meetings to find out what is happening with everyone.

The general theme of relationships was used for comments such as "relationships are highly important" and "I am more concerned with how relationships relate to the

company” and was placed in the parent node of relationship. With 13 out of a total of 92 references about relationships, it represents 14.1% of the relationship theme as having general relationship references. This theme came in only slightly higher than the remaining themes of compassion at 11 references representing 12.0% of the relationship total, acknowledgement and recognition at nine references or 9.8% of relationships, communication also at nine references and 9.8% of the total, and respect and trust at seven references each, which equates to 7.6% each of the relationship theme aggregate.

Some other behaviors related to these minor themes include giving out longevity awards, allowing employees to donate vacation time to other employees, being approachable, and encouraging open communication. Participant 1 stated that “we often think of others in terms of how they are like us.” He went on to say that being uncomfortable with a leader indicates a lack of trust, or respect, and relationship and he makes himself aware of how others feel around him so not to discourage positive relationships.

The theme of customer and/or client relationships emerged with those relationships being stressed as very important. Participant 2 referred to customers several times when referring to his company’s value of *fair play*. He explained several times, “fair play meaning fair to the customer, fair to the company, and fair to the employee.” Participant 3 said, “But what you try to emphasize, especially in the service business, is that our clients are the most important asset that we have.” Other comments indicating the importance of establishing excellent client/customer relationships included,

- “Be straightforward with the clients.”
- “Give them what they are looking for; if they don’t understand what they are looking for, that is our job to make them understand.”
- “We are really concerned about our customer’s success.”
- “We don’t want anyone—even if it costs us money to complete a project—we make sure that we take care of that client.”

### **Major Findings for Vision**

Theoretically, vision was defined as a bridge from the present to the future. It is created by a collaborative mindset, adding meaning to the organization, sustaining higher levels of motivation, and withstanding challenges (Kouzes & Posner, 2008, 2012; Landsberg, 2003; Mendez-Morse, 1993; Nanus, 1992). Operationally, vision was described as being foresight demonstrated by a compelling outlook of the future shared by leaders and followers who are engaged to create the future state.

Behaviors related to vision occurred in 21.9% of the five thematic codes with 75 out of a total of 342 codes obtained from the interviews with the exemplary chief executive officers of engineering technology organizations as shown in Figure 13. Participant 1 stressed that “vision is important for market leaders as that is how market transitions are made. It requires that leaders pay attention to the environment around them.” Participant 2 said, “Just about every successful business out there of any size has a written plan, a strategic plan. Vision and mission are the two most important things that need to be developed.” Participant 3 stated that vision requires examining what “fits” for his company and must consider the best use of their time, money, and resources.

## Consistent Themes Within Vision

The most frequent response within the vision theme was future outlook with a response rate of 22 out of 75, which represents 29.3% of the vision theme as shown in Figure 15. Participant 1 described this “as ‘seeing around corners,’ not that anyone can really see around corners, but it requires that leaders pay attention to the environment around them. It means never being content with where you are at now.” Participant 2 described vision as a process that is improved over time. He starts by asking himself where he wants to be in 10 years and visualizes what that will feel like. He then refines it into a vision that is simply stated, written down, collaborated, and communicated with others. He said, “If you want to build something that a team will appreciate, it has to be a bit of a collaborative process. I think the leader owns the vision, but the team creates it.” The Emerging Future group (TEF, 2012) estimated that “every twelve to eighteen months, computers double their capabilities, and so do the information technologies that use them” (p. 2). The group continued,

Eighteen to twenty years out, technological advancements will be hundreds of thousands to a million times more advanced [than they are now]. That makes our first fourteen years of exponential growth seem flat lined (no progress), when in fact, it will be 4,000 times more advanced than today. (TEF, 2012, p. 4)

Participant 3 said, “Sometimes it is really hard to look out, especially in technology, and look out five years, so we try to work around a three-year plan.” Participant 1 described vision as being “a journey and we never really arrive because each time we do, the environment has changed and the vision must change. It is more like we move *toward* a vision because it is always changing.” When discussing future growth, Participant 3 said,



“That’s going to be done with this team by adding new people to the team and raising people within the team up to leadership positions.”

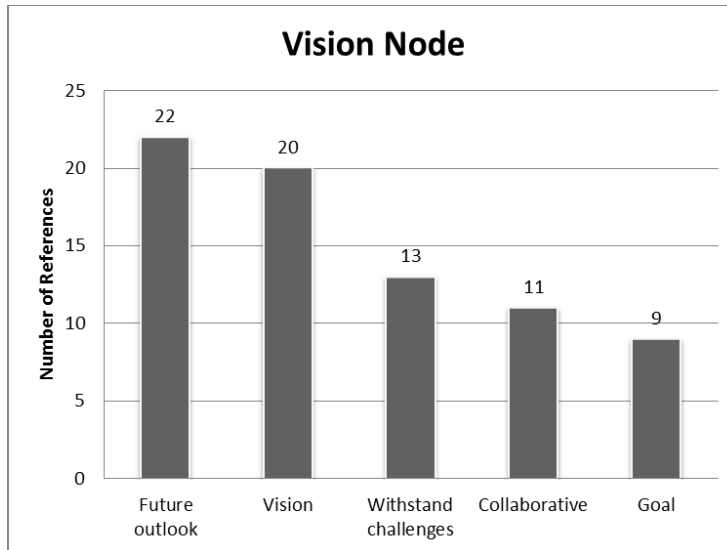


Figure 15. Vision themes within a total of 75 coded responses.

The next most frequent response within the vision theme was general comments about vision, such as “vision is important” or “vision sounds sort of simple.” These comments were placed directly into the parent node of vision with a 26.7% response rate of 20 out of 75 coded responses. The next theme, withstanding challenges, was referenced 13 times out of 75 coded responses, which accounts for 17.3% of the vision theme. Participant 1 commented,

It requires that leaders pay attention to the environment around them. It means never being content that you will be where you are at now. Vision is a journey and we never really arrive because each time we do, the environment has changed and the vision must change. It is more like we move toward a vision because it is always changing.

Participant 2 said, “In order to provide and do what we do, we have to be willing to crawl across the freeway on our hands and knees to get something done. We are available early, late, etc. Our phones are never off.” Participant 3 said, “We do fix a lot of situations. It seems in my world that a lot of curve balls get thrown to us, so after they are fixed, I really don’t think about them anymore.” He further explained his approach to meeting challenges as, “I hate loose ends; this team hates lose ends, so if we have a problem, we are going to confront it and knock it down because we have a lot of things we have to worry about every day.”

The fourth theme within vision was collaboration at 14.7% of the vision theme, with 11 coded responses out of 75. Participant 2 emphasized, “If you want to build something that a team will appreciate, it has to be a collaborative process.” Participant 3 stated, “When I refer to ‘we’ I mean the collective ‘we’ of the team.” Other comments include the following:

- “The team creates it.”
- “The most essential part of good leadership is collective wisdom.”
- “So we have revised and we have changed as a team.”

### **Major Findings for Character**

Character was defined as the moral compass by which a person lives his or her life (Bass & Bass, 2008; Bass & Steidlmeier, 1999; Moore, 2008; Sankar, 2003; Quick & Wright, 2011). Operationally, character was defined as the alignment of a value system, which promotes ethical thoughts and actions based on principles of concern for others through optimism and integrity while being reliable, transparent, and authentic.

Character was referenced 71 times, or 20.8%, out of 342 coded references from the

interviews with exemplary chief executive officers in engineering technology organizations in this study, making it the third most-often-cited variable in this study as shown in Figure 13. Moore (2008) stated, “Depth of character comes from admitting to yourself your complexity” (p. 91).

There were frequent references to how the leaders understand and accept that their character affects their lives, their followers’ lives, and the organization. Participant 3 stressed, “Character is probably the most important for me. It is how you carry yourself.” Participant 1 stated, “There is only one way to access character—by your actions.” Goleman et al. (2013) stated, “Even when leaders were not talking, they were watched more carefully than anyone else in the group” (p. 286).

### **Consistent Themes Within Character**

The primary theme within the character theme was moral compass or value system, which was used by the participants interchangeably. This represented 32.4% of the entire character theme with 23 references out of a total 71 coded responses as shown in Figure 16. Participant 1 stated, “They follow because of a moral compass.” Participant 2 stressed the importance of living by a value system. Participant 3 stated, “We do the right things every day.” He followed that with, “When a problem comes up we do not look for a short cut, we look for the best solution.”

The next emergent theme revolved around humility with 16 references, or 22.5%, out of 71 coded responses by the participants. While none of the participants used the word *humility*, it was obvious from their comments that they are humble people. Prime and Salib (2014) discussed results from a recent Catalyst study that “raises one common, perhaps universal implication: To promote inclusion and reap its rewards, leaders should

embrace a selfless leadership style” (para. 6). They clarified that “selfless leaders should not be mistaken for a weak one. It takes tremendous courage to practice humility” (para. 14). Guthrie (2103) stated,

A humble leader is secure enough to recognize his or her weaknesses and to seek the input and talents of others. By being receptive to outside ideas and assistance, creative leaders open up new avenues for the organization and for their employees. (para. 2)

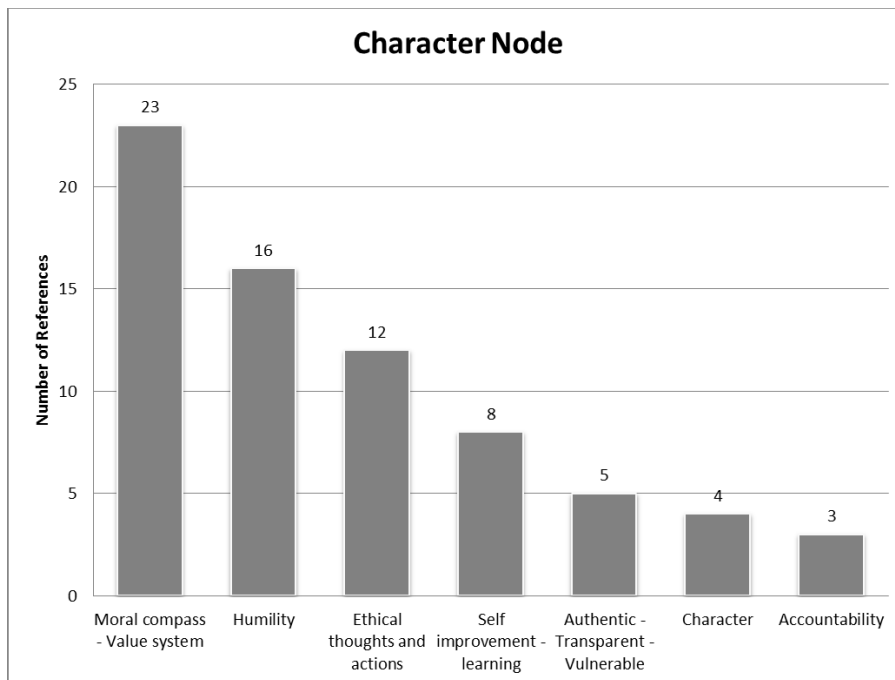


Figure 16. Character themes within a total of 71 coded responses.

Some of the comments made by the interview participants were,

- “It is important that a leader is not influenced by his title.”
- “A title does not make them smarter or better than anyone else.”
- “As the leader, you can’t always be the smartest guy in the room.”

- “You need to appreciate that if you are going to lead a larger team, you want to surround yourself with people that in a lot of ways are better than you are.”

Their comments always turned to the other people on the team, never pointing to themselves as the reason for success. Prime and Salib (2014) concurred, “In a global marketplace where problems are increasingly complex, no one person will ever have all the answers” (para. 1). Prime and Salib (2014) continued,

Ambiguity and uncertainty are par for the course in today’s business environment. So why not embrace them? When leaders humbly admit that they don’t have all the answers, they create space for others to step forward and offer solutions. They also engender a sense of interdependence. Followers understand that the best bet is to rely on each other to work through complex, ill-defined problems. (para. 9)

The next theme to emerge was ethical thoughts and actions with 12 references or 16.9% of the total 71 character-coded references. Participant 1 stated, “We are judged for our actions both professionally and personally.” Participant 3 said, “There are certain lines you keep in place.” One participant said,

It is like being a parent—they mimic you. If someone is seen doing something that is not the right thing to do, others think that is must be ok to do it and they will do it as well. Character crosses personal and professional actions—there is no barrier between them. For example, if you drink in excess at any time, it affects others’ opinions of you professionally.

Each of the participants was very aware of how his actions must be ethical at all times.

Goleman et al. (2013) stated, “But it is the leader who adds the strongest seasoning.

Why? Because of that enduring reality of business: Everyone watches the boss” (loc. 280

of 4817). Participant 3 summed up ethical thoughts and actions by saying, “Character is what you possess when no one is looking.”

The next theme with eight out of 71 coded references was self-improvement and learning, which represented 11.3% of the total character themes. Comments such as “leaders must try to improve themselves,” “I am always trying to be better,” and “we are always wanting to learn and be better” indicate a desire for self-improvement and learning. Participant 2 stated that he reads a lot and that over the last 20 years he has learned a lot from “two different peer groups I belong to that run other companies.” Participant 1 said that he is always learning from others and is sure to “check and listen to suggestions from others.”

The next theme was being authentic, transparent, and vulnerable, which were often used interchangeably by the participants. This theme was referenced five times out of 71 character-coded references, which represented 7.0% of the character theme. Participant 1 stated, “I do not hide my faults,” and “you are the same person no matter where you are.” He further noted that leaders “must be authentic and transparent.” Participant 3 noted, “I am not the type of leader that comes in every day saying ‘everything’s awesome.’ I try to keep it as real as possible.” Farson and Keyes (2002) noted,

Far from revealing weaknesses, admitting mistakes shows a leader’s self-confidence. It helps forge closer ties with employees and colleagues. . . . Leaders who don’t cover up their errors reveal themselves as human—they become people whom others can admire and identify with. (para. 24)

There were four references to character that could not be placed in a child node. This represented 5.6% of the character theme. Comments in this theme included, “I think

character is right up there as number two,” “I really believe there is value in character,” and “character is probably the most important for me.”

The last theme in the character theme was accountability with three references, which represented 4.2% of the total character responses. These comments came primarily from Participant 2. He stated, “One of the important things as a leader is to hold yourself accountable.” To do this, he hired an executive coach who is part of his team and holds him accountable.

### **Major Findings for Wisdom**

Theoretically, wisdom was defined as the ability to utilize cognitive, affective, and reflective intelligences to discern unpredictable and unprecedented situations with beneficial action (Baltes & Staudinger, 2000; Kekes, 1983; Pfeffer, 2010; Spano, 2013; Sternberg, 1998). Operationally, wisdom was defined as the reflective integration of values, experience, knowledge, and concern for others. This is done to accurately interpret and respond to complex, ambiguous, and often unclear situations.

From these definitions, there were 63 out of 342 references coded to wisdom, which represented 18.4% of the five variables in this study as shown in Figure 13. While none of the participants referred to themselves as being wise, they frequently referenced the collective wisdom of the group and relying on others, which revealed their own humility and wisdom. Participant 2 was hesitant to say he was wise, but he laughingly said, “I do think it’s wise to surround yourself with really smart people and build a team,” which is what he has done. Prime and Salib (2014) said,

When leaders showcase their own personal growth, they legitimize the growth and learning of others; by admitting to their own imperfections, they make it okay

for others to be fallible, too. We also tend to connect with people who share their imperfections and foibles—they appear more “human,” more like us. (para. 6)

### Consistent Themes Within Wisdom

The most consistent theme that emerged in the wisdom theme at 42.9% was reflective intelligence with 27 references out of a total 63 references relating to wisdom as shown in Figure 17. Participant 1 stated, “Wisdom involves knowing what you don’t know.” Participant 2 assessed himself as being “highly driven, extremely goal oriented, and very analytical . . . and that can be sort of scary.” Participant 3 recognized that “we haven’t always done a good job with that,” and “We can’t grow this on our backs alone.” McKee et al. (2008) stated that reflection involves knowing “who we are today, our strengths and weaknesses, and how we influence others. Assessing our real selves . . . requires that we reflect deeply and honestly and engage with others to share perceptions and to receive feedback” (p. 9). Other comments indicating reflective intelligence included,

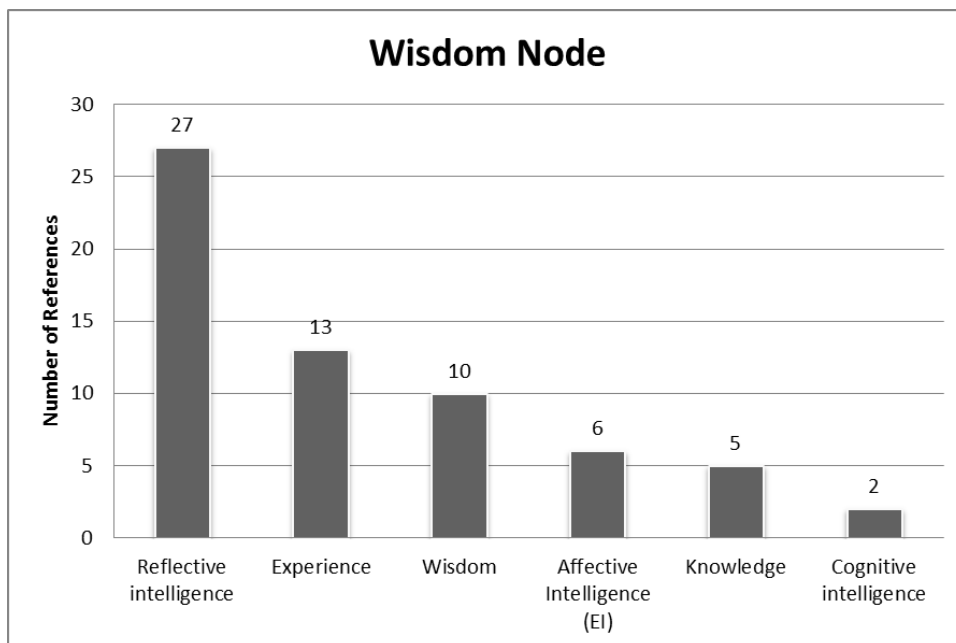


Figure 17. Wisdom themes within a total of 63 coded responses.



- “Where you want to be when you are 35 is different than where you want to be when you are 55.”
- “What is it going to feel like?”
- “It takes effort to interact and relate with a lot of people.”
- “I know that I can come off as being intimidating—I am very aware of that and try not to be intimidating.”

With fewer than half as many references as reflective intelligence, experience represented 20.6% of the 13 responses within the 63 wisdom-coded references.

Participant 1 noted that wisdom “doesn’t happen early in anyone’s career because experience is required. Through experience you know what action will result in which results.” He commented, “Millennials are in a unique position because they have unlimited access to information through the Internet. But they lack experience and that is where wisdom takes place.” When discussing challenges that he has faced, Participant 3 stated, “We add it to our knowledge and experience pool and move on.”

The 10 general comments about wisdom were not placed in a child node but did represent 15.9% of the total responses coded for wisdom. Some comments included, “I certainly don’t want to discount wisdom, but in terms of leadership, I would probably list that as number five.” The same gentleman later stated, “I do not think personal wisdom is important; I am a firm believer in the wisdom of the collective group. As the leader you cannot always be the smartest guy in the room.” This comment reflects humility as well as wisdom. Additionally, Prime and Salib (2014) stated, “Inclusive leaders empower others to lead. By reversing roles, leaders not only facilitate employees’ development but they model the act of taking a different perspective, something that is so

critical to working effectively in diverse teams” (para. 10). When Participant 3 was asked if he could describe a time when his organization faced a very complex or unclear situation, he responded, “Wisdom—so many complex problems—that is what we do.”

Affective intelligence, also referred to as emotional intelligence, was the next theme having been coded six times out of 63 references, which represented 9.5% of the wisdom theme. Emotional intelligence is a term created by researchers Peter Salavoy and John Mayer and made popular in 1996 by Daniel Goleman. Goleman et al. (2013) described emotional intelligence as “how leaders handle themselves and their relationships” (p. 240). Bradberry and Greaves (2009) described emotional intelligence as being two pronged. One component is personal competence consisting of self-awareness and self-management skills. The second is social competence, which consists of an individual’s awareness of other people combined with relationship management skills.

Participant 2 exhibited affective, or emotional, intelligence by describing his goals, “at a certain point my individual goals have been met and now it is about building the company bigger and sharing that with the employee.” Participant 1’s comments about millennials included the understanding that “they will make the mistakes no matter what you tell them, and you have to be okay with that.” Goleman et al. (2013) stated, “Leaders with that kind of talent are emotional magnets; people naturally gravitate to them. . . . It’s one reason emotionally intelligent leaders attract talented people—for the pleasure of working in their presence” (p. 337).

Knowledge was referenced five times out of 63 wisdom references, which resulted in a 7.9% share of the wisdom theme. Participant 3 stated,

When we are going in, we allow mistakes to happen because we are on a learning curve, now if we get to the 20th project and we are having the same problem we had on the fourth project, we have a major issue here.

He also said he knows that “when we get involved in something new we know that it is going to take at least 10–12 projects before we feel even somewhat confident in it.”

Farson and Keyes (2002) added, “New ideas are most likely to emerge in the workplace when managers [leaders] treat steps in the innovation process—those that work and those that don’t—with less evaluation and more interpretation.”

The last theme with only two references out of 63 references (3.2%) within the wisdom theme is cognitive intelligence. This was used interchangeably with knowledge and perception. Cognitive intelligence was noted in Participant 1’s understanding that “millennials are in a unique position because they have unlimited access to information through the Internet.” He also stated, “There are many different leadership styles and ways of communicating,” indicating that he has at least a basic understanding of different leadership and communication styles.

### **Major Findings for Inspiration**

Theoretically, inspiration was defined as a source of contagious motivation that resonates from the heart, transcending the ordinary, and that drives leaders and their followers forward with confidence (Kouzes & Posner, 2007; I. H. Smith, 2014; Thrash & Elliot, 2003). Operationally, it was defined as the heartfelt passion and energy that leaders exude through possibility thinking, enthusiasm, encouragement, and hope. This is done to create relevant, meaningful connections that empower followers.

Inspiration, or inspire, had the fewest number of references of the five variables in this study. There were a total of 10 references pertaining to inspiration out of a total of 342 coded references. This represented 12.0% of the total number of coded references as shown in Figure 13.

The major finding from the interviews was that all of the participants recognized the importance of inspiring others and they took that to be part of their job as a leader. There were comments such as “Leaders must inspire people to do their best” from Participant 1. Participant 3 referred to inspiration as motivating followers and was concerned that he did not see motivation on the list of variables; however, he conceded that “it crosses over there with inspiration and everything, so that is going to cover it in our discussion.” For him “inspiration occurs daily in the discussion you have.”

### **Consistent Themes Within Inspire**

The most consistent theme within inspiration was encouragement with 15 references out of a total of 41 references coded to the inspire theme as shown in Figure 18. This represents 36.6% of the total responses coded with a theme about inspiration. Participant 1 stressed that leaders “must encourage their followers to risk failing.” He stated, “All great people have a long list of failures. The process from those failures is to learn and grow.” He emphasized that “we have to push limits” and “I don’t want my people to know any boxes” when referring to working within a comfort zone. Farson and Keyes (2002) noted, “A business can’t develop a breakthrough product or process if it’s not willing to encourage risk taking and learn from subsequent mistakes. The growing acceptance of failure is changing the way companies approach innovation” (paras. 1-2).

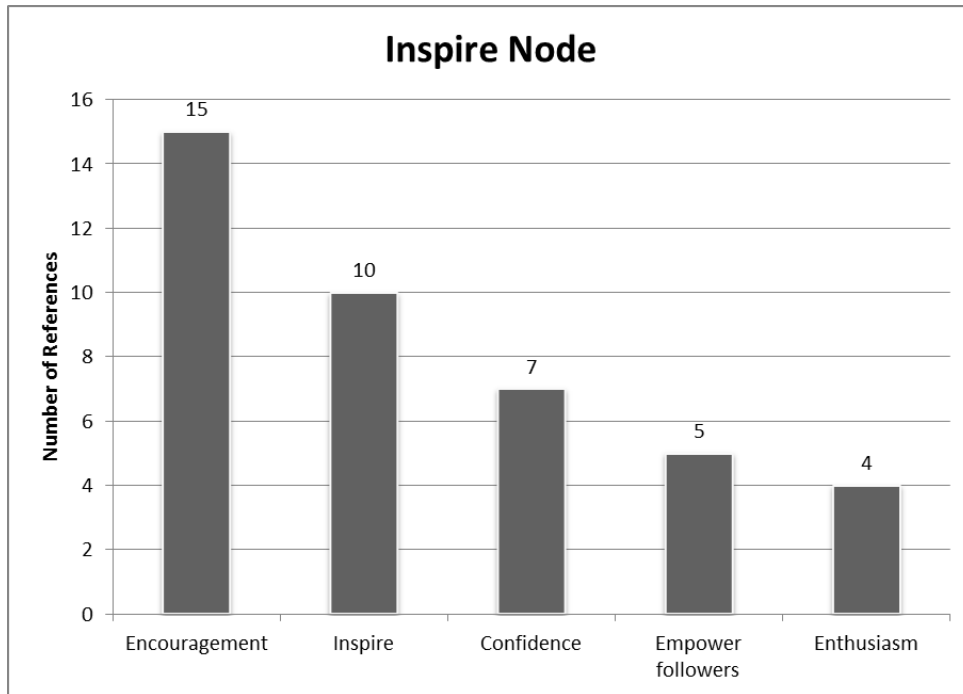


Figure 18. Inspire themes within a total of 41 coded responses.

Participant 2 felt that his people would be encouraged by their new ESOP program. He said, “People do not think much of \$5,000 in a 401K—they are like, ‘ok’; however, when it is \$100,000 in an ESOP program, they become interested and are like, ‘ok, where is it invested?’” When asked how he forms relationships with others, Participant 3 stated that there are many ways; however, “for some it is encouragement.”

General comments about inspire or inspiration counted for 24.4% of the total references coded to inspiration with 10 references out of a total 41 inspiration-coded references. Comments such as “I want to be inspiring to them,” “people want to be inspired to do better,” and “inspiration occurs daily” were placed within this theme. Participant 2 rated inspiration as being number four on his list but noted, “for inspiration, I am trying to get people to understand what the potential of the ESOP is.”

Confidence received seven references out of the total 41 inspiration-coded references, which reflected 17.1% of the total inspiration-related references. This is seen in comments such as “it is better to ask for forgiveness than ask permission” by Participant 1; and “they understand where I am coming from—what we want to achieve” by Participant 3. Participant 1 recognized that “people don’t follow just because they are told to.”

Empower or empowerment received five references out of 41 inspiration-coded references. This represents 12.2% of the total references coded to inspire or inspiration. Bennis (1989) stated,

Empowerment is the collective effect of leadership. In organizations with effective leaders, empowerment is most evident . . . [when] people feel significant. Everyone feels that he or she makes a difference to the success of the organization. The difference may be small—prompt delivery of potato chips to a mom-and-pop grocery store or developing a tiny but essential part for an airplane. But where they are empowered, people feel that what they do has meaning and significance. (p. 38)

Participants 1 and 2 were the most vocal about this concept; they stated, “Leaders must build an environment of empowerment” and “we empower our employees to make decisions to take care of the customer.” Because the client/customer was so vitally important to these leaders, they recognized the importance of empowering their followers to do what was needed to maintain a positive client/customer relationship.

The last theme was enthusiasm, which had four references coded out of a total of 41 references. This represented a 9.8% coverage rate within the inspire theme. It was

Participant 2 who referenced enthusiasm. Goleman et al. (2013) stated, “Leaders with that kind of talent [generating enthusiasm] are emotional magnets; people naturally gravitate to them. . . It’s one reason emotionally intelligent leaders attract talented people—for the pleasure of working in their presence” (p. 337). Participant 2 ranked “enthusiasm and relationships as ‘being up there’ [on the list of importance]” and was obviously enthused about the new ESOP program as he became very enthusiastic when discussing the ESOP program. He was also very enthused about their quarterly town hall meetings. He described these meetings as an opportunity to “explain how the company is doing. In that I give an example of \$70,000 per year per employee—if the company increases in value, what is it going to be worth to that employee in 5 to 7 years?”

### **Data Results for Research Question 2**

Research Question 2 asked, “To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help create personal and organizational meaning?” Data were obtained from an electronic survey sent to a total of 36 followers of the three exemplary chief executive officers of engineering technology organizations. The leaders forwarded an e-mail crafted by the researcher as shown in Appendix N. The e-mail contained the researcher-specific code and link to SurveyMonkey®, which was the software that housed the Leaders Behavior 2.0 survey. The survey was designed by the 12 peer researchers and four faculty members of the thematic team. In addition to the survey, it also contained the informed consent information and the Participant Bill of Rights. The survey required that both forms be read and acknowledged before the respondents could begin the survey.

Two of the chief executive officers of engineering technology organizations notified the researcher by e-mail when the e-mail had been sent to their 12 followers. The researcher contacted the third-party recipient of the results as they were processed through SurveyMonkey® and discovered that only 22 surveys had been completed. The researcher then contacted the third chief executive officer inquiring if his followers had received the survey link and code. He admitted that he had not yet sent it out; however, he assured the researcher that it would be done immediately. Several days later, the third-party recipient confirmed that the results were available from 33 out of 36 surveys.

The data were categorized by the five variables: character, inspiration, relationships, vision, and wisdom. The respondents were asked to rank each question pertaining to behaviors related to the variables from *not important* to *critically important*. Of the 33 surveys submitted, one follower declined to respond to the demographic information, and another failed to answer the last question asking how long they had worked with the exemplary chief executive officer who had been interviewed. The results were compiled and analyzed based on the number of responses as shown in Table 4. The themes of relationships, character, inspiration, and vision each had five questions relating to behavior, resulting in 165 total responses, whereas, the wisdom variable asked 33 followers about 10 behaviors resulting in 330 responses. For purposes of comparison, the total number of responses for wisdom was divided by two, as shown in Table 4, to correspond with the same number of total responses for the other variables. Doing so did not change the percentage of responses for each question within the wisdom variable.

When looking specifically at behaviors marked as *critically important*, character rated the highest with 66 respondents (40.0%). Relationship was a close second



Table 4

*Number of Follower Responses and the Perceived Degree to Which Each Variable Helps to Create Meaning*

	Character		Relationships		Wisdom			Vision		Inspiration	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	<i>n/2</i>	%	<i>n</i>	%	<i>n</i>	%
Critically important	66	40.0%	65	39.4%	103	52	31.2%	50	30.3%	36	21.8%
Very important	62	37.6%	59	35.8%	119	60	36.1%	68	41.2%	62	37.8%
Important	29	17.6%	36	21.8%	75	38	22.7%	40	24.2%	56	33.9%
Somewhat important	8	4.8%	5	3.0%	23	12	7.0%	5	3.0%	10	6.1%
Marginally important	0	0.0%	0	0.0%	9	5	2.7%	1	0.6%	1	0.6%
Not important	0	0.0%	0	0.0%	1	1	0.0%	1	0.6%	0	0.0%
Totals	165	100.0%	165	100.0%	330	165	100.0%	165	100.0%	165	100.0%
Mean	5.12		5.14		4.83			4.90		4.73	

with 65 respondents (39.4%). Wisdom and vision followed with 52 responses (103/2) rating them at 31.2% and 30.3% respectively. Inspiration received the fewest *critically important* responses numbering 36, which represented 21.8%.

As shown in Figure 19, overall, the majority of responses for all variables fell in the *very important* rating (5.0). Figure 19 also shows that the greatest response within all categories was for vision as a whole (41.2%) as being *very important*. The next rating was character (40.0%) as *critically important* and relationships (39.4%) very close in *critically important*. This represents a deviation of 1.8%. Figure 19 also demonstrates how *critically important*, *very important*, and *important* received the majority of the responses. The rating *somewhat important* received approximately 5% of the total responses. The ratings *marginally important* and *not important* received so few responses that they are almost negligible.

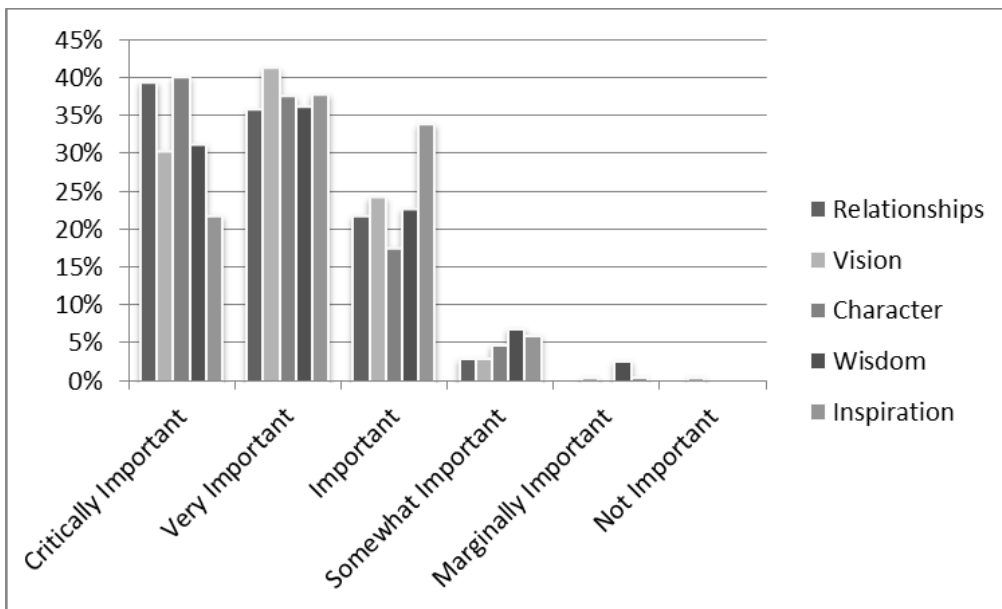


Figure 19. Follower responses by rating.

Figure 20 confirms that the majority of responses fell within the *very important* (5.0) range for all variables as shown in Figure 19. Figure 20 demonstrates the mean response for all five variables. Total character and total relationship means were each slightly above *very important* at 5.12 and 5.14 respectively. The mean response for vision and wisdom were each just below the response of *very important* at 4.90 and 4.83 respectively. Lastly, the response for inspiration fell about one quarter below the response of *very important* at 4.73.

It is noted that there was only a 0.41 total point difference in the mean by variable (5.14 to 4.73), which is less than one-half percent, in the mean of all five variables. The mean of all variables was 4.94 which falls in the *very important* rating of 5.0. The standard deviation from the mean was 0.160041 which represents a very small deviation from the *very important* rating for all variables thus making them all critical when creating personal and organizational meaning. The data indicates that all five variables are very important in creating meaning personally and professionally.

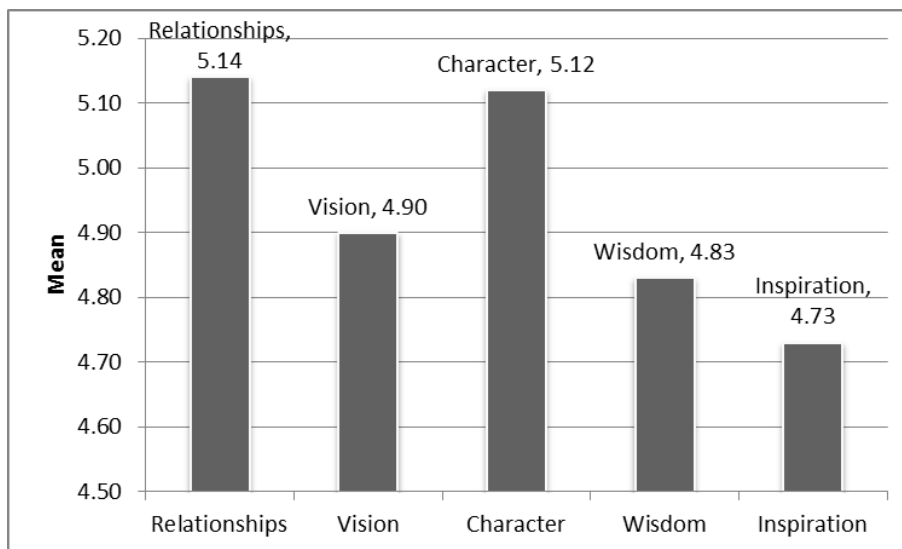


Figure 20. Mean by variable.

Moving from the ratings and looking at the data grouped by variable as shown in Figure 21, it becomes apparent that all five variables were perceived as being important in creating meaning within organizations. In all five variables, the three columns indicating *critically important*, *very important*, and *important* are easy to discern and the fourth column, *somewhat important*, while visible is markedly smaller than the three higher ratings. The rating of *marginally important* is visible in the wisdom area; however, it is negligible in all other variables. The rating of *not important* is barely visible in vision only and is therefore negligible when compared to the other ratings.

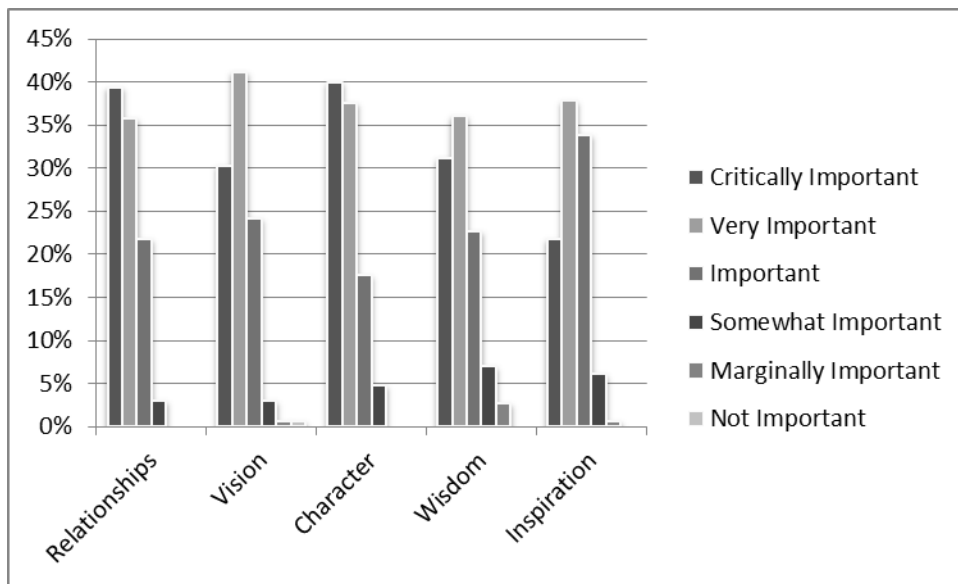


Figure 21. Follower responses by variable.

### Major Findings for Relationships

As shown in Table 5, the behavior receiving the greatest number of selections (25) was “creates an environment of trust among leaders and team members in the organization” as being *critically important* at 75.8%. This behavior also received the highest mean of 5.70 for this group. The next highest ranked behavior was “continuously promotes our team’s moving together as one unit to serve a common purpose” with 14

selections or 42.4%. With 10 *critically important* responses (30.3%) and 18 *very important* responses (54.5%) for “behaves in a way that shows she/he cares about the team members,” this behavior was also significant. When looking at *very important* and *critically important* for all five behaviors related to relationships, 124 out of 165 responses or 75.2% of the selections fell within these two ratings. Adding *important* to this group, as suggested by Figure 21, increased the response to 160 out of 165 or 97.0% of the respondents perceiving that behaviors related to relationships help create organizational and personal meaning.

### **Major Findings for Vision**

When looking at Figure 21, it is apparent that the *very important* rating received the greatest number of responses. Table 6 shows that all five vision-related behaviors received *very important* as the highest rating with a total of 68 responses (41.7%) for each except for the behavior “communicates the organization’s vision in a way in which team members support it,” which received the same number of responses (13) for both *very important* and *critically important*. It had the highest mean of 5.11 within vision.

The vision-related behavior “demonstrates thinking toward the future through conversations and actions” received the highest number of responses (16 or 48.5%) of all the behaviors within vision. There was one *not important* response (3%) for “engages team members in creating a vision for the future” and one *marginally important* response (3.0%) for “behavior reflects organizational vision when making decisions.” Combining the three highest ranked ratings of *critically important*, *very important*, and *important* as shown in Figure 21, the data showed that 158 out of 165 (96.9%) of the total responses fell within this range.

Table 5

*Meaning Making Importance of Relationships-Related Behaviors as Perceived by Followers*

Relationships	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Continuously promotes our team's moving together as one unit to serve a common purpose.	0	0.0%	0	0.0%	1	3.0%	6	18.2%	12	36.4%	14	42.4%	5.26
Creates an environment of trust among leaders and team members in the organization.	0	0.0%	0	0.0%	0	0.0%	3	9.1%	5	15.2%	25	75.8%	5.70
Behaves in a way that shows she/he cares about the team members.	0	0.0%	0	0.0%	1	3.0%	4	12.1%	18	54.5%	10	30.3%	5.15
Communicates in a clear, meaningful way.	0	0.0%	0	0.0%	2	6.1%	9	27.3%	13	39.4%	9	27.3%	4.89
Encourages team members to share leadership when performing tasks.	0	0.0%	0	0.0%	1	3.0%	14	42.4%	11	33.3%	7	21.2%	4.70
Overall	0	0.0%	0	0.0%	5	3.0%	36	21.8%	59	35.8%	65	39.4%	5.14

Table 6

*Meaning-Making Importance of Vision-Related Behaviors as Perceived by Followers*

Vision	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Communicates the organization's vision in a way in which team members support it.	0	0.0%	0	0.0%	1	3.0%	6	18.2%	13	39.4%	13	39.4%	5.11
Engages the team members in creating a vision for the future.	1	3.0%	0	0.0%	0	0.0%	12	36.4%	13	39.4%	7	21.2%	4.67
Behavior reflects organizational vision when making decisions.	0	0.0%	1	3.0%	1	3.0%	7	21.2%	13	39.4%	11	33.3%	4.85
Promotes innovation that aligns with the organization's vision.	0	0.0%	0	0.0%	0	0.0%	9	29.0%	13	41.9%	9	29.0%	4.81
Demonstrates thinking toward the future through conversations and actions.	0	0.0%	0	0.0%	1	3.0%	6	18.2%	16	48.5%	10	30.3%	5.04
Overall	1	0.6%	1	0.6%	3	1.8%	40	24.5%	68	41.7%	50	30.7%	4.90

## Major Findings for Character

As a whole, the data shown in Table 4 revealed that 95.2% of all respondents perceived character-related behaviors as being *important* (17.6%), *very important* (37.6%), or *critically important* (40%). Behaviors marked as such were selected 157 times out of a total of 165 responses. Eight responses (4.8%) indicated that followers perceived the behaviors listed for character as being *somewhat important* in creating personal and organizational meaning. No one selected *not important* for any of the five character-related behaviors.

As shown in Table 7, the highest ranked character behavior selected by followers was “behaves in an ethical manner when dealing with others” with 20 (60.6%) of the selections marked as being *critically important*. *Very important* was selected 10 times (30.3%). *Important* was selected twice (6.1%). *Somewhat important* was selected once (3.0%). None were marked *marginally important* or *not important*. Ethical behavior also had the highest mean score of 5.52.

The second-ranked character behavior was “actively listens when communicating with others” with 16 (48.5%) selections marked *critically important*. *Very important* was selected 12 times (36.4%). *Important* was selected four times (12.1%). *Somewhat important* was selected once (3.0%). No one selected *marginally important* or *not important* for active listening. The mean score was 5.26.



Table 7

*Meaning-Making Importance of Character-Related Behaviors as Perceived by Followers*

Character	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Behaves in an ethical manner when dealing with others.	0	0.0%	0	0.0%	1	3.0%	2	6.1%	10	30.3%	20	60.6%	5.52
Actively listens when communicating with others.	0	0.0%	0	0.0%	1	3.0%	4	12.1%	12	36.4%	16	48.5%	5.26
Responds to challenging situations with optimism.	0	0.0%	0	0.0%	2	6.1%	9	27.3%	14	42.4%	8	24.2%	4.78
Actions with others shows that he/she can be trusted.	0	0.0%	0	0.0%	1	3.0%	5	15.2%	13	39.4%	14	42.4%	5.26
Actions show concern for the well-being of others.	0	0.0%	0	0.0%	3	9.1%	9	27.3%	13	39.4%	8	24.2%	4.78
Overall	0	0.0%	0	0.0%	8	4.8%	29	17.6%	62	37.6%	66	40.0%	5.12

The third highest ranked character behavior was “action with others shows that he/she can be trusted” with 14 (42.4%) selections marked *critically important*. *Very important* was selected 13 times (39.4%). *Important* was selected five times (15.2%). *Somewhat important* was selected once (3.0%). None were marked *marginally important* or *not important*. The mean score for behaviors related to trust was also 5.26.

This is followed by the behavior “responds to challenging situations with optimism” with eight (24.2%) selections marked *critically important*. *Very important* was selected 14 times (42.4%). *Important* was selected nine times (27.3%). *Somewhat important* was selected twice (6.1%). No one selected *marginally important* or *not important*. The mean score for behaviors related to optimism was 4.78.

The remaining behavior, “actions show concern for the well-being of others,” received eight (24.2%) selections each marked *critically important*. This is the same score as for the previous behavior, “responds to challenging situations with optimism.” However, *very important* was selected 13 times (39.4%) for concern, which is one less than that selected for the previous optimism behavior, thus placing it in the last position for character-related behaviors. *Important* was chosen nine times (27.3%). *Somewhat important* was selected three times (9.1%). *Marginally important* and *not important* were not selected. The mean score for showing concern was also 4.78.

When combining *critically important* and *very important* as suggested by Figure 21, the data showed 128 out of 165 responses, or 77.6%, falling within this range. Adding the *important* ratings to this group resulted in 157 out of 165 responses, or 95.2% of the responses falling within this range. There were no *not important* or *marginally important* ratings selected for any of the five character-related behaviors.

## Major Findings for Wisdom

The greatest number of selections (19) fell within *critically important* for the behavior, “brings personal knowledge to the table when responding to complex situations within the organization” as shown in Table 8 at 57.6%. This behavior also has the highest mean of 5.48 within wisdom. The second highest ranked behavior is slightly lower at 17 *very important* responses for the behavior “elevates the quality of decision making by discussing similarities of past situations with team members” at 51.5%. The wisdom-related behavior, “when working with teams and team members, continuously keeps the overall goals of the organization as part of the conversation,” came in third with 16 *critically important* responses (48.5%). However, at 5.26, this behavior has the second-highest mean within wisdom-related behaviors.

Figure 21 shows the top three ratings of *critically important*, *very important*, and *important* as receiving the majority of the responses. When combined, they received 297 out of 330 responses or 90% of the responses. Figure 21 also shows the greatest number of *somewhat important* responses for any of the variables with 23 responses (7.0%) in wisdom. It must be remembered, however, that the wisdom variable had twice as many questions (10) as the other variables had. Therefore, the number of responses (23) becomes an inaccurate means of comparison with the other variables; however, the percentage (7.0%) remains accurate. The wisdom variable also received the greatest number of *marginally important* responses at nine, which again is not comparable to the other variables due to the increased number of questions within this variable. However, the 2.7% result remains accurate when compared to the whole of wisdom and remains the highest percentage of *marginally important* responses across all variables.

Table 8

*Meaning-Making Importance of Wisdom-Related Behaviors as Perceived by Followers*

Wisdom	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
When working with teams and team members, continuously keeps the overall goals of the organization as part of conversations.	0	0.0%	0	0.0%	1	3.0%	6	18.2%	10	30.3%	16	48.5%	5.26
Elevates the quality of decision making by discussing similarities of past situations with team members.	0	0.0%	0	0.0%	2	6.1%	5	15.2%	17	51.5%	9	27.3%	5.01
Demonstrates compassion toward team members.	0	0.0%	2	6.1%	3	9.1%	4	12.1%	11	33.3%	13	39.4%	4.96
Behavior reflects an understanding of life's complexities.	0	0.0%	4	12.1%	4	12.1%	8	24.2%	11	33.3%	6	18.2%	4.30
Integrates personal values with organizational values when interacting with team members.	1	3.0%	2	6.1%	3	9.1%	11	33.3%	9	27.3%	7	21.2%	4.33

*(table continues)*

Table 8 (continued)

Wisdom	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Brings personal knowledge to the table when responding to complex situations within the organizations.	0	0.0%	0	0.0%	0	0.0%	3	9.1%	11	33.3%	19	57.6%	5.48
Takes action by doing the “right thing” in a variety of organizational settings.	0	0.0%	0	0.0%	2	6.1%	11	33.3%	13	39.4%	7	21.2%	4.63
Displays expertise when working in a variety of situations within the organization.	0	0.0%	0	0.0%	2	6.1%	7	21.2%	16	48.5%	8	24.2%	4.89
Considers past experiences when responding to complex situations within the organization.	0	0.0%	0	0.0%	5	15.2%	8	24.2%	12	36.4%	8	24.2%	4.78
Shows concern for others.	0	0.0%	1	3.0%	1	3.0%	12	36.4%	9	27.3%	10	30.3%	4.67
Overall	1	0.3%	9	2.7%	23	7.0%	75	22.7%	119	36.1%	103	31.2%	4.83

## Major Findings for Inspiration

The greatest number of responses for inspiration fell within the *very important* rating with 62 selections (37.6%) and the *important* rating with 56 selections (33.9%). Together they represent 71.5% or 118 out of 165 inspiration-related responses (see Table 9). That number increases to 93.3% or 154 out of 165 responses when adding *critically important* to the group. The greatest number of behavior-related responses (16) fell in the *very important* rating of “recognizes achievements of teams and team members.”

The total mean of all five questions was 4.73. The behavior “works with team members in a way that generates enthusiasm within teams” received the highest mean at 4.93. It also received the highest number (10) of *critically important* responses (30.3%). There was only a difference of 0.67 points between the highest mean and the lowest mean of 4.26 for “empowers team members to take reasonable risks when problem solving.” This behavior was the only one that received a *marginally important* response.

## Summary

The qualitative and quantitative data showed character, inspiration, relationships, vision, and wisdom as being important in creating personal and organizational meaning within engineering technology organizations. Additionally, the data support the use of all five variables as being used consistently and concurrently to create meaning in the workplace. As shown in Table 10, the three chief executive officers of these organizations placed relationships first (26.9%), vision second (21.9%), character third (20.8%), and wisdom fourth (18.4%) as the being the most important factors in creating meaning, with inspiration following at 12.0%.

Table 9

*Meaning-Making Importance of Inspiration-Related Behaviors as Perceived by Followers*

Inspiration	Not important		Marginally important		Somewhat important		Important		Very important		Critically important		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Works with team members in a way that generates enthusiasm within teams.	0	0.0%	0	0.0%	2	6.1%	7	21.2%	14	42.4%	10	30.3%	4.93
Recognizes achievements of teams and team members.	0	0.0%	0	0.0%	1	3.0%	10	30.3%	16	48.5%	6	18.2%	4.85
Encourages team members to innovate in order to advance the organization's leading edge.	0	0.0%	0	0.0%	2	6.1%	9	27.3%	14	42.4%	8	24.2%	4.81
Engages in activities that build confidence among team members.	0	0.0%	0	0.0%	1	3.0%	13	39.4%	11	33.3%	8	24.2%	4.81
Empowers team members to take reasonable risks when problem solving.	0	0.0%	1	3.0%	4	12.1%	17	51.5%	7	21.2%	4	12.1%	4.26
Overall	0	0.0%	1	0.6%	10	6.1%	56	33.9%	62	37.6%	36	21.8%	4.73

Table 10

*Comparison of Perceived Importance of Five Variables to Create Workplace Meaning*

Variable	Exemplary leaders' perception of variables as a part of a whole	Follower responses per variable as critically important, very important, and important
Relationships	26.9%	97.0%
Vision	21.9%	96.9%
Character	20.8%	95.2%
Wisdom	18.4%	90.0%
Inspiration	12.0%	93.3%

Figures 22 and 23 show that the greatest number of responses for the quantitative data did not fall in the *critically important* rating for vision, wisdom, and inspiration. Instead, the majority of the responses fell into the *very important* rating. Additionally, inspiration had a greater number of responses in the *important* rating than it did in the *critically important* rating. It would be inaccurate to look only at *critically important* as the measure of comparison to the qualitative data. Therefore, it was necessary to combine *critically important*, *very important*, and *important* as one unit to more accurately compare the quantitative data to the qualitative data. Additionally, the terms, *critically important*, *very important*, and *important* are subjective. By combining these three ratings, the responses become closer to the *important* and *not important* responses from the CEOs.

When comparing data between exemplary chief executive officers of engineering technology organizations and their followers, the data showed that there was alignment between relationships as being the most important variable in creating meaning. The data showed that both leaders and followers placed vision as the second most important



variable and character as the third most important variable in creating meaning professionally and personally.

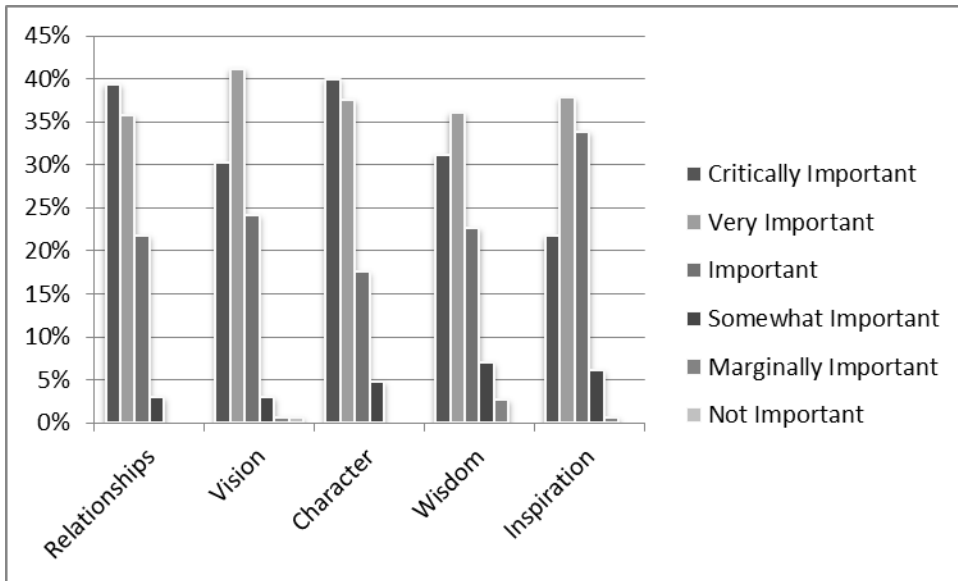


Figure 22. Quantitative data by variable.

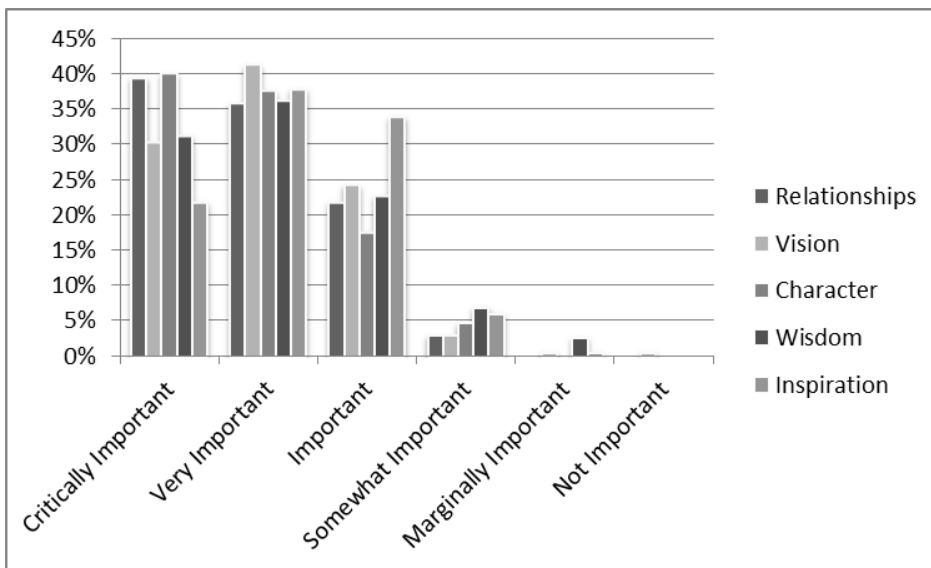


Figure 23. Quantitative data by rating.

The exemplary leaders placed wisdom as the fourth most important variable and inspiration as the least important of the five variables; however, the followers placed inspiration above wisdom in order of importance.

It must be noted that while ranking the data for evaluation purposes, only one of the exemplary chief executive officers of engineering technology organizations actually tried to rank the variables during the interview, and even then, found it difficult to do so. The survey instrument asked them to respond “yes” or “no” concerning their perceived importance of each variable; they were never asked to rank the importance of the variables. Likewise, it should be noted that out of 30 questions answered by 33 followers, only two responses, “engages team members in creating a vision for the future,” and “integrates personal values with organizational values when interacting with team members” were answered as being *not important*. All other questions were responded to as being *important* with a Likert scale rating.

Chapter IV reported the detailed data collected from qualitative and quantitative instruments used in this study. Chapter V discusses the findings and conclusions of the study. Additionally, Chapter V reports unexpected findings, implications for action, recommendations for future research, and closing remarks.

## CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V begins with brief summary of the purpose statement, research questions, methods, and population and sample. Chapter V then describes major findings, unexpected findings, conclusions, implications for action, and recommendations for further research. This chapter ends with concluding remarks and reflections.

### **Summary**

#### **Purpose Statement**

The purpose of this mixed-methods case study was to identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration. In addition, it was the purpose of this study to determine the degree of importance to which followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help create personal and organizational meaning.

#### **Research Questions**

1. What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?
2. To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?

## Research Methods

This study used an exploratory mixed-methods case study research design. It used both qualitative and quantitative methods to obtain data from different vantage points, thus providing richer and more comprehensive data (Creswell, 2014; McMillan & Schumacher, 2010; Patton, 2015; Patten, 2012). However, the priority was placed on the qualitative data and results with the quantitative data aiding in the interpretation of the data.

Case studies obtain qualitative data through an in-depth investigation of a current phenomenon within real-world context (Creswell, 2014; Merriam, 1988; Yin, 2009). The qualitative data were obtained from three exemplary chief executive officers, each from different engineering technology organizations, through face-to-face or telephone interviews, depending on the CEO's schedule. The questions, developed by the peer researchers, were open-ended and read verbatim from a script to provide consistency between interviews and interviewers. The interviews were recorded, transcribed, and coded for themes based on the five variables of character, inspiration, relationships, vision, and wisdom.

The quantitative data were obtained by deploying an electronic survey through SurveyMonkey® to 12 followers of each of the three CEOs. The followers were asked to state their perception of the degree of importance of the behaviors related to character, vision, wisdom, relationships, and inspiration to create meaning within an organization. The degree of importance was rated using a Likert scale ranging from *not important* to *critically important*. The data were quantified by mean, response frequency, and percentage based on the number of responses per rating.

## Population and Sample

The population consisted of an estimated 3.6 million technology engineers in the United States based on the 2014 Congressional Research Service records. This was narrowed to a target population of 700 technology companies from the Altius Directory of California technology companies. The sample was selected from Bort's (2016) review of Glassdoor's 25 best technology companies to work for in 2016. A company that appeared on both the Altius Directory and the Glassdoor rating was Cisco Systems, Inc. The three exemplary chief executive officers of engineering technology organizations were selected from Cisco and its affiliated organizations.

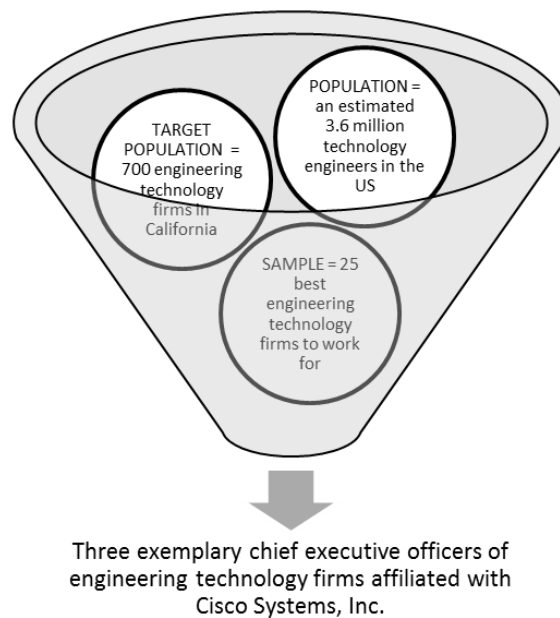


Figure 24. Graphical representation of the population and sample funnel.

## Research Question 1 Major Findings

A summary of the key findings organized by research questions follow. Both research questions focused on behaviors related to five variables: character, inspiration,

relationships, vision, and wisdom. As a whole, both groups of participants rated the five variables as being important in creating meaning in the workplace.

Research Question 1 asked, “What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?” Research Question 1 provided qualitative data from interviews with exemplary chief executive officers of engineering technology organizations. Data were obtained through face-to-face, or telephone interviews, depending on the CEO’s schedule. The researchers asked open-ended, guided questions about the behaviors they use to create meaning for themselves, their followers, and the organization through character, inspiration, relationships, vision, and wisdom. The interviews were recorded, transcribed, coded, and analyzed for themes based on the five variables, character, inspiration, relationship, vision, and wisdom.

**RQ 1 - Major Finding 1: All Five Variables are Essential and Interconnected**

All three exemplary chief executive officers of engineering technology organizations stated that all five variables, character, relationships, vision, wisdom, and inspiration are essential when creating meaning. They further stated that while they are all important, it is not necessarily at the same time or in the same situation. Different situations and different applications require one or more of the variables be used at any given time. However, no one described any one variable as being consistently more important than another. All five variables are interconnected when creating meaning.

### **RQ 1 - Major Finding 2: Relationships are Foundational in Creating Meaning**

The next major finding was the importance of relationships with employees and with clients/customers. Trust and respect form the building blocks of relationships. Due to the nature of their business, these chief executive officers never want to lose an employee to a competitor and clients/customers are their lifeline. Again, due to the nature of their business, clients/customers require continued, managed services for physical security, video collaboration, technology infrastructure including servers and storage, data networking, wireless mobility, unified communication, and physical security. Their industry requires relationship building as well as continued relationship maintenance with employees and customers/clients alike.

### **RQ 1 - Major Finding 3: The Challenge of Continual Innovation and Change**

The third major finding was the challenge of continual innovation and change, which emphasized the importance of vision in the engineering technology industry. Exemplary chief executive officers of engineering technology organizations cannot be content with fixing problems, but must instead, create the future of technology. They must not only compete with other technology firms but must be creative, innovative, and ahead of the competition. It is critical that they do this while creating a culture of inclusion that engages stakeholders in a collaborative process of forming a vision. They are the ones who create the future of technology, and thus create the way people do business, the way they purchase goods and services, and the way they learn. It is a lot of pressure that requires an ever-changing vision.

#### **RQ 1 - Major Finding 4: Strong, Positive Character is Required**

The fourth major finding was the importance of character for exemplary chief executive officers of engineering technology organizations. All three leaders understood and emphasized the importance of having a strong moral compass, ethical thoughts and actions, and stressed that there is no difference between professional and personal life when it comes to character. They were all very humble and placed value on being authentic, transparent, and vulnerable. They were all very well aware of their strengths and weaknesses and readily admitted the need to hire people smarter than themselves in order to succeed. Humility, self-improvement, and learning are imperative for exemplary chief executive officers of engineering technology organizations. They must also be authentic, transparent, open to criticism, and willing to admit their imperfections. This seems like a daunting self-improvement project; however, it was discovered that the participants in this study know this and willingly embrace it.

#### **RQ 1 – Major Finding 5: Reflective Intelligence is Critical in Wisdom**

All participants took time to reflect, recognize their weaknesses, and learned how to improve their strengths. They all recognized the importance of collaborative effort and surrounding themselves with people that are smarter than they are. By taking the time to reflect on their efforts, they were able to integrate experience and knowledge to offer insight and direction for self-improvement as well as organizational change.

#### **RQ 1 – Major Finding 6: Inspiration Begins with Encouragement**

Encouraging others builds confidence, a sense of belonging, and value to the organization. Additionally, encouragement motivates followers to perform to the best of their ability and a willingness to take risks, which can lead to creativity and innovation—



all critical for the success of engineering technology organizations. This ensures engagement which increases productivity which can translate into organizational profit.

### **Research Question 2 Major Findings**

Research Question 2 asked, “To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?” Research Question 2 provided quantitative data from an electronic survey instrument administered via e-mail to 12 followers of each of the chief executive officers of engineering technology organizations interviewed. Data were obtained electronically via SurveyMonkey® from 33 out of 36 possible followers of the three CEOs who had been interviewed previously. The followers answered five questions each for character, inspiration, relationship, and vision, and 10 questions about wisdom, for a total of 30 questions per respondent. The questions were rated on a Likert scale ranging from *not important* to *critically important*.

#### **RQ 2 - Major Finding 1: All Five Variables are Critical When Creating Meaning**

The first major finding was that the followers rated all five variables, character, inspiration, relationships, vision, and wisdom as being important in creating meaning. This finding is consistent with the finding that exemplary chief executive officers of engineering technology organizations place high importance on all of the variables as well. The majority of the follower responses fell within the *very important* rating as shown in Figure 25. The mean of all variables was 4.94 which falls in the *very important* rating of 5.0. The standard deviation from the mean was 0.160041 which represents a very small deviation from the *very important* rating for all variables thus making them all critical when creating personal and organizational meaning.

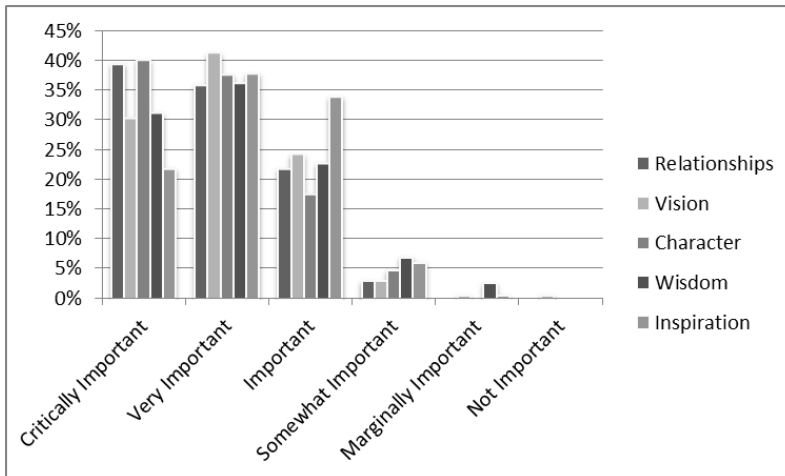


Figure 25. Follower responses by rating.

Additionally, 90-97% of the responses fell within the combined *critically important*, *very important*, and *important* ratings as shown in Table 11. Followers perceived character, inspiration, relationship, vision, and wisdom as all being important when creating personal and organizational meaning.

Table 11  
Follower Response per Variable

Variable	Follower responses per variable as critically important, very important, and important
Relationships	97.0%
Vision	96.9%
Character	95.2%
Wisdom	90.0%
Inspiration	93.3%

## RQ 2 - Major Finding 2: Relationships Are Foundational in Creating Meaning

The second major finding was that 97% of followers rated relationships as being critical in creating personal and professional meaning. Trust is an essential building block in creating relationships with followers. Communicating a sense of caring and concern for team members is the second building block when creating positive, strong relationships. This finding is consistent with that of the exemplary chief executive officers of engineering technology organizations. Exemplary chief executive officers of

engineering technology firms must focus on promoting teams moving together as one unit to serve a common purpose.

### **RQ 2 - Major Finding 3: Vision Must be Inclusive and Collaborative**

The third major finding was that vision was perceived by 96.9% of followers as being essential in creating personal and professional meaning. Followers understand and value the importance of being included in creating a collaborative vision. They expect to be included in conversations and actions that demonstrate thinking toward the future-- communication is essential in creating a vision.

### **RQ 2 – Major Finding 4: Character and Ethical Behavior Required**

The fourth major finding was the 95.2% of followers rated character as being an important component of creating personal and professional meaning. Followers expect exemplary chief executive officers of engineering technology organizations to follow a moral compass and to behave in an ethical manner when dealing with others. Further, they expect exemplary chief executive officers of engineering technology organizations to actively listen when communicating with others, to respond to challenges with optimism, and to demonstrate that they can be trusted.

### **RQ 2 – Major Finding 5: Wisdom is Required**

Followers depend on exemplary chief executive officers of engineering technology firms to be wise in making decisions, when working with stakeholders, and when creating a vision. They expect chief executive officers of engineering technology firms to keep the organizational vision and goals in mind for all conversations and actions. Wisdom is a prerequisite for trust and respect—followers are not inclined to follow someone who does not display wise behavior.

## **RQ 2 – Major Finding 6: Enthusiasm is Essential for Inspiration**

Generating enthusiasm within teams was described as being inspirational. Other behaviors that were perceived to be inspirational were encouragement, confidence building, and empowering others. Recognizing the achievements of individuals and teams was also perceived as being inspirational.

## **RQ 2 – Major Finding 7: Two *Not Important* Ratings**

The last major finding was that out of 30 questions answered by 33 followers, only two responses, “engages team members in creating a vision for the future,” and “integrates personal values with organizational values when interacting with team members,” were answered as being *not important*. All other questions, regardless of variable, were answered as having some degree of importance.

### **Unexpected Findings**

There were several unexpected findings in this study. The first unexpected finding was the low rating placed on inspiration by exemplary chief executive officers of engineering technology organizations. Inspiration was coded 41 times out of 342 total responses giving it the lowest response rate at 12.0%. Comments such as “leaders must inspire people to do their best” and “people want to be inspired to do better” indicate that they recognize the importance of inspiring their followers. They also acknowledged that empowering others, encouragement, and enthusiasm are important behaviors indicative of inspiration; however, they did not linger on any of these during the interview.

The second unexpected finding was that followers placed wisdom as the least important of the five variables. The most unexpected finding was that one follower thought it was *not important* and two followers thought it was *marginally important* for

leaders to “integrate personal values with organizational values when interacting with team members.” Due to the nature of the instrument, it is impossible to know why they answered the question this way. All the CEOs stated that there are no boundaries between personal and professional values and actions, which was in direct contrast to the way three of the followers answered the question.

The last unexpected finding was the importance of vision over character by both CEOs and followers. While the researcher understands the competitive nature of work in the private sector, the degree of competitiveness and levels of trust within the engineering technology industry were unexpected. Several CEOs refused to participate in the study for privacy reasons. One CEO who participated in the study expressed concern that the study was a way to leak information to competitors. Even after reassuring him that the nature of the study did not explore trade secrets or confidential information, it was apparent that he was uneasy at the beginning of the interview.

### **Conclusions**

This study identified the behaviors used by exemplary chief executive officers of engineering technology organizations to create meaning for themselves, their followers, and their organization through relationships, vision, character, wisdom, and inspiration. Additionally, the study looked at the degree of importance followers placed on the behaviors associated with relationships, vision, character, wisdom, and inspiration. The data showed that behaviors related to all five variables are used individually and often interchangeably to create meaning in the workplace. Behaviors related to trust, humility, emotional intelligence, authenticity, transparency, and collaboration flow freely between relationships, vision, character, wisdom, and inspiration.

### **Conclusion 1: All Five Variables are Critical and are Interconnected**

Relationships, vision, character, wisdom, and inspiration are all critical for creating organizational and personal meaning. Further, they are all interconnected. There is often an overlap of qualities related to each of the five variables. Qualities such as trust and respect occur throughout relationships, vision, character, wisdom, and inspiration. However, when exemplary chief executive officers of engineering technology organizations focus on relationships, vision, and character, wisdom and inspiration will follow.

### **Conclusion 2: Relationships Are Foundational to Creating Meaning**

Based on the findings of this study and literature research, it is concluded that while all five variables are important, without strong, positive relationships, no amount of vision, wisdom, inspiration, or character will motivate followers to willingly follow them. Only chief executive officers of engineering technology organizations who build strong, positive relationships will inspire followers to follow them. Relationships must be built on respect, trust, honesty, transparency, and authenticity. Connections must be formed; compassion and understanding must be cultivated; followers must be recognized and acknowledged. Exemplary leaders must encourage risk taking, empower employees, and engage in conversations. They cannot remain in their offices; they must talk to followers, and find out who they are and what their aspirations are. They must view relationship building as worthwhile and as adding value and meaning to the organization.

### **Conclusion 3: Vision for a Rapidly Changing Future**

Based on the findings of this study, it is concluded that visioning must involve all stakeholders and must be a collaborative effort. It is important that exemplary chief

executive officers of engineering technology organizations engage all stakeholders in strategic planning and creating a vision for the organization. With technology advancing at logarithmic speeds, it seems like a daunting job to keep abreast of it, much less lead this type of transformational change on a daily basis. However, the group of people in this study are doing just that. Having foresight, a future outlook, withstanding challenges, embracing uncertainty, and having goals are imperative for exemplary chief executive officers of engineering technology organizations. This must be done collaboratively as no one, including exemplary leaders, can do it by themselves.

#### **Conclusion 4: Character Matters**

It is concluded that leaders who consistently demonstrate a strong set of personal values through their actions and behaviors every day by using a moral compass create trust and respect with employees and customers. Stakeholders will willingly and enthusiastically follow exemplary chief executive officers of engineering technology organizations who display strong, positive character. The outcome will result in meaningful organizations.

#### **Conclusion 5: Experience and Knowledge Lead to Wisdom**

Experience and knowledge lead to wisdom and provide the ability for chief executive officers of engineering technology firms to lead organizations with meaning. Leaders who build positive relationships, develop an ever-changing vision, and possess positive character will have done so through experience, knowledge, and wisdom. Followers recognize wisdom as an essential part of influencing their decision of who they will follow.

## **Conclusion 6: Encouragement Leads to Inspiration**

Exemplary chief executive officers of engineering technology firms that encourage followers will create an environment where trust and respect are part of the culture. Recognizing accomplishments creates a sense of purpose and meaning. Followers find inspiration and meaning in organizations where they are encouraged and empowered to take risks, be creative, and innovative.

### **Implications for Action**

The results from this study support the importance for exemplary chief executive officers of engineering technology organizations to use character, vision, relationship, wisdom, and inspiration to create meaning for themselves, the organization, and their followers. Additionally, the data showed that exemplary leaders and followers are in agreement concerning the importance of these variables in creating meaning in the workplace. The following section presents several implications that exemplary chief executive officers of engineering technology organizations can implement to create meaning for themselves, their followers, and the organization. It begins with rather basic and obvious, but noteworthy, implications and moves into more unique and personalized applications.

#### **Implication 1: Develop CEO Leadership Skills in All Five Variables**

Guthrie (2013) asked, “How can we teach the next generation of America’s business leaders to be bold and exceptional while still possessing the humility that allows them to be trusted and believed?” (para. 1). The answer lies within this study. Develop a training and professional development program within the organization and implemented by Human Resources, under the direction of the CEO, that teaches chief executive



officers of engineering technology organizations how to implement and integrate behaviors that are related to relationships, vision, character, wisdom, and inspiration.

### **Implication 2: Workshops and Seminars**

The information obtained from this study can be used to create workshops and seminars available to engineering technology associations and at technology and engineering schools. Galloway (2007), Grogan (1991), Gurke (2011), Laurendeau and Incropera (1991), and others have been proponents of expanding engineering programs to include leadership training programs. However, concern has been expressed over the existing course load for engineering and technology programs. Presenting the information in workshops or presentations would expose current and future leaders to the behaviors necessary to create meaning and make them aware of the necessity to create meaning in the workplace.

### **Implication 3: Relationship-Building Training**

Human Resources personnel can work with chief executive officers of engineering technology organizations one-on-one and in interactive workshops to build solid relationships with stakeholders based on respect, trust, honesty, transparency, and authenticity. The training can teach them how to form connections, lead from a place of compassion, acknowledge others, and communicate. It can also show them how to engage in conversations that look for solutions and encourage risk taking. Lastly, the training can demonstrate how to be willing to fail and learn from it.

### **Implication 4: Executive Coaching**

The information from this study can be used to aid in executive coaching. As an action item, all chief executive officers of engineering technology organizations can have

an executive coach. This can be done in one-on-one sessions and peer-level group sessions. Executive coaches would shadow chief executive officers, attend meetings, and give feedback to assist the CEOs with deeper insight into their role in creating meaning for themselves, their followers, and the organization. The program can be developed into an accountability program for executives.

#### **Implication 5: Self-Assessment**

This study can be utilized to create self-assessment tests to aid chief executive officers of engineering technology organizations to recognize their areas of strengths and weaknesses. This can be done through focus groups, 360 degree feedback, journaling, and assessment tests created specifically for behaviors related to relationship, vision, character, wisdom, and inspiration. Additionally, the information in the study can be used to instruct CEOs on which behaviors to use to strengthen or change existing behaviors.

#### **Implication 6: Develop Self-Paced Improvement Program**

One of the most challenging aspects of workshops, seminars, and presentations is in retaining what one has learned in a short amount of time. It takes implementation and practice to change behavior. This product could take many forms—a calendar with monthly behavioral themes—a journal with monthly themes—index cards with specific behaviors detailed—or even a smartphone app!

A self-paced improvement program would offer a variety of areas of improvement such as character, relationships, vision, wisdom, and inspiration. Steps can include:

- Selecting which area (relationship, vision, character, wisdom, or inspiration) he or she would like to improve.

- Once the area was selected, the user would receive behavioral tips and ways to implement them.
- The program would allow the user to select banners, badges, sounds, or other types of notifications he or she would like to receive on a daily basis.
- The user could set goals, such as “I will engage followers in casual conversation five times today.”
- There would be an area for the chief executive officer to keep track of the number of times he or she actually follows through with the behavior.
- After repeating the behavior daily for 3 weeks, he or she would move to the next level, such as “I will follow up with previous conversations, adding to my knowledge about that person.”
- To hold the user accountable (because it is easy to ignore a program or an app once downloaded), it could be utilized in an executive coaching setting as a tool to follow through with goals set during the meeting.

### **Recommendations for Further Research**

Based on findings in this study, there are several recommendations to broaden and strengthen the study. There are many other industries and locations that can be studied. Additionally, the instruments can be revised to review the same information in the same manner but from different viewpoints. Lastly, the length of time and added observation can be used for further research.

#### **Recommendation 1: Mixed-Methods, Meta-Analysis of the Twelve Studies**

Eleven other studies were conducted concurrently with this one and should be compared and analyzed in a mixed-methods, meta-analysis of the 12 studies. It is

necessary to compare data and see if the results are similar, and if not, where and why they differ. There is potential for creating a book containing the combined information.

### **Recommendation 2: Replication Study with a Broader Population**

This study focused on exemplary chief executive officers of engineering technology organizations affiliated with Cisco System in California. Peer researchers conducted the study concurrently in private, nonprofit universities, charter schools, nonprofit organizations, superintendents of K-12 schools, female CEOs of private sector organizations, technology leaders, managing partners in consulting firms, professional athletic coaches in NCAA Division I institutions, healthcare organizations, and police chiefs. This study has opened the door for replication among many other fields of interest. A broader population of this study can involve other engineering technology organizations, other industries and professions, different geographical areas,

**Engineering technology organizations.** It is recommended that the study be replicated at additional engineering technology organizations beyond those affiliated with Cisco Systems, Inc. Data from a greater number of exemplary chief executive officers of engineering technology organizations and their followers could be obtained for further correlation of existing data. Additional data from exemplary chief executive officers of engineering technology organizations across the United States would provide comparative data.

**Other industries and professions.** Opportunity for further study exists in other industries, professions, and organizations such as:

- Retail organizations and other sales-related organizations
- Oil and gas industry

- Attorneys
- Entertainment industry
- Banking and mortgage
- Aerospace and airlines
- Unions,
- Publishing and printing
- Manufacturing
- Government agencies
- Religious organizations and clergy
- Food and beverage
- Military
- Real estate
- Environmental
- Construction

**Geographical area.** This study was conducted primarily in California with one peer researcher expanding her study into Utah. A more diverse demographic can be studied by expanding the study to other states and countries. Studies can be replicated on a state-by-state basis for greater depth or broadened across many states for a greater diversity of information.

### **Recommendation 3: Mixed-Methods Case Study of Female CEOs of Engineering Technology Organizations**

The demographics in this study did not include any female chief executive officers of engineering technology organizations. Additionally, the follower

demographics were predominantly male-dominated. This study can be replicated with female chief executive officers of engineering technology organizations for the qualitative portion of the study.

**Recommendation 4: Mixed-Methods Case Study Including a Quantitative Instrument for the CEOs**

In addition to the interview questions, the CEOs could rank the variables on a Likert scale similar to what was given to the followers. This would enable a much more conclusive set of data for comparing CEO and follower perception of the variables on a quantitative basis. Or, have the CEOs participate in the same quantitative survey as the followers did with coding to recognize the two different sources.

**Recommendation 5: Long-Term, Single-Case Study**

The study can be expanded over time for a long-term, single-case study of one exemplary chief executive officer of an engineering technology organization. The researcher could shadow the chief executive officer over time and observe his or her behaviors for consistency as well for as cause-and-effect of behaviors displayed as related to meaning. The study could include the leader's behavior as it relates to all members of the organization, or just as it relates to his direct reports.

**Recommendation 6: Expand Qualitative Data of Mixed-Methods Case Study**

The qualitative portion of the study can be expanded to include other types of qualitative data. Observations of behaviors related to relationship, vision, character, wisdom, and inspiration can be recorded. A review of documents and artifacts can add another dimension to the qualitative data.

## Concluding Remarks and Reflections

Character, inspiration, relationships, vision, and wisdom—these are common words with a great deal of depth and meaning that leave some room for interpretation. Were it not for the work of great scholars such as Avolio (1999), Bass (1990), Bennis (1989), Chemers (1984), Goleman (1997), Kouzes and Posner (1987), Maslow (1969), and Nanus (1992), the review of literature would lack the depth of knowledge and understanding about the meaning of each of these words. Newer literature from Collins (2011), Goleman et al. (2013), Mautz (2015), Moore (2008), Pearson (2015), Pink (2006), Quick and Wright (2011), and Seligman (2002) introduced optimism, positivity, the integration of personal and professional life, and the conceptual age. The most complex of the words used in this study was *meaning*. It has been defined, discussed, and debated by everyone from Aristotle (1893), Plato, and Socrates (Brickhouse & Smith, 1996) to Frankl (2006), Bennis (1989), Collins (2011), Hawking (2010), Mautz (2015), Moore (2008), Pearson (2015), Rath (2015), Seligman (2002), and everyone in between. This study truly has been built “by standing upon the shoulders of giants” (Isaac Newton, *BrainyQuote*). However, what had not been done prior to this study was to identify and examine the behaviors used to create meaning by using character, inspiration, relationships, vision, and wisdom.

The review of literature demonstrates man’s unending quest to find meaning in his life. The search for meaning is what makes people uniquely human (Baumeister et al., 2013). As this world has moved from the industrial age, to the technological age, and now the conceptual age, professional and personal life has become integrated. This has moved the search for meaning from a personal perspective to a workplace perspective.

Holbeche and Springett (2004) stated, “Seventy percent of us are experiencing a greater search for meaning at work than in life” (p. 3). In a world of constant change “meaning is an important tool for imposing stability on the flux of life” (Baumeister et al., 2013, p. 506). Exemplary chief executive officers in the field of engineering technology would do well to take note of this very important fact.

Finding meaning in the workplace is essential. Blacksmith and Harter (2001) cautioned that “Seventy-one percent of American workers are ‘not engaged’ or ‘actively disengaged’ in their work, meaning they are emotionally disconnected from the workplaces and are less likely to be productive” (para. 1). While this affects the morale, culture, and climate of an organization, it should be of particular interest to leaders that it directly affects the profitability of any organization. Mautz (2015) said, “William Kahn, professor of organizational behavior at Boston University, has drawn a direct link between meaningfulness and engagement” (p. 8). As leaders, how can we afford *not* to create meaning in the workplace?

The amazing thing is that creating meaning in the workplace does not have to be expensive, time consuming, or difficult to implement! The data in this study support the individual and integrated use of character, inspiration, relationships, vision, and wisdom to create meaning. This study presents behaviors that have been *proven* to create meaning in the workplace! All chief executive officers of every engineering technology organizations owe it to themselves, their followers, and their organizations, to take this information to heart, integrate it into their lives until it becomes an essential part of who they are, and then share it with others. In this manner, young engineering technology



leaders will have exemplary role models to emulate as they lead their followers into the future.

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## APPENDICES

APPENDIX A

**National Institutes of Health (NIH) Extramural Research Certification**



Screen shot of the Certificate of Completion issued to Sandra Hodge from the National Institutes of Health (NIH) Office of Extramural Research. It was provided to Brandman University’s Institution Review Board (BUIRB) as evidence that doctoral candidate, Sandra Hodge, has successfully completed the “Protecting Human Research Participants” web-based training course.

APPENDIX B

Brandman University Institution Review Board Approval



BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD

IRB Application Action – Approval

Date: 12/11/2016

Name of Investigator/Researcher: Sandra Kay Hodge

Faculty or Student ID Number: BU00183808

Title of Research Project:

Meaning Makers: A Mixed Method Case Study of Exemplary Chief Executive Officers of Engineering Technology Firms and the Behaviors They Use to Create Personal and Organizational Meaning.

Project Type:  New  Continuation  Resubmission

Category that applies to your research:

- Doctoral Dissertation EdD
- DNP Clinical Project
- Masters' Thesis
- Course Project
- Faculty Professional/Academic Research
- Other: \_\_\_\_\_

Funded:  No  Yes \_\_\_\_\_  
(Funding Agency; Type of Funding; Grant Number)

Project Duration (cannot exceed 1 year): 6 months

Principal Investigator's Address: 355 Virginia Street, #3, El Segundo, CA 90245

Email Address: hodg1302@mail.brandman.edu Telephone Number: 760-567-8133

Faculty Advisor/Sponsor/Chair Name: Dr. Keith Larick

Email Address: larick@brandman.edu Telephone Number: 916-212-5410

Category of Review:

Exempt Review  Expedited Review  Standard Review

<input checked="" type="checkbox"/>	I have completed the NIH Certification and included a copy with this proposal
<input type="checkbox"/>	NIH Certificate currently on file in the office of the IRB Chair or Department Office

Signature of Principal Investigator: Sandra Kay Hodge Digitally signed by Sandra Kay Hodge  
DN: cn=Sandra Kay Hodge, o=Br  
andman University, email=Sandra.Kay.Hodge@brandman.edu, c=US  
Date: 2016.12.11 15:43:48Z Date: 12/11/2016

Signature of Faculty Advisor/ Sponsor/Dissertation Chair: Keith Larick Digitally signed by Keith Larick  
Date: 2016.12.15 07:53:12  
-08'00' Date: 12/12/16

BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD  
IRB APPLICATION ACTION – APPROVAL  
COMPLETED BY BUIRB

IRB ACTION/APPROVAL

Name of Investigator/Researcher: \_\_\_\_\_

- Returned without review. Insufficient detail to adequately assess risks, protections and benefits.
- Approved/Certified as Exempt from IRB Review.
- Approved as submitted.
- Approved, contingent on minor revisions (see attached)
- Requires significant modifications of the protocol before approval. Research must resubmit with modifications (see attached)
- Researcher must contact IRB member and discuss revisions to research proposal and protocol.

Level of Risk:  No Risk  Minimal Risk  More than Minimal Risk

IRB Comments:

IRB Reviewer: Doug DeVore Digitally signed by Doug DeVore  
DN: cn=Doug DeVore, o=Brandman  
University, ou,  
email=ddevore@brandman.edu, c=US  
Date: 2016.12.22 14:31:24 -0500

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

BUIRB Chair: Doug DeVore Digitally signed by Doug DeVore  
DN: cn=Doug DeVore, o=Brandman University,  
ou, email=ddevore@brandman.edu, c=US  
Date: 2016.12.22 14:31:24 -0500 Date: 12/22/2016

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REVISED IRB Application  Approved  Returned

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_ Date: \_\_\_\_\_

BUIRB Chair: \_\_\_\_\_

## APPENDIX C

### Informational Letter

Date

Dear Chief Executive Officer,

I am a part of a group of doctoral candidates in Brandman University's Doctorate of Education in Organizational Leadership program in the School of Education. We are conducting a thematic, mixed method case study which will identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, relationships, vision, inspiration, and wisdom.

We are asking for your assistance in the study by participating in an interview which will take approximately 60 minutes and will be setup at a time and location convenient for you. If you agree to participate in the interview, you can be assured that it will be completely confidential. No names will be attached to any notes or records from the interview. All information will remain in locked files, accessible only to the researchers. No employer will have access to the interview information. You will be free to stop the interview and withdraw from the study at any time. You are also encouraged to ask any questions that will help you understand how this study will be performed and/or how it will affect you. Further, you may be assured that the researchers are not in any way affiliated with engineering technology organizations.

The research investigator, Sandra Hodge, is available at [hodg1302@mail.brandman.edu](mailto:hodg1302@mail.brandman.edu) or by phone at 760-567-8133, to answer any questions or concerns you may have. Your participation would be greatly appreciated.

Sincerely,

Sandra Hodge, MAOL  
Doctoral Candidate, Ed.D.  
355 Virginia Street, Apt. 3  
El Segundo, CA 90245

## APPENDIX D

### Research Study Invitation Letter

DATE:

Dear ...

My name is Sandy Hodge and I am a Doctoral Candidate in the School of Education at Brandman University. I am participating in a thematic dissertation with 11 other researchers. This letter serves as an invitation for you to participate in a research study.

**PURPOSE:** The purpose of this thematic, mixed method case study is to identify and describe the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, relationships, vision, inspiration, and wisdom. Further, this study will survey followers to assess their perceptions of the leader's behaviors in relation to character, relationships, vision, inspiration, and wisdom and how these traits create personal and organizational meaning. Results from this study will be summarized in a doctoral dissertation.

**PROCEDURES:** If you choose to participate in this study, you will be invited to a 60-minute, one-on-one interview. I will ask a series of questions designed to allow you to share your experience as an exemplary chief executive officers of engineering technology organizations. The questions will assess the specific variables of character, relationships, vision, inspiration, and wisdom. The interviews will be audio-recorded for transcription purposes.

**RISKS, INCONVENIENCES, AND DISCOMFORTS:** There are no major risks to your participation in this research study. The interview will be at a time and place which is convenient for you.

**POTENTIAL BENEFITS:** There are no major benefits to you for participating; nonetheless, a potential benefit may be that you will have an opportunity to identify future best practices for using the five variables of exemplary leadership. The information for this study is intended to inform researchers and leaders of behaviors used to by exemplary leaders to create organizational meaning.

**ANONYMITY:** If you agree to participate in the interview, you can be assured that it will be completely confidential. No names will be attached to any notes or records from the interview. All information will remain in locked files, accessible only to the researchers. No employer will have access to the interview information. You will be free to stop the interview and withdraw from the study at any time. You are also encouraged to ask any questions that will help you understand how this study will be performed and/or how it will affect you. Further, you may be assured that the researchers are not in any way affiliated with engineering technology organizations. Feel free to contact the principle investigator, Sandy Hodge, at [hodg1302@mail.brandman.edu](mailto:hodg1302@mail.brandman.edu) or by phone at 760-567-8133, to answer any questions or concerns you may have. If I have any questions, comments, or concerns about the study or your rights as a participant, you may write or call the Office of the Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, 949-341-7641.

Sincerely,

Sandra Hodge, MAOL  
Doctoral Candidate, Ed.D.  
355 Virginia Street, Apt. 3  
El Segundo, CA 90245

## APPENDIX E

### Research Participant's Bill of Rights



#### BRANDMAN UNIVERSITY INSTITUTIONAL REVIEW BOARD

##### Research Participant's Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.
2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.
3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.
4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.
5. To be told what other choices he/she has and how they may be better or worse than being in the study.
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.
7. To be told what sort of medical treatment is available if any complications arise.
8. To refuse to participate at all before or after the study is started without any adverse effects.
9. To receive a copy of the signed and dated consent form.
10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618.



APPENDIX F

Sample Informed Consent Form

INFORMED CONSENT

INFORMATION ABOUT: The behaviors of exemplary leaders related to character, vision, relationships, wisdom and inspiration to help create personal and organizational meaning.

RESPONSIBLE INVESTIGATOR: Sandy Hodge, MAOL

PURPOSE OF STUDY:

You are being asked to participate in a research study conducted by Sandy Hodge, a doctoral student from the School of Education at Brandman University. The purpose of study is to identify and describe the behaviors that leaders use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom and inspiration.

Your participation in this study is voluntary and will include an interview with the identified student investigator. The interview will take approximately 60 minutes to complete and will be scheduled at a time and location of your convenience. The interview questions will pertain to your perceptions and your responses will be confidential. Each participant will have an identifying code and names will not be used in data analysis. The results of this study will be used for scholarly purposes only.

I understand that:

- a) The researcher will protect my confidentiality by keeping the identifying codes safe-guarded in a locked file drawer or password protected digital file to which the researcher will have sole access.
b) My participation in this research study is voluntary. I may decide to not participate in the study and I can withdraw at any time. I can also decide not to answer particular questions during the interview if I so choose. Also, the investigator may stop the study at any time.
c) If I have any questions or concerns about the research, please feel free to contact Sandy Hodge at hodg1302@mail.brandman.edu or by phone at 760-567-8133; or Dr. Keith Larick (Chair) at larick@brandman.edu.
d) No information that identifies me will be released without my separate consent and all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed and consent re-obtained. There are minimal risks associated with participating in this research.
e) If I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

I acknowledge that I have received a copy of this form and the "Research Participant's Bill of Rights." I have read the above and understand it and hereby consent to the procedure(s) set forth.

Signature of Participant or Responsible Party

Date:

Signature of Principle Investigator, Sandra Hodge, MAOL

Date:

APPENDIX G

**Sample Audio Release Form**

**AUDIO RELEASE FORM**

**RESEARCH STUDY TITLE:** Meaning Makers: A Mixed Method Case Study of Exemplary Chief Executive Officers of Engineering Technology Organizations and the Behaviors They Use to Create Personal and Organizational Meaning

**BRANDMAN UNIVERSITY**  
**16355 LAGUNA CANYON ROAD**  
**IRVINE, CA 92618**

**RESPONSIBLE INVESTIGATOR:** Sandra Hodge, MAOL

I authorize Sandra Hodge, MAOL, Brandman University Doctoral Candidate, to record my voice. I give Brandman University, and all persons or entities associated with this study, permission or authority to use this recording for activities associated with this research study.

I understand that the recording will be used for transcription purposes and the identifier-redacted information obtained during the interview may be published in a journal or presented at meetings and/or presentations. I will be consulted about the use of the audio recordings for any purpose other than those listed above. Additionally, I waive any rights and royalties or other compensation arising from or related to the use of information obtained from the recording.

By signing this form, I acknowledge that I have completely read and fully understand the above release and agree to the outlined terms. I hereby release any and all claims against any person or organization utilizing this material.

\_\_\_\_\_

Signature of Participant or Responsible Party

Date: \_\_\_\_\_

\_\_\_\_\_

Signature of Principle Investigator – Sandra Hodge, MAOL

Date: \_\_\_\_\_

## APPENDIX H

### Script Question Instrument (Participant Copy)

#### Thematic Interview Protocol

##### **Informed Consent (required for Dissertation Research)**

I would like to remind you any information that is obtained in connection to this study will remain confidential. All of the data will be reported without reference to any individual(s) or any institution(s). After I record and transcribe the data, I will send it to you via electronic mail so that you can check to make sure that I have accurately captured your thoughts and ideas.

We have scheduled an hour for the interview. At any point during the interview you may ask that I skip a particular question or stop the interview altogether. For ease of our discussion and accuracy I will record our conversation as indicated in the Informed Consent.

1. Here are five leadership behaviors that research suggests are necessary in an exemplary leader.

*Looking at these, would you agree that these are all important?*

**VISION:** The leader exhibits foresight with a compelling outlook of the future.

**RELATIONSHIPS:** The leader communicates a common purpose through listening, respect, trust, and acknowledgement of one another.

**CHARACTER:** The leader displays a moral compass of ethics and integrity while being reliable, transparent, and authentic.

**INSPIRATION:** The leader empowers followers by exuding enthusiasm, encouragement, and hope.

**WISDOM:** The leader accurately interprets and responds to complex, ambiguous, and often unclear situations

If yes, *Realizing that they are all important, do any jump out as being absolutely essential?*

- Character
- Inspiration
- Relationship
- Vision
- Wisdom

*What is about those you selected that would place them a bit above the others?*

If no, or not really, *which of them do you believe do not fit into the group of important behaviors?*

- Character
- Inspiration
- Relationship
- Vision
- Wisdom

*Why do you think it/they do not belong in this group of important behaviors?*

2. The first behavior on the list is VISION. Based upon the success of your leadership, it is clear that you have established a vision for your organization. *Are there things that you recall having done to develop vision for yourself and your organization?*

- *Are there some that seemed to work better than others?*
- *Why do you think they (it) worked as well as they (it) did?*

- *Were there any unintended outcomes, positive or negative, from the use of that particular strategy?*
  - *How do you ensure that your team buys into your vision?*
3. The second item on the card is establishing RELATIONSHIPS. This involves being a good listener and establishing trust among your team members. ***Are there specific things you have done to develop relationships among the members of your organization?***
- *Are there some that seemed to work better than others?*
  - *Why do you think they (it) worked as well as they (it) did?*
  - *Were there any unintended outcomes, positive or negative, from the use of that particular strategy?*
4. If you take a look at the card, one of the five important leadership behaviors is CHARACTER and leading with a moral compass. This includes integrity...reliability...authenticity. ***What kinds of things do you do to demonstrate your character as the leader of your organization?***
- *What behaviors do you look for in your peers or employees that demonstrate their character?*
  - *How do you communicate the importance of these behaviors to your staff members?*
  - *Are there challenges that you face as you deal with these issues on a daily basis?*
  - *Are there any unintended outcomes, positive or negative, from the use of a particular strategy?*
5. As stated on the card, an INSPIRATIONAL leader empowers staff by exuding enthusiasm, encouragement, and hope. ***Tell me about some of the things you do to inspire your staff to be all they can be.***
- *Are there some things that seemed to work better than others?*
  - *Why do you think they (it) worked as well as they (it) did?*
  - *Were there any unintended outcomes, positive or negative, from the use of any particular strategy?*
6. The fifth item on the card is WISDOM. As the card states, responding effectively to unclear, complex issues is called for here. ***Can you describe a time when your organization faced a very complex or unclear situation?***
- If yes, ***What did you do or what strategies did you put in place to clarify the situation so that progress was possible?***
- If no, ***If a situation like this did arise in the future, how do you think you would you go about clarifying the situation to put your staff's mind at ease and feel ready to go?***
- *Are there some strategies that seemed to (or you think would) work better than others?*
  - *Why do you think they (it) worked (would work) well?*
  - *Were there any unintended outcomes, positive or negative, from the use of that particular strategy?*
7. Of all the things we have spoken about today – vision, relationships, character, inspiration and wisdom - ***are there absolute 'musts!' that you believe are essential behaviors for an exemplary leader to have?***

If yes, ***What are those behaviors and why do you believe they are so critical?***

*Thank you very much for your time.  
If you like, when the results of our research are known, we will send you a copy of our findings.*

APPENDIX I

**Alignment Table**

Research Questions	Survey Item	Analytical Technique
<p>Research Question 1:            What are the behaviors that exemplary chief executive officers of engineering technology organizations use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration?</p>	<p>Script developed by thematic team.</p>	<p>Data tabulated, median scores measured and analyzed, then charted and graphed. Descriptive statistics: mean, medium, mode.            Information presented in tables, charts, and figures.</p>
<p>Research Question 2:            To what degree do followers perceive the behaviors related to character, vision, relationships, wisdom, and inspiration help to create personal and organizational meaning?</p>	<p>Leader Behaviors 2.0 questionnaire in Survey Monkey® with demographic data input.</p>	<p>Simple descriptive statistics (mean, median, mode, and Spearman rank-order correlations displayed in tabular form).</p>

## APPENDIX J

### Script with Prompts and Generic Probes (Researcher Copy)

*Lead-in sentences and prompts for researcher are in italics and are not on participant sheet*

#### Thematic Interview Protocol

*My name is Sandy Hodge and I work for a multi-discipline engineering firm located in San Luis Obispo and serve as the office manager in their Los Angeles office. I am also a doctoral candidate at Brandman University in the area of Organizational Leadership. I'm a part of a team conducting research to determine what behaviors are used by exemplary leaders to create effective organizations. What is it that you do to create a positive work environment, a healthy culture, and to bring meaning to your organization?*

*Our team is conducting approximately 36 interviews with leaders such as yourself. The information you provide, along with the information provided by others, hopefully will provide a clear picture of the thoughts and strategies that exemplary leaders use to create effective organizations and will add to the body of research currently available. We are also inquiring from a sample of your management level team using a survey instrument to obtain their impressions as well.*

*Incidentally, even though it appears a bit awkward, I will be reading most of what I say. The reason for this is to guarantee, as much as possible, that my interviews with all participating exemplary leaders will be conducted in the most similar manner possible.*

#### Informed Consent (required for Dissertation Research)

I would like to remind you any information that is obtained in connection to this study will remain confidential. All of the data will be reported without reference to any individual(s) or any institution(s). After I record and transcribe the data, I will send it to you via electronic mail so that you can check to make sure that I have accurately captured your thoughts and ideas.

*You received the Informed Consent and Brandman Bill of Rights in an email and responded with your approval to participate in the interview. Before we start, do you have any questions or need clarification about either document?*

We have scheduled an hour for the interview. At any point during the interview you may ask that I skip a particular question or stop the interview altogether. For ease of our discussion and accuracy I will record our conversation as indicated in the Informed Consent.

Do you have any questions before we begin? Okay, let's get started, and thanks so much for your time.

1. Here are five leadership behaviors that research suggests are necessary in an exemplary leader.  
**Looking at these, would you agree that these are all important?**  
*(display on a 3 x 5 card). Give the card to the leader so that it can be referred to at any time.*

**VISION:** The leader exhibits foresight with a compelling outlook of the future.

**RELATIONSHIPS:** The leader communicates a common purpose through listening, respect, trust, and acknowledgement of one another.

**CHARACTER:** The leader displays a moral compass of ethics and integrity while being reliable, transparent, and authentic.

**INSPIRATION:** The leader empowers followers by exuding enthusiasm, encouragement, and hope.

**WISDOM:** The leader accurately interprets and responds to complex, ambiguous, and often unclear situations

If yes, **Realizing that they are all important, do any jump out as being absolutely essential?**

- Character
- Inspiration

- Relationship
- Vision
- Wisdom

**What is about those you selected that would place them a bit above the others?**

If no or not really, **which of them do you believe do not fit into the group of important behaviors?**

- Character
- Inspiration
- Relationship
- Vision
- Wisdom

**Why do you think it/they do not belong in this group of important behaviors?**

2. The first behavior on the list is **VISION** (pointing to Vision on the card). Based upon the success of your leadership, it is clear that you have established a vision for your organization. **Are there things that you recall having done to develop vision for yourself and your organization?**
  - Are there some that seemed to work better than others?
  - Why do you think they (it) worked as well as they (it) did?
  - Were there any unintended outcomes, positive or negative, from the use of that particular strategy?
  - How do you ensure that your team buys into your vision?
3. The second item on the card is **Establishing RELATIONSHIPS**. This involves being a good listener and establishing trust among your team members. **Are there specific things you have done to develop relationships among the members of your organization?"**
  - Are there some that seemed to work better than others?
  - Why do you think they (it) worked as well as they (it) did?
  - Were there any unintended outcomes, positive or negative, from the use of that particular strategy?
4. If you take a look at the card, one of the five important leadership behaviors is **CHARACTER** and leading with a moral compass. This includes integrity...reliability...authenticity. **What kinds of things do you do to demonstrate your character as the leader of your organization?**
  - What behaviors do you look for in your peers or employees that demonstrate their character?
  - How do you communicate the importance of these behaviors to your staff members?
  - Are there challenges that you face as you deal with these issues on a daily basis?
  - Are there any unintended outcomes, positive or negative, from the use of a particular strategy?
5. As stated on the card, an **INSPIRATIONAL** leader empowers staff by exuding enthusiasm, encouragement, and hope. **Tell me about some of the things you do to inspire your staff to be all they can be.**
  - Are there some things that seemed to work better than others?
  - Why do you think they (it) worked as well as they (it) did?
  - Were there any unintended outcomes, positive or negative, from the use of any particular strategy?

6. The fifth item on the card is **WISDOM**. As the card states, responding effectively to unclear, complex issues is called for here. **Can you describe a time when your organization faced a very complex or unclear situation?**

If yes, **What did you do or what strategies did you put in place to clarify the situation so that progress was possible?**

If no, **If a situation like this did arise in the future, how do you think you would you go about clarifying the situation to put your staff's mind at ease and feel ready to go?**

- Are there some strategies that seemed to (or you think would) work better than others?
  - Why do you think they (it) worked (would work) well?
  - Were there any unintended outcomes, positive or negative, from the use of that particular strategy?
7. Of all the things we have spoken about today – vision, relationships, character, inspiration and wisdom - **are there absolute ‘musts!’ that you believe are essential behaviors for an exemplary leader to have?**

If yes: **What are those behaviors and why do you believe they are so critical?**

Thank you very much for your time.

If you like, when the results of our research are known, we will send you a copy of our findings.

***GENERIC PROBES THAT CAN BE ADDED TO ANY QUESTION TO PRODUCE MORE CONVERSATION:***

1. *Would you expand upon that a bit?*
2. *Do you have more to add?*
3. *What did you mean by ....*
4. *Why do think that was the case?*
5. *Could you please tell me more about....*
6. *Can you give me an example of ....*
7. *How did you feel about that?*

*Suggest you put these generic probes on a card so you can use them any time you need to encourage an interviewee to say more about a question you have asked.*



## APPENDIX K

### Field Test Participant Feedback Questions

*Eric Porkert, PE, GM responses to Sandy Hodge*

**September 8, 2016**

While conducting the interview you should take notes of their clarification request or comments about not being clear about the question. After you complete the interview ask your field test interviewee the following clarifying questions. **Try not to make it another interview; just have a friendly conversation.** Either script or record their feedback so you can compare with the other two members of your team to develop your feedback report on how to improve the interview questions.

Before the brief post interview discussion, give the interviewee a copy of the interview protocol. If their answers imply that some kind of improvement is necessary, follow up for specificity.

1. How did you feel about the interview? *Eric: I felt very good about the interview – it was relaxed and preferred having you read the questions rather than me trying to review them on paper in advance.*  
Do you think you had ample opportunities to describe what you do as a leader when working with your team or staff? *Eric: Absolutely!*
2. Did you feel the amount of time for the interview was ok? *Eric: Yes. Half an hour was perfect. I don't think it can be done in less time and cannot imagine it taking more than an hour.*
3. Were the questions by and large clear or were there places where you were uncertain what was being asked? If the interview indicates some uncertainty, be sure to find out where in the interview it occurred. *Eric: The questions were good; I was just disappointed when you skipped over wisdom. Thanks for letting me add that.*
4. Can you recall any words or terms being asked about during the interview that were confusing? *Eric: No, nothing was confusing. Having the card with the five behaviors listed was a great help. Thank you.*
5. And finally, did I appear comfortable during the interview... (I'm pretty new at this)? *Eric: You did great – seemed relaxed, confident, and very engaged. I really liked the eye contact.*

Remember, the key is to use common, conversational language and very user friendly approach.

Put that EI to work☺

NOTE: Underlined font is for your eyes and support info only

## APPENDIX L

### Observer and Field Test Participant Feedback

#### Interview Feedback Reflection Questions

September 8, 2016

Conducting interviews is a learned skill set/experience. Gaining valuable insight about your interview skills and affect with the interview will support your data gathering when interviewing the actual participants. As the researcher you should reflect on the questions below after completing the interview. You should also discuss the following reflection questions with your 'observer' after completing the interview field test. The questions are written from your perspective as the interviewer. However, you can verbalize your thoughts with the observer and they can add valuable insight from their observation.

1. How long did the interview take? **30 minutes.** Did the time seem to be appropriate? **Yes.**
2. How did you feel during the interview? Comfortable? Nervous? **I was extremely nervous and felt flustered. I had left my glasses on my desk (not in that room) which did not help. I knew I had to "act as if" and proceed as if nothing was wrong.**
3. Going into it, did you feel prepared to conduct the interview? Is there something you could have done to be better prepared? **I felt prepared with the questions, what needed to be done, the recording equipment, questions printed out, etc. I could have arrived at least five minutes earlier than I did to allow some deep breathing meditation after setting up and prior to starting the interview.**
4. What parts of the interview went the most smoothly and why do you think that was the case? **It all went fairly smoothly. I believe it is because I interviewed the general manager and I am comfortable with him and know him well.**
5. What parts of the interview seemed to struggle and why do you think that was the case? **When I asked about the five behaviors I must have given him the impression that he had to pick one or two that stood out above the others. I kept feeling as if I needed to clarify that he did not have to pick any in particular unless he wanted to.**
6. If you were to change any part of the interview, what would that part be and how would you change it? **I would add a question about wisdom before question #6. Each of the other four behaviors has its own question except wisdom. I did not realize that until I asked him the 6<sup>th</sup> question about a time when the organization faced a very complex or unclear situation. He said, "what about wisdom? I want to talk about wisdom." I just said "great! What would you like to tell me?"**
7. What suggestions do you have for improving the overall process? **I cannot think of anything. It is obvious that the faculty knows what they are doing. I feel confident with the materials we have been given.**

#### Comments from my observer and the interviewee:

Both said that I was relaxed and did a great job. The observer said that I told him I would be reading the questions verbatim and then I did not do that. She said I abbreviated some of the questions. Additionally, she said I sort of led him a few times.

They both said my eye contact was excellent and were amazed at my ability to take notes without looking at what I'm writing other than the occasional glance at the paper (thanks to years of note taking).

My observation was that it was *really* hard not to talk and carry on a conversation. I learned that even though we are to have a conversational tone, which does not mean we have a conversation! I learned that interviews are not conversations!

## APPENDIX M

### Quantitative Survey Instrument Sample – Leader Behaviors 2.0

#### Leader Behaviors 2.0

##### Introduction

The success of any organization depends in large part on the quality of interactions among the leader and the team members and associates. What determines the quality of these interactions is tied closely to the perception that these people have of the leader's behaviors in five areas: **vision** for the organization; **relationships** between the leader and team members; **character** of the leader; **inspiration** the leader provides; **wisdom** of the leader.

Completing this survey will take approximately 10 minutes. Please choose to become a part of this important undertaking.

#### Leader Behaviors 2.0

##### Informed Consent

It is important to read the following consent information carefully and click the agree box to continue. The survey will not open until you agree.

In the Informed Consent language below, '*Student*' refers to the researcher who requested you complete the survey.

**INFORMATION ABOUT:** The degree of importance regarding a leaders' behaviors related to character, vision, relationships, wisdom and inspiration help to create personal and organizational meaning.

**RESPONSIBLE INVESTIGATOR:** Student

**THE FOLLOWING WILL BE INCLUDED IN THE ELECTRONIC SURVEY:**

You are being asked to participate in a research study conducted by the student., a doctoral student from the School of Education at Brandman University. The purpose of study is to **identify and describe the behaviors** that leaders use to create **personal and organizational meaning** for **themselves** and their **followers** through character, vision, relationships, wisdom and inspiration.

Your participation in this survey is voluntary. You may choose not to participate. If you decide to participate in this electronic survey, you can withdraw at any time.

The survey will take approximately 10 minutes to complete. Your responses will be confidential. The survey questions will pertain to your perceptions.

Each participant will use a three digit code for identification purposes. The researcher will keep the identifying codes safe-guarded in a locked file drawer to which the researcher will have sole access. The results of this study will be used for scholarly purposes only.

No information that identifies you will be released without your separate consent and all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, you will be so informed and consent re-obtained. There are minimal risks associated with participating in this research.

I understand that the Investigator will protect my confidentiality by keeping the identifying codes and research materials in a locked file drawer that is available only to the researcher. I understand that I may refuse to participate in or I may withdraw from this study at any time without any negative consequences. Also, the investigator may stop the study at any time. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor of Academic Affairs, Brandman University, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

If you have any questions about completing this survey or any aspects of this research, please contact the student at email or phone number provided or the faculty advisor Dr. Keith Larick (916-212-5410).

**ELECTRONIC CONSENT:** Please select your choice below.

Clicking on the "agree" button indicates that you have read the informed consent form and the information in this document and that you voluntarily agree to participate.

If you do not wish to participate in this electronic survey, you may decline participation by clicking on the "disagree" button.

The survey will not open for responses unless you agree to participate.

- AGREE:** I acknowledge receipt of the complete Informed Consent packet and "Bill of Rights." I have read the materials and give my consent to participate in the study.
- DISAGREE:** I do not wish to participate in this electronic survey

## Leader Behaviors 2.0

### Part 1

Please enter the code provided to you by the researcher.

**Part 1 Directions:** For purposes of this study and survey, meaning is defined as the result of leaders and followers coming together for the purpose of gathering information from experience and integrating it into a process which creates significance, value and identity within themselves and the organization.

Listed below are behaviors that research suggest that leaders use to create personal and organizational meaning. Using the following descriptions, which one comes the closest to your feelings about the importance of the leadership behavior in developing meaning in your organization.

1 = Not important in our organization; its absence would have no effect upon the leader's overall effectiveness nor our organization's culture.

2 = Marginally important to have but not necessary in our organization; its absence would have little effect upon the leader's effectiveness or the cultural health of our organization.

3 = Somewhat important for a leader in our organization; this is a leadership behavior that would have a positive effect upon how we function and would contribute in some positive ways to our organizational culture.

4 = Important for a leader in our organization; this is a leadership behavior that is good for the organization and its absence in the leader would be a definite deterrent in the organization's overall effectiveness as well as culture.

5 = Very important for a leader in our organization; would contribute significantly to our overall effectiveness and enhance our organizational culture in some very positive ways.

6 = Critically important in our organization; an absolute must; its absence would severely inhibit the leader's effectiveness and the overall health of our organizational culture.

Using the descriptions above, which one comes the closest to your feelings about the importance of the leadership behavior in developing meaning in your organization?

	Not Important (1)	Marginally important (2)	Somewhat important (3)	Important (4)	Very important (5)	Critically important (6)
Continuously promotes our team's moving together as one unit to serve a common purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behaves in an ethical manner when dealing with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Works with team members in a way that generates enthusiasm within teams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When working with teams and team members, continuously keeps the overall goals of the organization as part of conversations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elevates the quality of decision making by discussing similarities of past situations with team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creates an environment of trust among leaders and team members in the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actively listens when communicating with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognizes achievements of teams and team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicates the organization's vision in a way in which team members support it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrates compassion toward team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Using the descriptions above, which one comes the closest to your feelings about the importance of the leadership behavior in developing meaning in your organization?

	Not important (1)	Marginally important (2)	Somewhat important (3)	Important 4	Very important (5)	Critically important (6)
Behaves in a way that shows she/he cares about the team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responds to challenging situations with optimism.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages team members to innovate in order to advance the organization's leading edge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engages team members in creating a vision for the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behavior reflects an understanding of life's complexities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicates in a clear, meaningful way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engages in activities that build confidence among team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behavior reflects organizational vision when making decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrates personal values with organizational values when interacting with team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages team members to share leadership when performing tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Using the descriptions above, which one comes the closest to your feelings about the importance of the leadership behavior in developing meaning in your organization?

	Not important (1)	Marginally important (2)	Somewhat important (3)	Important (4)	Very important (5)	Critically important (6)
Actions with others shows that he/she can be trusted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Empowers team members to take reasonable risks when problem solving.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actions show concern for the well-being of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotes innovation that aligns with the organization's vision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brings personal knowledge to the table when responding to complex situations within the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Takes action by doing the "right thing" in a variety of organizational settings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Displays expertise when working in a variety of situations within the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considers past experiences when responding to complex situations within the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shows concern for others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrates thinking toward the future through conversations and actions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Leader Behaviors 2.0**

**Part 2**

**Part 2 Directions:** Please supply the following information. The information will be used only to

**assist in understanding the results of this inquiry.**

Enter the code provided to you by the person who asked you to completed this survey.

Your gender

Female  Male

Your age category

20-30  31-40  41-50  51-60  61+

Your time with this organization

0-5 yrs.  6-10 yrs.  11-20 yrs.  21 yrs. or over

Your time with the current leader

0-2 yrs.  3-5 yrs.  6-10 yrs.  11 yrs. or over

## APPENDIX N

### Sample E-mail for CEO to Forward to Followers

Thank you for speaking with me today – it will be a great help for this study.

As we discussed, the last part of this project is for 12 of your followers to participate in a quick survey administered through SurveyMonkey®. I have attached a copy of that survey to this email for your review.

Please forward the following to a minimum of 12 people. Thank you.

*Hi! My name is Sandy Hodge, and I am a doctoral student from the School of Education in Organizational Leadership at Brandman University. With the support of your name, I am asking for your assistance in answering a short leadership survey for my doctoral research. The purpose of this study is to look at how exemplary leaders create meaning in their workplace (aka Meaning Makers). Specifically, the purpose is to identify and describe the behaviors that exemplary leaders use to create personal and organizational meaning for themselves and their followers through character, vision, relationships, wisdom, and inspiration.*

*The survey will take **less than 10 minutes**. **Please complete the survey by February 20th**, if possible, by clicking the following SurveyMonkey® link and then entering code **SD16** where prompted. It is important to enter **SD16** exactly as indicated here (with caps and no spaces). Again, the survey will take less than 10 minutes to complete. Your support is greatly appreciated and I will gladly share the results of my study if you are interested:*

*Leader Behaviors 2.0 Survey*

*If the above link does not work, please go to: <https://www.surveymonkey.com/r/BrandDiss>*

*Thank you again for your support. I truly appreciate it!*

