

THE CONTRIBUTION OF EMOTIONAL AND SPIRITUAL INTELLIGENCES  
TO EFFECTIVE BUSINESS LEADERSHIP

by

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## **Abstract**

### **The Contribution of Emotional and Spiritual Intelligences**

#### **to Effective Business Leadership**

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**Joseph Yosi Amram**

Studies of leadership have widened to include different forms of intelligences. This research investigated contributions of emotional and spiritual intelligences to effective leadership. Participants were 42 company CEOs and 210 staff members. Each CEO was administered instruments providing self-reported and 360-degree observer ratings of 5 dimensions of personality, emotional intelligence (EI), and spiritual intelligence (SI). Leadership effectiveness was defined as the composite score of CEO's staff's assessment of their leadership ability, and staff's reported organizational commitment, sense of community, productivity, job satisfaction, morale, and low intention to quit. CEO's self-reported SI significantly correlated with leadership effectiveness, as assessed by their staff, was significant after controlling for company variables (company size and growth) and self-reported personality, and marginally significant after controlling for company variables, and self-reported personality and EI. Self-reported EI by the CEO did not correlate significantly with their staff's assessment of leadership effectiveness, but was marginally significant after controlling for company variables and self-reported personality. Staff's observer ratings of CEO's SI significantly correlated with their assessment of CEO's leadership effectiveness, and remained significant after controlling for company variables, and observer ratings of personality and EI. Similarly, staff's observer ratings of CEO's EI significantly correlated with their assessment of CEO's

leadership effectiveness, and remained significant after controlling for company variables, and observer ratings of personality and SI. Further, “out-of-sample” observer ratings of both the CEO’s EI and SI by a staff subset predict leadership effectiveness as rated by excluded staff. Combined EI score averaging self-report and out-of-sample observers correlated significantly with leadership effectiveness, as did combined self-report and out-of-sample observers’ score on SI. These results suggest that EI and SI are distinct constructs, and each contributes to leadership effectiveness. However, relying solely on self-report may not be as robust as a combination of self-report and/or observer ratings of these constructs.

## Dedication

Dedicated to leaders—those in formal and informal positions of power—who through dedication to their purpose and service bring out the best in themselves and those around them.

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## Chapter 1: Introduction

Business leadership attracts a great deal of attention because it is commonly believed that leaders make a large difference on business performance outcomes. The empirical research shows that, in fact, leaders do make a significant difference and that with the wrong leader “teams lose, armies are defeated, economies dwindle, and nations fail” (Hogan, Curphy, & Hogan, 1994, p. 493). As a result, business leaders are often lionized (e.g., Steve Jobs, CEO of Apple) or demonized (e.g., Jeff Skilling, CEO of Enron), but what psychological models best predict leadership effectiveness? Traditional models—relying on IQ or personality traits—have shown only limited success in explaining or predicting effective leadership (Sternberg, 1997b). For example, many studies show that traditional IQ, a measure of cognitive intelligence focusing on linguistic and logical-mathematical abilities, explains only a small portion of leader effectiveness (Sternberg, 1997b). Over the last few decades the study of leadership has widened to include different forms of intelligence (Chermers, 2001), including emotional and spiritual intelligences (Mussig, 2003) that may relate to motive- and trait-level qualities that have also come under the rubric of intelligence (McCrae, 2000; Piedmont, 1999). The current study investigated the extent to which these non-IQ forms of intelligence, namely emotional and spiritual intelligences, contribute to the effectiveness of business leaders as reflected in outcome measures of commitment, morale, and satisfaction of the direct report staff of company leaders.

Before asking what contributes to effective leadership performance, it is important to first define what leadership is. The vast popular press on leadership with over 2000 books published on leadership per year fails to provide a consistent view of

what defines leadership (Higgs & Rowland, 2002). A useful definition put forth by Chermers (2001) describes leadership as “a process of social influence in which one person is able to enlist the aid and support of others in the accomplishment of a common task” (p. 140). Central to this and other definitions of leadership is that leaders command power and influence using emotional and other forms of motivation in groups (Gardner, 1995). Within the context of business organizations, there exist both formal leaders—executives and managers whose role yields power and influence based on their formal authority and positions (e.g., the CEO)—as well as those whose influence emanates from informal sources. Formal sources of power come from the managerial authority to make hiring and firing decisions, compensation and business strategy decisions, and the like. Informal sources of power come from other factors such as the capacity to articulate and mobilize meaning, providing inspirational motivation by outlining a compelling vision, articulating and embodying values, or establishing trust and optimism, and building relationships to create emotional bonds with team members (e.g., Bass, 1990, 1997, 2001; Bennis, 2000, 2001, 2007; Kouzes & Posner, 1992, 2005, 2006).

Establishing relationships, trust, and creating emotional bonds with team members are suggestive of emotional competencies and a potential I-Thou orientation (Buber, 1958) to human relationships. In this regard, emotional intelligence, based on Gardner’s (1983) theory of multiple intelligences, has been proposed as relevant to the study of effective business leadership (Caruso, Mayer, & Salovey, 2001; Goleman, Boyatzis, & McKee, 2002). Gardner defines intelligence as a set of abilities that are used to solve problems and create products that are valuable within a cultural setting or community. The emotional intelligence construct, popularized by Goleman (1995), was

originally defined by Salovey and Mayer (1990) as an ability to combine cognitive processing with emotional information. Salovey and Mayer (1990) defined emotional intelligence as the ability “to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 189).

An increasing body of research suggests that emotional intelligence (EI) is important for individual performance (e.g., Lam & Kirby, 2002), well-being (e.g., Bar-On, 2000), team performance (e.g., Rapisarda, 2002), and leader effectiveness (e.g., Goleman, 1998a, 1998b; Higgs & Aitken, 2003). Yet, due to methodological concerns and some conflicting and mixed results (Antonakis, 2003; Feyerherm & Rice, 2002), additional tangible outcome data is needed to fully test the predictive power of EI on effective business leadership. For example, measuring the performance impact of EI based on career advancement is problematic as some charismatic leaders may promote their own power base and career at the expense of organizational performance (Hogan, Raskin, & Fazzini, 1990). Tangible performance measures assessed through means other than the leader’s own self-report, such as employee commitment, morale, and low turnover, or customer satisfaction, are needed to better examine the impact of emotional intelligence on leader effectiveness as reflected in organizational outcomes (Feyerherm & Rice, 2002; Hogan, Raskin, & Fazzini, 1990).

Paralleling the growing interest in EI and its application to business leadership is an increasing interest in the integration and application of spirituality to organizational performance (Ashmos & Duchon, 2000; Dent, Higgins, & Wharff, 2005; Jurkiewicz & Giacalone, 2004; Milliman, Czaplewski, & Ferguson, 2003) and to leadership

effectiveness (Duchon & Plowman, 2005; Fry, 2003, 2005; Reave, 2005). For example, Fry (2003, 2005) outlines a spiritual leadership theory (SLT) that was developed within an intrinsic motivation model which incorporates vision, hope/faith, and altruistic love. According to Fry, altruistic love is built on the qualities of trust, forgiveness, acceptance, gratitude, integrity, honesty, courage, humility, kindness, compassion, patience, meekness, and endurance. SLT posits a causal link between hope/faith, altruistic love, and vision, which in turn support a sense of meaning, purpose, and calling, as well as a sense of membership, commitment, and greater effort in followers. In fact, Reave's (2005) review of over 150 papers and studies shows that there is a clear consistency between spiritual values and practices such as honesty, integrity, humility, listening responsively, and showing concern for others, and effective leadership.

Furthermore, over the past 9 years there has been an emerging interest in integrating the constructs of spirituality and intelligence into a single construct called spiritual intelligence (Amram, 2007; Amram & Dryer, 2008; Emmons, 1999, 2000a, 2000b; Halama & Strizenec, 2004; Levin, 2000; Nasel, 2004; Noble, 2000; Vaughan, 2002; Wolman, 2001; Zohar & Marshall, 2000). Much as emotional intelligence is not equivalent to emotionality, spiritual intelligence (SI) is not equivalent to spirituality. Spirituality refers to the individual search and experiential elements of the sacred, deep meaning, unity, connectedness, transcendence, and the highest human potential (Emmons, 1999; Worthington, 2001). In contrast, spiritual intelligence integrates these subjective experiential themes of spirituality associated with meaning, sacred experiences, interconnectedness, and transcendence, and applies them to the tasks involved in living in order to enhance functioning, adaptation, and well-being to produce

products that are valuable within a cultural context or community (Emmons, 1999, 2000a). Hence, SI can be differentiated from spirituality in general, spiritual experience (e.g., a unitary state), or spiritual belief (e.g., a belief in God) (Amram, 2007).

Among the first and most often cited definitions and models of spiritual intelligence is that of Emmons (1999, 2000a, 2000b). Emmons (1999) writes, “spiritual intelligence is a framework for identifying and organizing skills and abilities needed for the adaptive use of spirituality” (p. 163). Vaughan (2002) defines spiritual intelligence as “a capacity for a deep understanding of existential questions and insight into multiple levels of consciousness” (p. 19). Wolman (2001) defines spiritual intelligence as “the human capacity to ask ultimate questions about the meaning of life, and to simultaneously experience the seamless connection between each of us and the world in which we live” (p. 83). In this research, SI is defined as the ability to apply, manifest, and embody spiritual resources, values, and qualities to enhance daily functioning and well-being (Amram, 2007).

Using grounded theory (Glaser, 1992; Glaser & Strauss, 1967; Strauss & Corbin, 1990) and doing qualitative analysis of 71 interviews of participants nominated for their application and embodiment of spirituality in daily life, Amram (2007) identified several dimensions of SI. Included are the following: the ability to mobilize meaning through a sense of purpose and a call for service; developing refined consciousness and utilizing trans-rational modes of knowing such as intuition to solve problems; mindfulness and self-knowledge; acceptance and love of truth; living in alignment with the sacred; a compassionate I-Thou orientation to human relations; utilizing a holistic systems perspective to see the interconnection among everything; love, optimism, and trust in life;

egolessness and humility; and inner-directedness, manifesting inner-freedom, creativity, courage, discernment, and integrity.

Built from these SI themes, follow-on research resulted in the development of the Integrated Spiritual Intelligence Scale (ISIS) (Amram & Dryer, 2008). Preliminary research has shown the ISIS to be a reliable and valid ecumenical measure of SI. It contains five main domain scales and 22 capability subscales that operationalized and corroborated many of the dimensions of SI which were identified from the thematic analysis of the original interviews.

Many of these dimensions of SI capabilities—such as those relating to meaning, intuition, mindfulness, an I-Thou orientation to human relationships, holistic systems view, humility/egolessness, and inner-directedness—can be hypothesized to relate to effective business leadership. For example, since business leaders, in general, and CEOs in particular, are tasked with instilling a sense of purpose and mobilizing meaning in their organizations (e.g., Bass, 1990, 1997, 2001; Bennis, 2000, 2001, 2007; Fry, 2003, 2005; Kouzes & Posner, 2005, 2006), spiritual intelligence would appear relevant to the leader's role. Furthermore, as spiritual intelligence includes the ability to utilize trans-rational modes of knowing such as intuition, CEOs who can use multiple levels of consciousness that transcend linear and logical thinking may indeed make better decisions and solve problems more holistically and effectively (Young, 2002). In fact, several researchers have found that intuition contributes to top management and leadership decision making and effectiveness (e.g., Agor, 1986, 1989; Andersen, 2000). In addition, J. Collins (2001) found that great corporate CEOs who exhibit sustained superior financial performance over an extended period of time manifest greater humility,

a component of SI. Based on their research with over 3,000 managers and their subordinates, Kouzes and Posner (1992, 2005, 2006) highlight the relationship aspects of leadership, in which the best leaders encourage the heart, and lead with love, compassion, and courage. Posner (2003) highlights the inner-directed nature of leadership in explaining that

Where leaders must go to find their voice is within. You have to explore your inner territory. You have to take a journey into those places in your heart and soul where you hide your treasures, and then let them out to play. (p. xii)

Indeed, Bennis (2000) found that effective leaders manifest greater self-awareness and self-knowledge, again components of spiritual intelligence. Sternberg (2007) highlights another important aspect of SI, namely, exhibiting inner-directedness in the form of creativity, as important for effective leadership.

In sum, modern theories of business leadership find that empathic and compassionate interpersonal relationships, inspirational motivation, inner-directedness based on self-knowledge, discernment, articulation, and embodiment of values, and the mobilization of meaning are central for effective leadership (Bass, 1990, 1997, 2001; Bennis, 2000, 2001, 2007; Kouzes & Posner, 1992, 2005, 2006; Sternberg, 2007). With IQ only accounting for small part of leader performance, there has been an evolution and broadening of our understanding of intelligence to include emotional and spiritual intelligences. Furthermore, there is an increasing interest in the integration of spirituality into business leadership in order to articulate and mobilize meaning, and to provide inspirational motivation to employees (Cavanagh, 1999; Creighton, 1999; Duchon & Plowman, 2005; Fry, 2003, 2005; Loehr & Schwartz, 2001; Reave, 2005; Wheatley, 1999, 2002). Prior studies suggest that several SI abilities relating to meaning, intuition,

an I-Thou orientation to human relations, self-knowledge and self-awareness, and egolessness and humility may contribute to effective business leadership. In fact, several authors have already discussed and advocate the importance of spiritual intelligence to effective business leadership (Covey, 2004; Mussig, 2003; Solomon & Hunter, 2002). However, no empirical studies have measured the contribution of spiritual intelligence to effective business leadership and what limited research has been done on the relationship between spirituality and leadership has relied solely on the leader's own self-report.

This research investigated the extent to which emotional and spiritual intelligences contribute to the effectiveness CEOs as reflected in their direct staff's assessment of their leadership effectiveness, including the staff's organizational commitment, sense of community, productivity and effort on the job, job satisfaction, morale, and behavioral commitment (i.e., low intention to quit).

## Chapter 2: Literature Review

In considering the extent to which spiritual intelligence may contribute to effective business leadership, it is important to first review the new paradigms of business leadership to see how the key tasks of leaders may be enhanced with spiritual intelligence competencies. The second section in this review looks at modern theories of intelligence and the emerging constructs of emotional and spiritual intelligences. As emotional intelligence combines the constructs of emotion and intelligence into a new construct of emotional intelligence (EI), it provides an important analog to spiritual intelligence (SI). Furthermore, as an emerging body of literature has assessed the contribution of EI to leadership, the third section of this review considers the contribution of emotional intelligence to effective business leadership. The fourth section reviews the growing interest in and literature on organizational spirituality, and the fifth section reviews the application and contribution of spirituality to leadership. The sixth section reviews the existing models of spiritual intelligence. The last section reviews and assesses the potential link between spiritual intelligence and effective business leadership on theoretical grounds.

### *Modern Theories of Business Leadership*

In contrast to the industrial economy that required the management of manual labor, the new information economy involves turbulence, change, and the management of “knowledge workers,” whose job performance depends on specialized knowledge that cannot be simply commanded by management (Tissen, 1998). This new economy has brought about a number of new management paradigms (Cascio, 1995). Since the accumulation and development of specialized knowledge by such knowledge workers

requires self-motivation, the old 3-C (command, control, and compartmentalization) model that was used to manage manual labor is widely viewed as outmoded (e.g., Bass, 1990, 1997, 2001; Fry, 2003; Senge, 2006; Wheatley, 1999, 2002). According to Senge (2006), the old paradigm needs to be replaced with a broader systems perspective which involves breaking barriers, using collaborative teams, and an orientation toward continuous learning. Leaders of the new economy focus on enhancing cooperation and taking a broader holistic systems view (Senge, 2006). The leader's primary tasks become embedding trust, leading change, and creating a sense of purpose (Ghoshal, Bartlett, & Moran, 1999). Leaders lead by articulating a vision and mobilizing meaning (Bass, 1990, 1997, 2001; Bennis, 2000, 2001, 2007; Kouzes & Posner, 2005, 2006; Smircich & Morgan, 1982). The dissemination of meaning happens through symbolic management (metaphors, stories, etc.) that communicates a set of beliefs and values. This symbolic management is done through the evocation of emotion (Ashforth & Humphrey, 1995).

These leadership paradigms go beyond what is termed transactional leadership that involves managing and manipulating rewards. In his historically seminal paper, Zaleznik (1977) differentiates between managers and leaders. Whereas managers coordinate necessities through transactional rewards (salary, bonuses, stock options, praise, etc.), leaders inspire. To "inspire" connotes spiritual energy and motivation (the word "inspire" contains the same Latin root as "spirituality"—pertaining to the breath of life force).

A similar distinction between transactional and inspirational motivation exists in the transformational leadership literature (Avolio, Bass, & Jung, 1999; Bass, 1990, 1997, 2001; Burns, 1982, 2003). Transformational leaders are change agents who motivate and

inspire followers to attain greater self-development, performance, and responsibility within themselves (i.e., to become more inner-directed). Bass (1990, 1997) defines four elements of transformational leadership: (a) *Individualized consideration* which reflects the leader's concern about developing followers as people, implying an interpersonal relationship as the foundation for transformation; (b) *Intellectual stimulation* which forms an open dialog around the process of vision formation and implementation; (c) *Charisma or idealized influence* which sets high behavior standards for emulation, requiring the leader to embody a strong set of values and integrity in their manifestation; and (d) *Inspirational motivation* which provides meaning so that followers are committed to and engage in pursuing shared goals. Transformational leadership scholars (e.g., Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Bass, 1990, 1997, 2001) argue that transactional leadership is more appropriate in stable environments, while transformational leadership is especially appropriate in turbulent environments, when change and commitment are required from employees to transcend short-sighted self-interest for the long-term good of the whole.

A meta-analytic review by Lowe, Kroeck, and Sivasubramaniam (1996) shows that while most leaders use transactional as well as transformational techniques, employees tend to feel more satisfied, work harder, and perform better under transformational leadership. For example, Ross and Offermann (1997) found a positive link between transformational leadership style and subordinate satisfaction and expressed commitment. Barling, Weber, and Kelloway (1996) studied 9 treatment group leaders who were randomly selected to receive transformational leadership skills training as compared with 11 control group leaders. The results showed that the transformational

skills training had a positive effect on subordinates' satisfaction and on some objective aspects of financial performance.

Some scholars underscore the spiritual dimension of transformational leadership elements such as idealized influence and inspirational motivation (e.g., Fairholm, 1996; Hartsfield, 2003). Bass and Steidlmeier (1999) argue that to be truly transformational, leaders must transmit a moral vision in their organization. Authentic transformational leaders embed values, increase awareness of what is right, help followers satisfy needs for achievement and self-actualization, and inspire followers to transcend their self-interest for the good of the whole. A study by Dukerich, Nichols, Elm, and Vollrath (1990) showed that the moral reasoning level of the assigned leader influenced the moral reasoning level of the group.

In a study of 60 effective business leaders, Bennis (2000) found that leaders had four key abilities: (a) management of attention, involving the ability to emotionally draw others to them; (b) management of meaning through creating and communicating a vision; (c) management of trust through relationships; and (d) management and awareness of self, including self-knowing of one's own skills. Based on his studies and observations of leadership over six decades, Bennis (2007) adds some additional competencies to this list including the ability to generate trust and optimism in themselves and in those who follow. He found that people who work for such leaders feel significant, are excited about their work, and form a community in which learning takes place.

Studies of managerial performance also reveal that self-knowledge and self-awareness (SA), operationalized as congruence between self-report and behavioral

ratings by subordinates and peers, is associated with high performance (e.g., Sosik & Megerian, 1999). Church (1997) investigated 134 high-performing and 470 average-performing managers in different settings and found that SA was statistically significant in differentiating between the high- and average-performing managers.

Kouzes and Posner (2005) describe five practices that are common to successful leaders that have emerged out of their research, including in depth interviews with over 500 respondents, and over 4,000 semistructured self-reflection questionnaires. The five practices and the behavioral commitments that support them are as follows.

1. Modeling the way—Developed by finding one’s voice and clarifying personal values, as well as by setting an example through aligning actions with values.
2. Inspiring a shared vision—Supported by envisioning an exciting future and ennobling possibilities and enlisting others to a common vision.
3. Challenging the process—Facilitated by searching for innovative ways to change, grow, and improve, and by experimenting, taking risks, and learning from mistakes.
4. Enabling others to act—Enhanced by fostering collaboration and trust, and by sharing power and discretion.
5. Encouraging the heart—Cultivated by recognizing contributions and showing appreciation for individual excellence and by celebrating values and victories to create a spirit of community.

From these practice themes, Kouzes and Posner have developed the Leadership Practices Inventory (LPI), that includes both a self-report and a 360 version. The LPI has been administered and validated with over 350,000 people showing that these practices

result in greater leadership effectiveness (Kouzes & Posner, 2005; Posner & Kouzes, 1993).

Sternberg (2007) presents a systems model of leadership that includes three key components of leadership: wisdom, intelligence, and creativity. Sternberg (2007) defines wisdom as the

use of successful intelligence, creativity, and knowledge as mediated by values to (a) seek to reach a common good, (b) by balancing intrapersonal (one's own), interpersonal (others'), and extrapersonal (organizational, institutional, and/or spiritual interests, (c) over the short and long term to (d) adapt to, shape, and select environments. (p. 38)

In other words, Sternberg sees wisdom as taking a holistic or systems view and involving discernment based on a code of values that looks to balance one's narrow self-interest with the wider perspective of the greater whole. Other leadership scholars highlight the importance of values and discernment in relationship to leadership:

One of the greatest challenges for students of leadership is to find an academically respectable way to deal with the value-laden nature of the subject. No matter how much psychologists might like to avoid grappling with the values issue, we ultimately cannot. Values are part of the very fabric of the phenomenon. (Bennis, 2007, p. 3)

Sternberg's (2007) systems model of leadership also highlights the role of creativity, which he defines as "generating ideas and products that are (a) relatively novel, (b) high in quality, and (c) appropriate for the task at hand" (p. 34). Such creativity usually requires a sense of inner-freedom from outside norms in order for the creator to produce such novel ideas and products. Indeed, creativity has been found to be an important contributor for leadership effectiveness (Mumford & Connelly, 1991).

Avolio, Gardner, Walumbwa, Luthan, and May (2004) propose a theory of authentic leadership, describing authentic leaders as "persons who have achieved high

levels of authenticity in that they know who they are, what they believe and value, and they act upon those values and beliefs while transparently interacting with others” (p. 802). They further characterize authentic leaders as acting “in accordance with deep personal values and convictions, to build credibility and win the respect and trust of followers by encouraging diverse viewpoints and building networks of collaborative relationship with followers” (p. 803). The authors draw on positive organizational psychology and propose a framework in which authentic leaders promote greater personal and social identification, fostering hope, optimism, trust, and other positive emotions, among followers. Those positive emotions in turn drive greater follower commitment, job satisfaction, and meaningful engagement, which lead to greater effort, and better job performance.

Koestenbaum (2002) outlines what he calls a diamond model of leadership greatness. This consists of four strategic qualities leading to leadership greatness, which are as follows: (a) vision—thinking creatively and big; (b) reality—having no illusions; (c) ethics—involving service; and (d) courage—acting with sustained initiative.

Koestenbaum says, “Nothing is more practical than for people to deepen themselves. The more you understand the human condition, the more effective you are as a businessperson. Human depth makes business sense” (cited in LaBarre, 2000, p. 222).

In summary, modern leadership theories highlight the business context in which self-knowledge, discernment and wisdom, a holistic systems perspective, emotional and interpersonal relationships, inspirational motivation, and the management of meaning become central for leader effectiveness. While not mentioning emotional or spiritual intelligences directly, many of these leadership paradigms appear to suggest that SI

related abilities, such as self-knowledge, discernment, an I-Thou orientation for the development interpersonal relationships, a holistic systems view, trust and optimism, inspirational motivation, the mobilization of meaning, as well as courage, creativity, authenticity, and integrity all play an important role in leadership effectiveness.

### *Intelligence Beyond IQ*

Other approaches to the study of leadership look at the contribution of intelligence in general, and IQ in particular, to leadership performance. However, several studies highlight the limitation of using IQ, a measure of cognitive intelligence focusing on linguistic and logical-mathematical abilities as the only form of intelligence to predict leader performance (e.g., Bahn, 1979; Dulewicz & Higgs, 2000; Fiedler, 2001).

Bahn's (1979) metareview of the research shows that IQ provided limited value in predicting supervisory performance. Some studies showed that leaders with too high an IQ may actually be detrimental for team performance. According to Bahn, experts agree that a minimum threshold level of IQ is necessary for good performance and that other non-IQ factors play a significant role in predicting leader effectiveness beyond that. A study of the relationship between leader IQ and team performance found a higher positive correlation of .56 between intelligence and performance in leaders with a directive style whose groups were supportive (i.e., willing to listen), a lower positive correlation of .21 for leaders with a directive style whose groups were unsupportive and nonlistening, and a negative correlation of .05 for nondirective leaders with unsupportive and nonlistening groups (Fiedler, 2001). These results suggest a complex interaction between IQ and social dynamics, with the benefits of higher IQ only realized when the leader uses other abilities to create a supportive environment.

In a review of prior research, Hedlund and Sternberg (2000) found that IQ only accounts for about 20% to 30% of professional success. Sternberg (1997b, 2001) argues that improved prediction of leadership performance requires broadening the concept of intelligence beyond IQ. These studies and authors reviewing the contribution of IQ to leadership also highlight the limitation of using IQ as the only form of intelligence to predict leader effectiveness.

Sternberg (1997a) defines intelligence as comprising mental abilities necessary for adaptation to as well as selection and shaping of, any environmental context. Sternberg (1997b) offers a triarchic model consisting of (a) academic intelligence (as measured by classical IQ tests), (b) practical intelligence (which grows through the accumulation of tacit knowledge for solving practical everyday problems), and (c) creative intelligence which involves synthetic abilities to see problems in new and novel ways and to escape the bounds of conventional thinking, but has not been studied as rigorously.

A richer and broader model for multiple intelligences that goes beyond just “mental abilities” as defined by Sternberg is offered by Gardner (1983, 1999). Gardner defines intelligence as a set of abilities that are used to solve problems and create products which are valuable within a cultural setting or community. Gardner (1983) defines seven types of intelligences: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and two personal intelligences (a) an intrapersonal intelligence (the understanding of one’s self and “one’s own feeling life” [p. 239]), and (b) interpersonal intelligence (the understanding of others through the ability to “make distinctions among other individuals . . . among their moods, temperaments, motivations, and intentions” [p.

239]). Whereas Sternberg emphasizes mental abilities, Gardner's model allows for a broader set of abilities such as musical or bodily-kinesthetic that may rely on specialized regions in the brain for their functioning, but are not typically thought of as mental abilities per se.

In subsequent work, Gardner (2000) added naturalistic intelligence, the ability to recognize patterns in the flora and fauna in the wild. He also suggested the possibility of an existential intelligence, involving the capacity to address existential questions pertaining to "the fact of our existence as individuals in the cosmos and our capacity to puzzle over that fact" (p. 29).

Building on Gardner's model, Halama and Strizenec (2004) define existential intelligence as an ability to find and realize meaning in life. Furthermore, Halama and Strizenec suggest that the ability to find and realize meaning in life is also an important element of spiritual intelligence, and hence, they see existential and spiritual intelligences as nonidentical but mutually related and overlapping constructs.

In building on Gardner's (1983) theory of multiple intelligences, several authors have developed models of EI that, despite some criticism (e.g., Davies, Stankov, & Roberts, 1998), have shown some reliability and validation (e.g., Bar-On, 2000; Boyatzis, Goleman, & Rhee, 2000; Mayer, Salovey, & Caruso, 2004). The next section will review several EI models and a growing body of research that suggests a contribution of EI to business leader effectiveness.

#### *Models of EI and Its Contribution to Effective Business Leadership*

During the 1980s, Bar-On (1988) developed the Emotional Quotient Inventory (EQI) to parallel the Intelligence Quotient (IQ). The EQI measures a broad set of

noncognitive abilities and emotional competencies that influence success in dealing with environmental demands. Development of this self-report measure was based on an examination of the key elements of effective emotional and social functioning that led to well-being (Bar-On, 2000). People taking the EQI answer questions in five areas: (a) intrapersonal skills like emotional self-awareness, self-regard, self-actualization, or independence; (b) interpersonal skills like interpersonal relationships, empathy, and social responsibility; (c) adaptability, including problem solving, flexibility, and reality testing; (d) stress management and tolerance, and impulse control; and (e) general mood of optimism and happiness.

Salovey and Mayer (1990) conceived of emotional intelligence as an ability combining cognitive processing with emotional information. They define EI as the ability “to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). Mayer et al. (2004) outline a model of EI based on four abilities (called ability-EI here): (a) perception of emotions as the capacity to recognize emotions in self and others; (b) facilitation of thought through the use of emotional information; (c) understanding of emotions as the ability to analyze and predict their outcome; and (d) management of emotion in the context of goals, self-knowledge, and social environment.

Following their conceptualization of EI as a form of intelligence, Mayer et al. developed the Multifactor Emotional Intelligence Scale (MEIS) and its successor, the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, Caruso, & Sitarenios, 2003). Consistent with other traditional measures of intelligence, the MSCEIT is a performance test in which participants are assessed based on the four-

ability EI model. For example, participants are asked to categorize the emotion conveyed in a picture as sad, afraid, or angry.

Goleman (1995) builds on these prior models by expanding EI to include all competencies other than IQ that are important for success in life: “abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one’s moods and keep distress from swamping the ability to think; to empathize and to hope” (p. 34). Goleman (2001) defines emotional competence as a “learned capability based on emotional intelligence that results in outstanding performance at work . . . job skills that can, and indeed must be learned” (p. 27). Emotional competencies, according to Goleman, explain the 80% of success that is not explained by IQ. Integrating with Goleman’s model, Boyatzis, Goleman, and Rhee (2000) describe the Emotional Competence Inventory (ECI), which uses a 360-degree feedback mechanism to gather self, subordinate, peer, and supervisory ratings on 12 social and emotional competencies.

Whereas Mayer and Salovey (1993) emphasize the term “intelligence” rather than competencies or traits in their four-ability EI model, Bar-On (2000) and Goleman (1998b) expanded the EI construct to include broader emotional competencies such as impulse control and traits such as conscientiousness or extraversion. A trait such as extraversion may depend on abilities, such as social skills, but as a trait it is a behavioral tendency rather than ability. To differentiate them from ability-EI, some authors refer to Goleman’s or Bar-On’s expanded EI models as trait-EI (e.g., Davies, Stankov, & Roberts, 1998; Petrides & Furnham, 2003).

Other authors (e.g., Goleman, 2006) delineate a difference between emotional and social intelligence. In fact, emotional intelligence has its original roots in Thorndike's notion of social intelligence (Thorndike, 1920, 1936; Thorndike & Stein, 1937). Silvera, Martinussen, and Dahl (2001) use a heavily cognitive definition of social intelligence as "the ability to understand other people and how they will react to different social situations" (p. 314). Whereas Goleman (1995, 1998b, 2001) used a broad definition of emotional intelligence which included interpersonal capacities such as empathy, his more recent work (2006) relegates EI to the intrapersonal domain of self-awareness and self-management, while awareness of the emotions of others (social awareness) and relationship management and the regulation of the emotions of others (social facility or relationship management) were seen as part of the social intelligence domain. Goleman (2006) states "my own model of emotional intelligence folded in social intelligence without making much of that fact, as do other theorists in the field" (p. 83). Indeed, the definition of emotional intelligence cited above—the ability "to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189)—clearly includes both awareness and regulation of emotions in self and other. That is, it covers Gardner's (1983) intra- and inter-personal intelligence domains. As will be pointed out in the next chapter, for purposes of this research, emotional intelligence will be presumed to cover what some may break out as social intelligence.

In studying the validity of EI, Barchard and Hakstian (2004) found that ability-EI predicts academic success, but does not add predictive validity beyond IQ. However, Lam and Kirby (2002) found that ability-EI contributes to cognitive performance under

stress even when controlling for IQ. Studies of ability-EI also show correlations between EI and life-satisfaction and reduced tobacco and alcohol usage (MacCann, Matthews, Zeidner, & Roberts, 2003). In social contexts, those who have higher ability-EI were more valued by the opposite sex even after controlling for personality (Mayer, Salovey, & Caruso, 2004).

Additionally, studies find predictive power in the trait-EI model. For example, Gowing (2001) found that scores on the EQI are predictive of occupational success for U.S. Air Force recruiters. Rapisarda (2002) found that trait-EI competencies of influence and empathy (using ECI) correlated to team cohesiveness and team performance in a study of 18 teams composed of participants in an Executive MBA program.

Despite the evidence for the positive performance effects of EI, some authors have criticized the EI construct as elusive and limited by the measurement properties of its tests. Davies, Stankov, and Roberts (1998) studied 530 participants and found that self-report trait-EI measures exhibited low reliability on some factors or correlated significantly with personality dimensions on other factors. Even ability-EI measures showed lower than acceptable reliability on several factors in this study. However, subsequent ability-EI instruments like MSCEIT have shown satisfactory overall reliability of over .90 and subscale reliabilities ranging between .76 to .96 (Mayer, Salovey, & Caruso, 2004). Not surprisingly, reliability for the ECI subscales when using 360-feedback that averages ratings from peers, subordinates, and superiors, is somewhat higher ranging from a low of .73 on self-awareness scale to a high of .90 on the empathy scale (Boyatzis, Goleman, & Rhee, 2000).

Davies, Stankov, and Roberts (1998) and McCrae (2000) argue that there is no incremental predictive power in trait-EI because of the significant correlations between trait-EI and personality inventories. For example, high trait-EI people are low on the five factor model of personality (FFM) neuroticism scale (Bar-On, 2000), and are intuitive on the Myers-Briggs type indicator (Higgs, 2001).

Despite such criticisms, EI has shown incremental predictive validity. For example, Furnham and Petrides (2003) found that trait-EI made a large contribution to happiness as it explained over 50% of the variance. The relationship was significant even when controlling for personality or cognitive ability. Similarly, Petrides and Furnham (2003) found that high trait-EI people exhibit greater emotional and social sensitivity, even when controlling for personality. In summary, despite important criticisms, modern measures of EI show satisfactory reliability and the EI construct offers incremental predictive validity for performance measures such as happiness and social sensitivity.

Having established the reliability and validity of several models of EI, an increasing interest in the role of EI in business organizations and leadership has grown because teamwork and collaboration are required in groups (Abraham, 1999; Cherniss, 2000, 2001; Cooper & Sawaf, 1997; Robins, 2002). Additionally, since the leader serves as a motivator and facilitator of relationships in the team, the leader's EI is important for the performance of the whole team (Prati, Douglas, Ferris, Ammeter, & Buckley, 2003).

Ashkanasy and Tse (2000) reviewed the theory and empirical studies on transformational leadership and conclude that transformational leaders need high EI. In fact, correlations show trait-EI contributes to effective transformational leadership (Bass, 2001; Mandell & Pherwani, 2003). However, in highlighting the problem of using

divergent measures, Palmer, Walls, Burgess, and Stough (2001) used a different trait-EI measure and found no significant correlation between EI and transformational leadership. Unfortunately, these studies suffer from a common method bias as EI and the performance outcome are both measured using the self-report of the same person where the outcome was assessed using the Multifactor Leadership Questionnaire (MLQ), a self-report measure of transformational leadership style, rather than some independent performance measure such as actual productivity, or commitment from the employees themselves rather than the self-report of the leader.

Some authors suggest that EI accounts for over 80% of leader effectiveness (Bennis, 2001; Goleman, 1998a; Goleman et al., 2002). Goleman (1998b) cites a study of hundreds of executives at 15 companies by Hay/McBer in which “the stars showed significantly greater strengths in a range of emotional competencies, among them influence, team leadership, political awareness, self-confidence, and achievement drive. On average, close to 90 percent of their success in leadership was attributable to emotional intelligence” (p. 34). Higher cognitive abilities were 27% more frequent in the stars than in the average leaders. In comparison, emotional competencies showed greater significance, as they were 53% more frequent in the stars than the average leader. Such data, while suggestive of the contribution of EI to performance, lacks tangible objective measures of performance or EI. For example, assessing performance based on the “star status” as reflected in rapid career advancement within an organization is problematic since some charismatic leaders may promote their own power base and career at the expense of organizational performance (Hogan, Raskin, & Fazzini, 1990).

Others have put forward less extreme claims on the significance of EI for leadership (Caruso, Mayer, & Salovey, 2001) and argue for using an objective measure of ability-EI (MEIS/MSCEIT) for leadership selection. For instance, individuals who rank high in ability-EI measures seem to write higher quality vision statements, even when controlling for personality (Mayer et al., 2004).

Wong and Law (2002) developed and used their own self-report EI measure to show that the EI of subordinates positively related to their job satisfaction and job performance as rated by the superior. They also found that the self-rated EI of the leader affects the followers' job satisfaction and organizational citizenship behavior while failing to show a relationship to follower performance. Indeed, it is hard to see how using the leader's self-assessment of her own EI and only her assessment of her team members' performance can be valid to assess the link between the leader's EI and the subordinate's performance. No independent rating was used to judge subordinate performance across different leaders such that the relationship between the EI of the leader and the performance of the subordinates or the team could be ferreted out.

Higgs and Rowland (2002) found that trait-EI predicts change leadership competency, but both were assessed through a self-report measure which introduces a common method bias. A study of 40 managers in a leadership development center showed a positive relationship between trait-EI and independently assessed leadership potential (Higgs & Aitken, 2003). The researchers used a self-report measure of trait-EI, and the leadership potential was assessed by independent center staff.

In a survey of 100 corporate board directors, Dulewicz and Higgs (2003) found that the Chairman and CEO, the most significant leadership positions within the director

group, self-reported higher levels of trait-EI than the other directors. In another study (Dulewicz & Higgs, 2000) 58 managers from the UK and Ireland were assessed on personality traits, cognitive ability, and EI. In this study, trait-EI accounted for 36% of the variance in career advancement compared to 27% for IQ. These results are difficult to generalize because the authors used their own definition and measures of EI and IQ, with IQ including atypical competencies like planning and strategic decision making.

V. Collins (2001) collected IQ, personality, ability- and trait-EI data on 91 executives in a large company to assess the impact of EI on leadership success as measured by multi-rater feedback, position, and salary. Initially, no significant relationship between EI and leadership success was found. However, after controlling for gender, EI did appear to predict success. As women tend to have higher EI (Mandell & Pherwani, 2003), but lower salaries and face a “glass ceiling” in some organizations, controlling for gender differences is important for pinpointing the effect of EI (V. Collins, 2001).

In a sample of 11 leaders of 26 different service teams, Feyerhem and Rice (2002) found mixed results between the manager’s ability-EI and the team’s performance. For example, they found a positive correlation between the leader’s EI component of understanding of emotions and customer satisfaction ( $r = .44, p < .05$ ). However, they found a negative correlation between understanding of emotions and other performance measures such as accuracy ( $r = -.46, p < .01$ ) and productivity ( $r = -.51, p < .01$ ). The study highlights the challenge of correlational research as it is not likely that the ability-EI component of understanding of emotion reduces productivity and accuracy directly; other possible factors (such as improved service quality, even with a smaller number of

served clients) might account for the negative correlation. In addition, the overall EI score, as well as the other EI components such as perception of emotions and management of emotions, showed no significant correlation with any aspects of performance. Such mixed results, which show positive correlations of some elements of EI to some performance measures but negative correlation to others, highlight the need for further research that uses larger sample sizes and looks at each of the components of EI and its contribution to different measures of performance.

In summary, despite some methodological concerns (such as common method bias), mixed results (such as some aspects of EI showing negative correlations with some aspects of performance), and few tangible performance outcomes, conceptual analysis and the majority of empirical studies suggest a positive contribution of EI to leadership effectiveness. However, further tangible performance data beyond the leaders' own self-reported relationship between their emotional intelligence and leadership abilities would be helpful to fully test the predictive power of EI on business leaders' effectiveness.

### *Spirituality in Organizations and Workplace Settings*

Paralleling the growing interest in the application of EI to business is an emerging interest in the application of spirituality to work, organizations, and leadership (Ashmos & Duchon, 2000; Cavanagh, 1999; Creighton, 1999; Fairholm, 1996; Fry, 2003, 2005; Loehr & Schwartz, 2001; Milliman, Czaplewski, & Ferguson, 2003; Solomon & Hunter, 2002; Wheatley, 1999, 2002). This emerging interest in how spirituality affects business and leadership is reflected in the growing number of journal articles and books devoted to it (Ashmos & Duchon, 2000; Duchon & Plowman, 2005; Jurkiewicz & Giacalone, 2004; Milliman, Czaplewski, & Ferguson, 2003; Reave, 2005). This growing interest in

spirituality in business and organizations can be partly explained through the application of Maslow's hierarchy of needs (Tischler, 1999). As standards of living have risen in the developing world, workers in these societies are able to shift from concerns about survival and safety to self-actualization and spiritual needs.

In discussing organizational spirituality, it is important to first define it. Not surprisingly, there are many definitions and measures of spirituality (e.g., Elmer, MacDonald, & Friedman, 2003; Lopez & Snyder, 2003; Stanard, Sandhu, & Painter, 2000). Despite the overlap between religion and spirituality, there is general agreement on the distinction between them. Religion is focused on rituals and beliefs with regards to the sacred within institutional organizations, and spirituality refers to individual experiential elements of meaning and transcendence (Worthington, 2001). Elkins, Hedstrom, Hughes, Leaf, and Saunders (1988) identify several important dimensions of spirituality that include a sense of meaning and mission in life, a sense of sacredness of life, balanced appreciation of material values, and a vision for the betterment of the world. Friedman and MacDonald (2002) review many definitions of spirituality and identify several common themes. Based on these themes, they say that spirituality can be defined as (a) focus on ultimate meaning, (b) awareness and development of multiple levels of consciousness, (c) experience of the preciousness and sacredness of life, and (d) transcendence of self into a connected whole.

Based on their review and thematic analysis of prior definitions of spirituality and workplace spirituality, Jurkiewicz and Giacalone (2004) define workplace spirituality as "a framework of organizational values evidenced in the culture that promote employees' experience of transcendence through the work process, facilitating their sense of being

connected to others in a way that provides feelings of completeness and joy” (p. 13). In their review of the literature and research correlating workplace spirituality and performance, Jurkiewicz and Giacalone (2004) suggest a positive link moderated through greater employee motivation, commitment, and adaptability and flexibility towards organizational change. They propose the following values framework for performance enhancing workplace spirituality: benevolence, generativity, humanism, integrity, justice, mutuality, receptivity, respect, responsibility, and trust.

Other authors, such as Neck and Milliman (1994), have argued that spirituality in the workplace can bind employees to the company and enhance job performance. Neck and Milliman (1994) argue that spirituality in organizations can lead employees to experience consciousness at a deeper level and hence develop their intuitive abilities. Such intuition can enable employees to develop a more purposeful organizational vision that can increase innovation. Furthermore, organizations that offer spiritually-oriented goals provide opportunities to experience higher sense of service and greater personal growth. These in turn lead to better teamwork, organizational commitment, and, ultimately, performance.

Saas (2000) conducted qualitative research that included observation, 38 interviews, participation/volunteering, and document review in a nursing home. He identified three central characteristics of workplace spirituality. They are as follows: (a) value alignment between the management and ownership of the organization and the values of its members; (b) personal spirituality, in which the organization provides the context to foster the spiritual experience of employees; and (c) relationship-based organizing, creating a community or family-like feeling.

Mitroff and Denton (1999) investigated the role of spirituality in the workplace through mailed questionnaires and interviews with senior executives and human resources managers in different companies throughout the Western US. They report that approximately 30% of participants had positive views of religion and spirituality. A small group, roughly 2%, had positive views of religion and negative view of spirituality, while another 8% had negative views of both religion and spirituality. The majority, or 60%, had positive views of spirituality and negative views of religion. Those who worked in organizations they evaluated as “more spiritual” also perceived their organizations as more profitable. Participants ranked what gave them the most meaning and purpose from work (ranked from first to seventh).

1. The ability to realize my full potential as a person.
2. Being associated with a good and ethical organization.
3. Interesting work.
4. Making money.
5. Having good colleagues; serving humankind.
6. Service to future generations.
7. Service to my immediate community.

Dent, Higgins, and Wharff (2005) reviewed, analyzed, and coded 87 scholarly articles relating to workplace spirituality and explored the nexus between spirituality and leadership. They concluded that most articles couple spirituality and religion, and most hypothesize, and some have actually found, a correlation between spirituality and productivity.

In studying the impact of a spiritual practice aimed at the development of consciousness, Schmidt-Wilk, Alexander, and Swanson (1996) review retrospective, prospective, and case study research on the applications of meditation with employees across different levels in businesses. Their conclusion was that meditation appeared to improve health, well-being, job satisfaction, efficiency, and productivity. This, in turn, seemed to improve organizational climate, reduce absenteeism, and bolster financial performance.

In a survey of 556 employees in three different organizations, Lee, Sirgy, Efraty, and Siegel (2003) found that quality of work life influences life satisfaction through the mediation effects of spiritual well-being and job satisfaction. The authors suggest that managers can enhance spiritual well-being and job satisfaction by meeting the employees' higher-order needs (e.g., social, self-esteem, and self-actualization needs). Those in turn will boost employee morale, facilitate organizational citizenship behaviors, and enhance work performance.

Grant, O'Neil, and Stephens (2004) surveyed 334 nurses in a university hospital and found that while the majority (91%) consider themselves to be a "spiritual person" (compared to 42% who consider themselves to be a "religious person"), and 88% say they are "personally interested in spirituality," over 40% do not find opportunities to practice their spirituality at work. Many others may have work experiences that cause them to doubt spirituality's relevance and may perceive talk about spirituality to be unwelcome. For example, 26% believe that the kind of spirituality being promoted is "superficial" and 30% believe it is "becoming too commercialized." Indeed, other authors have expressed skepticism of workplace spirituality as it is seen as an opaque construct,

that can be used to manipulate meaning, and avoid productive conflict in the workplace (Brown, 2003).

Ashmos and Duchon (2000) define spirituality at work as “the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community” (p. 137). Thus, spirituality at work addresses three aspects pertaining to inner life, meaningful work, and community. Based on 696 participants, Ashmos and Duchon (2000) developed a reliable measure of spirituality at work containing seven factors: (a) conditions for community, including value alignment; (b) meaning at work; (c) inner life; (d) blocks to spirituality; (e) personal responsibility; (f) positive connections with other individuals; and (g) contemplation. In an exploratory study with a small sample size containing six hospital units, Duchon and Plowman (2005) found that work unit performance (measured in terms of patient satisfaction) is associated with work unit spirituality. Duchon and Plowman (2005) suggest that the spirituality-performance connection is enabled “by leaders who possess a strong spirit-friendly orientation” (p. 823). Indeed, the leaders in the better performing units showed higher spirituality scores than the leaders in the lower performing units.

Milliman, Czaplewski, and Ferguson (2003) examined the contribution of workplace spirituality to outcome, utilizing three factors from the Ashmos and Duchon (2000) conceptualization of workplace spirituality and their impact on five job attitude variables. They used a sample of 208 part time MBA students working across diverse industries. Using structural equation modeling, they found that meaningful work and sense of community positively contributed to organizational commitment, intrinsic job satisfaction, greater job involvement, and organizational-based self-esteem levels. Sense

of community and alignment of values contributed to lower intentions to quit. Additionally, alignment of values also contributed to organizational commitment. This study is noteworthy as it is among the first to empirically test presumed relationships between workplace spirituality and organizational outcomes using a statistically significant sample size. Unfortunately, among the study's limitations is the fact it is based on a single self-report survey instrument, which introduces a potential for a common method variance among the variables.

In summary, despite the growing interest in organizational and workplace spirituality and the theoretical arguments made for its positive impact on performance, there are limited numbers of empirical studies on the topic. While a number of qualitative studies do suggest a positive contribution of workplace spirituality to organizational outcomes, they are usually limited by their small sample size. Furthermore, most of these studies lack tangible or objective outcome or performance measures. These factors make it challenging to generalize from these studies. Furthermore, the few quantitative studies that do exist suffer from methodological limitations such as no statistical significance, small sample sizes, or exclusive reliance of self-reports.

### *Spirituality and Leadership*

The spiritual qualities and themes discussed earlier, such as confidence in the meaning and purpose of life, a sense of mission in life, and a vision for the betterment of the world, tie into the inspirational elements of leaders and to those models of leadership that highlight the leader's role in defining and mobilizing meaning (Bass & Steidlmeier, 1999; Fairholm, 1996; Fry, 2003; Hartsfield, 2003; Lee, Sirgy, Efraty, & Siegel, 2003). Indeed, as work forms one of people's most significant communities, they expect work

(where they spend the bulk of their waking hours) to satisfy their deeply held need for meaning (Fairholm, 1996; Fry, 2003, 2005; Wheatley, 2002). Fairholm's (1996) research with midlevel managers points to the spiritual as well as economic rewards people receive from work.

Sanders, Hopkins, and Geroy (2003) explore the spiritual dimensions of leadership by proposing a transcendental leadership theory that hierarchically integrates and extends the transactional and transformational theories of leadership. Transcendental leadership, in their view, comprises three dimensions of spirituality: consciousness, moral character, and faith. As leaders grow in their spiritual development along these dimensions, they develop greater awareness and intuition along the consciousness dimension, are guided by an internalized set of universal values along the moral dimensions, and are more inner-directed along the faith dimension. These developments lead to internal locus of control and greater leadership effectiveness.

Houston and Sokolow (2006) discuss the spiritual dimension of leadership by reviewing how spirituality applies to the practical business of motivating staff and accomplishing goals. They identify eight basic spiritual principles: setting intention, paying attention, cultivating the unique gifts of employees, expressing gratitude for progress made, applying unique life lessons, taking a holistic perspective, maintaining openness, and cultivating trust in a higher self.

McCormick (1994) argues that the integration of spirituality and management provides a source of enduring meaning for all people currently working in turbulent times. From their experiences as leadership consultants, Covey (2004) and Wheatley (1999, 2002) argue that the need for a union between spirituality and work is an

unavoidable consequence of the chaotic times in which leaders must respond to questions of meaning that historically have only been answered by the spiritual traditions. These are questions such as “what are my values?” and “what is the meaning and purpose of my work or life?”

From his anecdotal experience as a leadership author, coach, and trainer, Covey (1990, 2004) sees both emotional and spiritual development as important for effective leaders. Given the communal interdependence that is the cornerstone of an effective organization, he advocates principle-centered leadership, which consistently applies natural universal laws to guide action and to build trust. Covey further states that effective leaders “regularly exercise the four dimensions of human personality: physical, mental, emotional, and spiritual” (p. 38). Similarly, Strack and Fottler (2002) argue that leaders who are more spiritually actualized tend to be more effective as they are likely to implement the Kouzes and Posner (2005) five practices of effective leadership. Furthermore, an inspirational leader helps people to expand their capacity to understand the complexities of work and to inspire and breathe life into the vision of the organization (Creighton, 1999).

Based on his own leadership experience and consistent with the teachings of the spiritual traditions, Greenleaf (2002) describes effective leadership as service. The servant leader points the way by showing initiative, listening, demonstrating empathy, exhibiting awareness, using persuasion, and having conceptual foresight. Furthermore, the effective leader uses insight into higher levels of consciousness and “knows the unknowable—beyond conscious rationality” (Greenleaf, p. 35). Indeed, Schneider, White, and Paul (1998) found that an organizational climate for service yielded greater

customer perception of service quality, which can be expected to lead to numerous benefits such as greater customer retention, loyalty, and brand equity. Their study involved surveys of employees and customers in 134 branches of a large northeastern bank. Service climate was found to be fostered through the right foundation conditions such as support, training, and leadership responsiveness to requests for help or guidance.

From studying ego development stages in leaders and specifically tracking 10 longitudinal organizational development efforts, Rooke and Torbert (1998) categorize the highest and most effective development stage of leaders as magicians. At this highest development stage, magicians seek participation in spiritual transformation, synthesize and blend opposites, utilize intuition, and experience disintegration of ego identity.

Parameshwar (2005) did an in-depth analysis of 504 events from the autobiographies of 10 human rights leaders. From this analysis, Parameshwar offers an integrative conceptual framework of spiritual leadership that is based on ego-transcendence.

Quinn (2000) highlights several qualities of great leaders based on his study of some of the world's great transformational leaders, such as Gandhi, Jesus, and Martin Luther King, all of whom drew on their spirituality to inspire themselves and those who follow them. First among these is that the path of deep organizational change and transformation begins with profound change and transformation within the leader. Such inner transformation requires mindfulness and great self-knowledge. Furthermore, Quinn argues that great leaders are inner-directed, following their inner compass to do things that are inherently rewarding, manifesting freedom from social and outside norms. Yet, paradoxically such leaders are also egoless rather than narcissistic or self-centered, as

they are other-focused and manifest great empathy. At the same time, such leaders exhibit a great sense of purpose as paradoxically, they are both people and task focused. Additionally, great leaders manifest freedom from fears (i.e., courage—not in that they don't have fears, but rather in that they are not ruled by them).

Fry (2003) calls for a more holistic and spiritual leadership that integrates the four dimensions of the person: body, mind, heart/emotions, and spirit. Hence, “to motivate followers, leaders must get in touch with their core values and communicate them to followers through vision and personal actions to create a sense of spiritual survival through calling and membership” (p. 693). Fry (2003, 2005) outlines a spiritual leadership theory (SLT) which “was developed within an intrinsic motivation model that incorporates vision, hope/faith, and altruistic love” (Fry, 2005, p. 47). SLT contains three main qualities of leadership: (a) Vision—defines the destination and journey reflecting high ideals and standards for excellence; (b) Altruistic Love—provides for a sense of wholeness, harmony, and well-being produced through care, concern, and appreciation for self and others; and (c) Hope/Faith—fostering endurance, perseverance, “do what it takes” attitude, reaching for stretch goals with an optimistic expectation of victory and excellence. Fry links his definition of altruistic love to the qualities of trust/loyalty, forgiveness/acceptance/gratitude, integrity, honesty, courage, humility, kindness, compassion, and patience/meekness/endurance. SLT posits a causal link between hope/faith, altruistic love, and vision, which in turn support a sense of meaning, purpose, and calling, as well as a sense of membership in followers. A sense of meaning and calling in one's work and organizational membership in turn supports organizational commitment, effort, and productivity, leading to higher organizational effectiveness.

However, despite this growing body of literature arguing the relevance of spirituality to effective leadership, indeed there are only a handful of empirical studies that investigated the link between them. In surveying approximately 200 individuals in a U.S. Army study, Fry, Vitucci, and Cedillo (2005) found that SLT qualities defined above are linked with self-reported organizational commitment, productivity, and effort, mediated by greater meaning/calling, and higher sense of membership and belonging. Meaning and calling, as well as membership were in turn supported by the three components of SLT, namely hope/faith, vision, and altruistic love. Though not studying the effect of individual leader qualities but rather the effect of organizational culture/climate, items assessing these three components of SLT suggest that spiritual qualities such as meaning, purpose, faith, hope, optimism, integrity, humility, courage, and compassion are adaptive and contributive to the organizational commitment and effort of people who are members of organizations that manifest them.

Posner, Slater, and Boone (2006) investigated the relationship between spirituality and leadership by examining the relationship between the Leadership Practices Inventory (LPI) and the Spirituality Assessment Scale (SAS, Beazley, 1998). SAS includes two components—the Definitive Dimension which is characterized by spiritual practices and living in faith relationship with the transcendent, and the Correlated Dimension—that assess the embodiment of three spiritual values (humility, honesty, and service to others). They found significant correlations between leadership as measured by the LPI and the Correlated Dimension of spirituality, but no significant correlations with the Definitive Dimension. These results suggest that it is the embodiment of certain spiritual values

such as humility, honesty, and service that contributes to leadership, rather than spiritual belief or practices such as meditation or prayer per se.

Rego, Cunha, and Oliveira (in press) analyzed 175 critical incidents of 105 employees in 53 organizations who identified events in which their leaders respected or disrespected workplace spirituality. After describing each incident, employees reported their reactions. Positive leader behaviors included the following: (a) promotion of self-determination and employee personal development; (b) respecting the inner and personal life of employees; (c) kindness, compassion, and respect; (d) promotion of interpersonal relationships and sense of community; and (e) courage and open-mindedness. The most frequent reactions to these behaviors were higher levels of psychological well-being, higher commitment, and stronger sense of calling.

On the basis of interviews with six community college leaders, Borger (2007) developed a spiritual leadership framework. Seven themes emerged from the interviews: (a) the motivating importance of meaning by “making a difference”; (b) the role of vocation or calling; (c) the significance of reflection and balance; (d) the importance of self-awareness and “ego strength”; (e) the significance of values and integrity; (f) the existence of common indicators or experiences, regardless of religious participation; and (g) the value of relevant experience.

Parish (1999) did qualitative detailed in-person interviews with 6 educational, 3 ministerial, and 3 political leaders, addressing their effective leadership style. Of the 12 leaders, 3 (25%) stated that they were not inspired to lead based on spirituality. Conversely, 9 (75%), stressed the importance of spirituality in daily activities, as well as leadership. Similarly, Jacobsen (1994) interviewed 22 leaders from the public and private

sectors, each nominated by an outside panel of experts. For the majority of leaders, spirituality played a vital role in their personal and professional activity. The majority favored the integration of spirituality into secular organizational life; however a significant minority was concerned about the role of spirituality in a religiously diverse culture.

Delbecq (2000) reported on the impact of a course on spiritual development for business leaders in which nine CEOs and nine MBAs in Silicon Valley participated. The course focused on integrating business leadership as a calling, listening to the inner voice in the midst of work turbulence, self-integration to address challenges, and discernment in leadership. Delbecq reports getting positive feedback from most participants as the course appeared to touch participants deeply both in their spiritual unfolding, as well as its relevance to their business careers. The overall summary evaluation for the course scored 4.93 on a 5.0 scale.

Reave (2005) reviewed over 150 studies showing that there is a consistency between spiritual values and practices and effective leadership. Spiritual values such as integrity, honesty, and humility have been shown to contribute to leadership effectiveness. Similarly, spiritual practices and behaviors such as exhibiting respect for others, manifesting fair treatment, showing care and concern, listening responsively, recognizing the contributions of others, as well as engaging in reflective practices have also been found to contribute to leadership effectiveness.

Lee (2006) did an exploratory cross-sectional survey with 143 leaders in school administration to investigate the relationship between spirituality, emotional intelligence, and psychological empowerment as the independent variables and motivation to lead as

the dependent variable. Results showed significant positive correlations between two of the independent variables of emotional intelligence and spirituality, and the motivation to lead. However, after controlling for emotional intelligence, spirituality did not account for any additional variance in the motivation to lead variable.

Hartsfield (2003) found a significant correlation between spirituality and transformative leadership in a study of 124 leaders in a large aerospace corporation. He used the Multifactor Leadership Questionnaire (MLQ), the Spiritual Well-Being-Scale (SWBS, Ellison, 1983), a self-report measure of trait-EI, and a measure of self-efficacy. Hartsfield found that all three—spirituality, EI, and self-efficacy—contributed to transformational leadership. Spirituality had a beta coefficient of .15 ( $p < .05$ ), EI had a beta coefficient of .34 ( $p < .001$ ), and self-efficacy had a beta coefficient of .29 ( $p < .01$ ). Together these three variables accounted for 40% of the variance in transformational leadership. As noted earlier, transformational leadership seems to contribute to leader effectiveness, so while Hartsfield's study used a self-report measure of transformational leadership style rather than tangible outcome data, these results can be interpreted to suggest a positive contribution of spirituality to effective business leadership.

As impressive as these results are, Hartsfield's (2003) study suffers from a common methodological problem because the dependent and all of the independent variables were measured using self-reported data. This reduces the validity of Hartsfield's conclusions. Furthermore, Hartsfield found significant correlations among all three independent variables. Spirituality correlated to EI ( $r = .36, p < .001$ ) and self-efficacy ( $r = .29, p < .001$ ). Similarly EI correlated to self-efficacy ( $r = .52, p < .001$ ). While this highlights the potential relationship between EI and spirituality, this correlation also

suggests that the regression estimating their impact on leadership suffers from multicollinearity. Yet, the Hartsfield study is important in that it looked at the contribution of EI and spirituality simultaneously and found that spirituality makes a contribution to the variance in leadership even after controlling for EI.

Although spirituality appears to be correlated with transformational leadership, other research shows mixed results. For example, a study by Zwart (2000) found no relationship between spirituality and transformational leadership in 266 leaders. He used the MLQ for the transformational leadership assessment, but a different measure of spirituality than used by Hartsfield (2003) thus making it unclear if the two studies are measuring the same spirituality construct. Such divergence of results between the Hartsfield (2003) and Zwart studies highlights the need to use common definitions and measures in comparing results across different studies.

In summary, the study of the contribution of spirituality to leadership is a young endeavor in which diverse approaches are used and little agreement exists about the operational definitions of the key constructs (Dent, Higgins, & Wharff, 2005; Strack & Fottler, 2002). While theoretical arguments and a number of qualitative studies do suggest a positive contribution of spirituality or spiritual practice to leadership and business performance, the qualitative studies reviewed used mostly small sample sizes and lacked objective measures of performance outcomes. These factors reduce the generalizability of the findings.

Furthermore, there has been no research using the construct of spiritual intelligence (consisting of abilities that predict functioning and adaptation) rather than spirituality, which emphasizes the experiential and belief elements. For example, the

Hartsfield (2003) study used the SWBS (Ellison, 1983), which includes two subscales measuring existential well-being and religious belief. These subscales of spirituality are less likely to predict leadership effectiveness than the capacity to be present and mindful, to find and mobilize meaning, to manifest discernment and integrity, to exhibit humility and egolessness, or the ability to use multiple modes of consciousness such as intuition in problem solving. Such abilities would better fall under the umbrella of spiritual intelligence rather than spirituality. Hence, there is a need to separate out the experiential elements of spirituality from those elements that reflect abilities that predict functioning and adaptation (Gardner, 2000). In this regard, spiritual intelligence (comprising abilities that predict functioning) holds greater promise than spirituality in explaining and predicting effective business leadership.

### *Spiritual Intelligence*

Much like emotional intelligence defines a set of abilities that draw on emotional resources and information (Mayer, Salovey, & Caruso, 2004), spiritual intelligence involves a set of abilities that draw on spiritual resources (Emmons, 1999). SI combines the constructs of spirituality and intelligence into a new construct of spiritual intelligence. Whereas spirituality refers to the individual search for, and experiential elements of, the sacred, meaning, higher-consciousness and transcendence, spiritual intelligence places a greater emphasis on abilities that draw on such spiritual themes to predict functioning and adaptation, and to produce valuable products or outcomes (Emmons, 1999).

Emmons (2000a, 2000b) draws on Gardner's definition of intelligence and argues that spirituality can be viewed as a form of intelligence because it predicts functioning and adaptation and offers capabilities that enable people to solve problems and attain

goals. In other words, spirituality is based on abilities that produce valuable outcomes. Research suggests a relationship between spirituality, life purpose and satisfaction, health, and well-being (George, Larson, Koenig, & McCullough, 2000; Kass, Friedman, Leserman, Zuttermeister, & Benson, 1991; Veach & Chappel, 1992). Elmer, MacDonald, and Friedman (2003) reviewed research on the impact of spirituality on health and found that it contributes to lower disease rate and longer life. When facing an injury, spiritually oriented people seem to respond better to intervention, better handle trauma (Emmons, 2000a), and have lower depression rates (MacDonald & Friedman, 2002). Trott's (1996) study of 184 workers in a Fortune 100 company indicated positive correlations between spiritual well-being and general self-efficacy.

In looking at spirituality through the lens of intelligence, Emmons (1999) writes, "spiritual intelligence is a framework for identifying and organizing skills and abilities needed for the adaptive use of spirituality" (p. 163). Emmons (2000a) proposes five components for SI as follows: (a) ability to utilize spiritual resources to solve problems, (b) ability to enter heightened states of consciousness, (c) ability to invest everyday activities and relationships with a sense of the sacred, (d) capacity for transcendence of the physical and material, and (e) capacity to be virtuous. However, in responding to criticisms from Mayer (2000) who argues that virtuous behavior belongs more to ethics and personality rather than intelligence, Emmons (2000b) drops (e) the capacity to be virtuous from his revised definition of SI and retains the first four (a through d) components of his model.

A somewhat different framework is offered by Vaughan (2002) who defines SI as "a capacity for a deep understanding of existential questions and insight into multiple

levels of consciousness . . . it implies awareness of our relationship to the transcendent, to each other, to the earth, and all beings.” (p. 19). Hence, Vaughan’s (2002) model may be seen to imply three components of SI: (a) the ability to create meaning based on deep understanding of existential questions, (b) an awareness of and the ability to use multiple levels of consciousness in problem solving, and (c) an awareness of the interconnection of all beings to each other and to the transcendent.

In focusing the definition of SI on issues of meaning, Zohar and Marshall (2000) define SI as

the intelligence with which we address and solve problems of meaning and value, the intelligence with which we can place our actions and our lives in a wider, richer, meaning-giving context, the intelligence with which we can assess that one course of action or one life-path is more meaningful than another. (p. 3)

Zohar and Marshall’s definition also highlights and hints at linking SI to a sense of connection to the wider and greater whole.

Overlapping somewhat with other authors, Levin (2000) argues that SI is exhibited when we live in a way that integrates spirituality into our daily life. Levin suggests that the development of SI requires the recognition of our interconnection to all of life, and the capacity to utilize perceptual powers beyond the five senses including our intuition, which is seen as another level of consciousness and intelligence beyond analytical, linear, and rational thought.

Wolman (2001) defines spiritual intelligence as “the human capacity to ask ultimate questions about the meaning of life, and to simultaneously experience the seamless connection between each of us and the world in which we live” (p. 83). Nasel (2004) defines spiritual intelligence as the

ability to draw on one's spiritual abilities and resources to better identify, find meaning in, and resolve existential, spiritual, and practical issues. . . . Such resources and abilities, be it prayer, intuition, or transcendence, ought to be relevant to facilitating an individual's capacity for finding meaning in experiences, for facilitating problem solving, and for enhancing an individual's capacity for adaptive decision making. (p. 42, p. 305)

Based on his study of some of the world's major spiritual traditions (Buddhism, Christianity, Confucianism, Islam, Judaism, Shamanism, and Taoism), Walsh (1999) identifies and discusses seven common practices that are universal across these spiritual traditions. Amram (2007) developed an ecumenical grounded theory of SI based on interviews with 71 people of different spiritual traditions designated as spiritually intelligent by their associates. A minimum of four interviews was conducted within each of the following spiritual traditions: Buddhism, Christianity, Earth-Based (Shamanic and Pagan), Hindu, Islam/Sufism, Jewish, Non-Dual, Taoism, and Yoga. In addition to the well-defined traditions, the largest single group of participants (20) could be characterized as integrative or eclectic in their spiritual orientation, following their own unique personal integration of several traditions. The majority were spiritual teachers (Priests, Rabbis, Swamis, Sheikhs, etc.). Some were therapists or business leaders who integrated spirituality into their work.

Each interviewee was asked to describe their spirituality in terms of practices and qualities they cultivate in daily life; how spirituality informs their work and relationships; and how they integrate, manifest, and draw on their spirituality to help daily functioning. At the end of the interview, the participants were asked to critically comment on the emergent themes from prior interviews.

Using grounded theory (Glaser, 1992; Glaser & Strauss, 1967; Strauss & Corbin, 1990), Amram (2007) utilized open coding to identify individual properties (e.g.,

gratitude, joy, abundance, and appreciation of beauty), followed by axial coding to identify themes (e.g., love of life, which combines all of the above properties). Lastly, selective coding identified higher-level themes such as grace, which combines the theme of love of life with the theme of the sacred and the theme of trust. Interviews continued until convergence and saturation of the model was achieved.

From a qualitative analysis of these interviews, Amram (2007) identified seven major themes and several subthemes that emerged in the SI model.

1. *Consciousness*—Developed refined awareness and self-knowledge.
  - a. *Mindfulness*—knowing self and living consciously with clear intention and mindful, embodied awareness and presence.
  - b. *Trans-rational knowing*—transcending rationality through synthesis of paradoxes and using various states/modes of consciousness (e.g., meditation, prayer, silence, intuition, and dreams) to access knowledge.
  - c. *Practice*—using a variety of practices to develop and refine consciousness or spiritual qualities.
2. *Grace*—Living in alignment with the sacred, manifesting love for, and trust in life.
  - a. *Sacred*—living in alignment with the divine, a universal life force, nature, or one's true essential nature.
  - b. *Love of life*—reverence and cherishing of life based on gratitude, beauty, vitality, and joy.
  - c. *Trust*—hopeful/optimistic outlook based on faith or trust.
3. *Meaning*—Experiencing significance in daily activities through a sense of purpose and a call for service, including in the face of pain and suffering.

4. *Transcendence*—Going beyond the separate egoic self into an interconnected wholeness.

a. *Relational I-Thou*—nurturing relationships and community with acceptance, respect, empathy, compassion, loving-kindness, generosity, and I-Thou orientation.

b. *Holism*—utilize a systems perspective seeing the wholeness, unity, and the interconnections among diversity and differentiation.

5. *Truth*—Living in open acceptance, curiosity, and love for all creation (all that is).

a. *Acceptance*—forgive, embrace, and love what is, including the “negative” and shadow.

b. *Openness*—open heart and mind, open curiosity, including open respect for the wisdom of multiple traditions.

6. *Serenity*—Peaceful surrender to Self (Truth, God, Absolute, true nature).

a. *Peacefulness*—centered, equanimity, self-acceptance, self-compassion, and inner-wholeness.

b. *Egolessness*—letting go of persona to maintain humble receptivity, surrendering, and allowing what wants and needs to happen.

7. *Inner-Directedness*—Inner-freedom aligned in responsible wise action.

a. *Freedom*—liberation from conditioning, attachments and fears, manifesting courage, creativity, and playfulness.

b. *Discernment*—wisdom to know truth using an inner-compass (conscience).

c. *Integrity*—being/acting authentically, responsibly, and with alignment to one’s values.

In addition, parallel work by Amram and Dryer (2008) focused on the development and validation of the Integrated Spiritual Intelligence Scale (ISIS) built from these themes. ISIS is an 83-item self-report ecumenical measure of spiritual intelligence that was found to be reliable and valid. Based on cluster and principle component analysis of results from 263 participants, ISIS contains 5 main domain scales and 22 capability scales that show considerable overlap with the qualitative themes identified from the interviews by Amram (2007) above. The five ISIS domains are Meaning, Consciousness, Grace, Transcendence, and Truth. The 22 capability subscales are Beauty, Discernment, Egolessness, Equanimity, Freedom, Gratitude, Higher-Self, Holism, Immanence, Inner-Wholeness, Intuition, Joy, Mindfulness, Openness, Practice, Presence, Purpose, Relatedness, Sacredness, Service, Synthesis, and Trust. Indeed, most of the qualitative themes identified in Amram's qualitative themes and grounded theory model found confirmation within the ISIS domain scales and capability subscales. While showing some small differences in clustering of individual capabilities, the five ISIS domains parallel the first five qualitative themes in Amram's (2007) grounded theory model. The qualities related to the sixth theme, including peacefulness, equanimity, and egolessness, are included and cluster within the ISIS Truth domain. Similarly, qualities related to the seventh theme of inner-directedness, such as freedom and discernment, cluster within the ISIS Grace domain. As ISIS shows satisfactory reliability and validity, it complements and further validates the qualitative grounded theory model of spiritual intelligence outlined above.

### *Biological Basis of Spiritual Intelligence*

Gardner (1999) emphasizes the biological basis and biopsychological aspects of intelligence. Hence, Gardner adds several considerations to the list of criteria for intelligence. These include the potential for localization and isolation of certain abilities to specialized regions in the brain, and an evolutionary history and plausibility for their development.

Indeed, classical cognitive intelligence functions such as language, mathematical, and deductive reasoning are associated with the left brain hemisphere, whereas the unification of parts into a greater holistic picture, and intuition (both of which may be deemed as components of spiritual intelligence) are associated with the right brain hemisphere (Deutsch & Springer, 1997; Herrmann, 1981; Ornstein, 1998; Power & Lundsten, 1997). In highlighting the biological basis of the SI quality of mindfulness, Davidson and colleagues (2003) found that those who trained in mindfulness meditation exhibit significantly greater activity in the prefrontal cortex even while not in meditation. Lazar and colleagues (2005) found that a mindfulness meditation practice is associated with increased cortical brain thickness, showing brain regions of the right anterior insula, right middle and superior frontal sulci were thicker among the savvy meditators compared to matched controls. Lutz, Greischar, Rawlings, Ricard, and Davidson (2004) found that a long-term compassion and loving-kindness meditation practice is associated with altered resting electroencephalogram patterns, suggesting that the development of SI relatedness qualities such as compassion and loving-kindness involves temporal integrative mechanisms and may induce short- and long-term neural changes in the brain.

Furthermore, Lutz et al. (2004) found particular brain area activation during loving-kindness and compassion meditation among such trained meditators.

Similarly, recent discoveries of the mirror neuron system in the brain have provided biological basis for the capacity for empathy, a component of SI (Gallese, 2003, 2005). Furthermore, meta-analysis of 80 studies reporting neural correlates of empathy suggests that the medial prefrontal cortex mediates human empathy using six spatially distinct activation clusters in the medial part of the frontal lobe dorsal to the intercommissural plane (Seitz, Nickel, & Azari, 2006).

Hamer (2004) has found a gene contributing to self-report value of self-transcendence from his study of same-sex siblings. Furthermore, Kirk, Eaves, and Martin (1999) found genetic factors to be important in influencing self-transcendence, based on a study of Australian twins.

In summary, these findings suggest a link between spiritual intelligence abilities and biologically based qualities. They include self-transcendence, holistic thinking, intuition, empathy, compassion, loving-kindness, and mindfulness and their biological basis, including association with specialized processing subsystems in the brain and genetic evolutionary plausibility.

#### *Contribution of Spiritual Intelligence to Effective Business Leadership*

Looking at some of the components of SI discussed above suggests several possible links between SI and effective business leadership. For example, the ability to experience and mobilize meaning based on an understanding of existential questions, sense of purpose, and a call for service would tie in to the leader's role in setting a purpose and mobilizing meaning for their organization (Bass, 1990, 1997, 2001; Bennis,

2000, 2001, 2007; Fry, 2003, 2005; Kouzes & Posner, 1992, 2005, 2006; Smircich & Morgan, 1982). Spiritually intelligent leaders would engage in their job motivated by rewards that go beyond financial and status considerations but rather view their work through a sense of purpose and a call for service. This sense of purpose and/or call for service would relate to the inspirational motivation elements of transformational leadership theory in which leaders provide meaning to followers through shared goals (Bass, 1990). The leader's meaning-making ability also relates to one of Bennis' (2000) key leadership abilities pertaining to the management of meaning and to Kouzes and Posner's (2005) practice of inspiring a shared vision.

Additionally, leaders with developed and refined consciousness could be presumed to have greater capacities to use multiple modes of knowing such as intuition, dreams, and extra sensory perception (ESP), for more effective problem solving. For example, Deslauriers (2000) argues that the ability to use dreams, as states of consciousness that transcend rational thought, for guiding action and self-development is reflective of spiritual intelligence. Delaney (2002) has linked intuition as a mode of knowing that goes beyond rationality and is reflective of SI. In reviewing Wilber's (1975) spectrum of consciousness model, Young (2002) argues that as CEOs move from lower to higher levels of development, they will be more effective through solving problems more holistically by using intuition, trans-rational, and higher modes of knowing.

Indeed, in empirical studies looking at the role and use of intuition in functioning and adaptation, Agor (1989) did a survey of 3,157 managers to assess intuitive ability among business and government management employees. Agor found that intuition appears to be a skill that is more prevalent as one moves up the management ladder. Top

level managers in both private and government sectors showed significantly higher levels of intuitive ability than middle- and lower-level managers. Based on this evidence, Agor (1989) contends that intuition is important in management and leadership.

In another study, Agor (1986) surveyed 200 top executives who scored in the top 10% on a national survey of intuitive abilities. All but one of the respondents said they used intuition to guide their most important decisions, and used it in combination with other skills. About a third of these top executives used techniques to expand their intuitive abilities.

In a similar 2-year study of top executives, Isenberg (1984) found that they do not closely follow the classical model of rational decision making. In fact, the most successful senior managers use a mix of intuition and disciplined analysis in their decision making. Nobel-prize winner, Simon (1987) further emphasizes the important role of intuition in decision making.

Using Jung's topology as assessed with the Myers-Briggs Type Indicator (MBTI), Andersen (2000) studied 200 managers from eight companies to determine if those who are intuitive are more effective. Though statistically inconclusive ( $p$  values were not below .05), Andersen (2000) found that the covariance between effectiveness and less effectiveness was 1.5 for intuitive managers. The covariance for other nonintuitive managers was 0.5. This implies that intuition in managers is three times as strongly related to effectiveness compared to other dominant functions. Furthermore, those who combine intuitive (in contrast to sensing) and thinking (in contrast to feeling) were 6.7 times more likely to be effective compared to other personality and decision making styles.

Dean and Mihalasky (1974) did a computerized test of top executives for extra sensory perception (ESP, an intuitive or trans-rational mode of knowing). They found that superior ESP scores were significantly correlated with superior profit-making ability. In fact, 80% of the leaders who doubled their company profits over a 5-year period scored above average in ESP (intuitive) powers. These executives said that they used factors like hunch, sixth sense, or gut feeling, as well as logic and numbers in decision making (Dean & Mihalasky, 1974; Mihalasky, 1975). As a result of such findings, Dean and Mihalasky (1974) recommend that the screening process for company presidents include tests for ESP.

The literature suggests that intuition and intuitive abilities, such as ESP, gut feeling, sixth sense, and so forth, have been linked with functioning and adaptation. In particular, such intuitive abilities appear to contribute to organizational leadership advancement and greater business profitability. Furthermore, there is an increasing body of evidence suggesting that spiritual practices aimed at the development and refinement of consciousness (e.g., meditation) positively impact mental abilities and cognitive functioning (Cranson, Orme-Johnson, Gackenbach, & Dillbeck, 1991; Kember, 1985; Warner, 1987), as well as reduce stress and improve personal relationships at work (Alexander, Swanson, Rainforth, Carlisle, Todd, & Oates, 1993; Shapiro, Schwartz, & Bonner, 1998; Shapiro, Schwartz, & Santerre, 2002). These improvements in cognitive, emotional, and social functioning resulting from a practice aimed at developing consciousness could contribute to effective business leadership and managerial performance among CEOs.

Other SI abilities pertaining to the development of consciousness theme (including, mindfulness, self-awareness, and self-knowledge) map well into one of Bennis' (2000) key leadership abilities pertaining to management and awareness of self and greater self-knowledge. Being mindful and present with employees may support a deepening relationship and loyalty among followers.

Furthermore, an I-Thou orientation to human interactions which involves the nurturing of relationships and community with empathy and compassion may enhance the CEOs' social functioning, enabling them to manage relationships with greater trust, and to create a community and team spirit. As effective leadership involves the building and management of relationships (e.g., Kouzes & Posner, 2005; Posner, 2003) through the establishment of trust (Bennis, 2000), the spiritually intelligent CEO may perform better and exhibit greater EI. Exhibiting greater I-Thou orientation to relationships, including greater empathy, would also be suggestive of the individualized consideration element of transformational leadership style (Bass, 1990). In fact, Tischler, Biberman, and McKeage (2002) propose several models linking EI, spirituality, and work performance. This may explain some of links and correlations found between spirituality and EI (Hartsfield, 2003; Orr, 2001).

Relatedness abilities pertaining to an I-Thou orientation to human relations, such as greater empathy, were found to be a key factor contributing to satisfaction among employees, customers, and shareholders of public Midwestern financial institutions (Strong, Ringer, & Taylor, 2001). Similarly, abilities pertaining to the theme and subscale of SI, such as a holistic systems view of seeing the interconnection among everything, would also be expected to contribute to leadership effectiveness in that it would help

leaders solve problems more globally from a system-wide perspective (Senge, 2006; Sternberg, 2007).

Moreover, leaders with abilities pertaining to the grace domain and themes including joy, beauty, optimism, and trust are likely to be more inspiring to followers. Such leaders are able to manifest greater joy, faith, optimism, or trust that are important leadership qualities (Bennis, 2007) and to “create a culture of celebration” (Kouzes & Posner, 2005, p. 19). Indeed, in studying 53 sales managers, George (1995) found that those who exhibited greater positive mood and optimism were found to be more effective. This effect stayed in place even when controlling for the leader’s job involvement and satisfaction. Other studies show that optimistic expectations contribute to success by helping people overcome adversity (Schulman, 1999).

Similarly, inner-directedness of the SI themes is also one of the key characteristics identified by Quinn (2000) in his study of great leaders. Abilities pertaining to inner-directedness, such as freedom from social norms (supportive of creativity), freedom from fears (supportive of courage), and discernment (relating of good judgment, strong inner-compass, conscience, values, and integrity) would be contributive to leader performance based on Sternberg’s (2007) systems model of leadership. Kouzes and Posner (1992, 2005) highlight the importance of inner-directedness—having discernment, clarifying one’s values, giving voice and having the integrity to live in alignment with them—so as to “model the way” for followers. They state that “leaders must find their own voice, and then they must clearly and distinctively give voice to their values” (Kouzes & Posner, 2005, p. 14). Indeed, integrity and honesty in communications was found to be an important factor in stakeholder satisfaction among

employees, customers, and shareholders of public Midwest financial institutions (Strong, Ringer, & Taylor, 2001). Furthermore, other inner-directed abilities, such as leader self-efficacy, and inner locus of control are important contributors to their effectiveness (Murphy, 2001; Sanders, Hopkins, & Geroy, 2003).

Lastly, leader abilities relating to the SI truth domain, such as acceptance, openness, and egolessness, could also be expected to contribute to leader performance. For example, leaders who work based on acceptance of what is (inner and outer awareness and acceptance of truth) fulfill one of Koestenbaum's (2002) four key leadership diamond principles, namely a reality orientation and having no illusions. Furthermore, leaders whose egos don't get in the way of seeking feedback and being open to the truth, who are more open and curious to what is can be expected to stimulate discussion and bring out the best creative ideas in their teams, which is supportive of the intellectual stimulation element of transformational leadership theory (Bass, 1990, 1997). Leaders who remain open and egoless are more likely to seek innovative ways to change, grow, and improve, all of which are important leadership practices (Kouzes & Posner, 2005). Similarly, leaders who manifest the paradoxical qualities of a sense of purpose as well as egolessness are also expected to inspire the best in their organizations (J. Collins, 2001; Quinn, 2000). J. Collins' (2001) study of great CEOs who delivered superior stock performance over a long term sustained period were characterized by the paradoxical qualities of humility and strong resolve. Indeed, greater scores in the Truth domain of the ISIS seemed to be related to greater business acumen (Amram & Dryer, 2008).

In sum, analysis of several components of the SI model and measurement instrument described above suggests a positive contribution of SI to business leadership.

Such contribution of SI to CEO performance may be mediated through greater organizational and workplace spirituality, as discussed earlier. However, higher SI among CEOs may contribute to their performance through other means that are not related to greater organizational spirituality. For example, CEOs with greater SI may be more effective problem solvers by applying SI abilities relating to greater inner-freedom, creativity, intuition, and holistic systems perspective. Furthermore, greater SI may contribute to a leader's effectiveness by supporting greater inspirational motivation through greater integrity, authentic presence, and inner-directedness, all of which are important leadership qualities that do not necessarily translate into greater workplace spirituality.

Several authors have already proposed a link between spiritual intelligence and leadership performance. Solomon and Hunter (2002) suggest that finding meaning through existential and spiritual intelligences contributes to effective leadership. Mussig (2003) argues that SI is an important component in values-driven leadership required to manage and mobilize meaning in business organizations. In discussing mental, physical, emotional, and spiritual intelligences, Covey (2004) argues that "spiritual intelligence is the central and most fundamental of all the intelligences because it becomes the source of guidance of the other three. Spiritual intelligence represents our drive for meaning and connection" (p. 53). Hence, Covey sees SI as the key to going beyond effectiveness to leadership greatness.

In summary, theoretical arguments made by several authors and the analysis of several components of spiritual intelligence all suggest a possible contribution of SI to leadership performance. Yet, to-date no empirical studies have measured the contribution

of spiritual intelligence to effective business leadership, going beyond the self-reported leadership qualities and relating these to tangible outcome data.

### Chapter 3: Methods

This research study used quantitative data analysis and correlational statistics to investigate the contribution of emotional and spiritual intelligences to business leaders' effectiveness as reported by their direct reports. Quantitative statistics methods were chosen as they are well-suited to explain and predict the effect that some variables, such as various forms of intelligence like EI and SI, have on the variance in another variable, such as leader performance (Creswell, 2003; Goodwin, 2005). A quantitative method is also important for positively impacting business-oriented audiences who are interested in empirical evidence about the relationships between emotional and spiritual intelligences and objective business results.

Specifically, correlational statistics were used to test the contribution of EI and SI to the effectiveness of Chief Executive Officers (CEOs) of companies as reported by their staff. Hierarchical regressions were used to investigate the incremental contribution of EI and SI to leadership effectiveness after controlling for the effect of previously established constructs, such as demographics, and personality, as well as company environmental context variables such company size and growth. Stepwise regression analyses were used to explore which dimensions of emotional and spiritual intelligences, as well as various dimensions of personality, accounted for the largest portion of the variance in leadership effectiveness.

An outcome measure of CEO leadership effectiveness was a composite score of leadership effectiveness (EFF) averaging the CEOs' staff's reported scores on several measures of organizational outcomes relating to leadership effectiveness, including organizational commitment, sense of community, level of effort and productivity, job

satisfaction, morale, overall assessment of the CEO's leadership by his staff, and the staff's intention to quit. The leaders' emotional and spiritual intelligences were assessed using both the CEO's self-reported emotional intelligence (EI-S) and spiritual intelligence (SI-S), as well as observer ratings by the staff on the CEO's emotional and spiritual intelligences (EI-O and SI-O). Self versus observer measures of the same constructs or scales are distinguished with -S or -O, respectively, appended to the construct or name of the scale.

### *Hypothesis*

The following specific hypotheses about the contribution of emotional and spiritual intelligences to leadership effectiveness were tested:

1. Self-reported emotional intelligence by the CEO (EI-S) explains leadership effectiveness. Specifically,
  - a. Self-reported emotional intelligence correlates with leadership effectiveness.
  - b. Self-reported emotional intelligence contributes to leadership effectiveness even after controlling for self-reported personality scores.
  - c. Self-reported emotional intelligence contributes to leadership effectiveness even after controlling for self-reported personality and self-reported spiritual intelligence.
2. Self-reported spiritual intelligence by the CEO (SI-S) explains leadership effectiveness. Specifically,
  - a. Self-reported spiritual intelligence correlates with leadership effectiveness.
  - b. Self-reported spiritual intelligence contributes to leadership effectiveness even after controlling for self-reported personality scores.

- c. Self-reported spiritual intelligence contributes to leadership effectiveness even after controlling for self-reported personality and self-reported emotional intelligence.
3. Observer ratings by the CEO's staff of his or her emotional intelligence (EI-O) explain leader effectiveness. Specifically,
  - a. Observer ratings of emotional intelligence correlate with leadership effectiveness.
  - b. Observer ratings of emotional intelligence contribute to leadership effectiveness even after controlling for observer ratings of personality.
  - c. Observer ratings of emotional intelligence contribute to leadership effectiveness even after controlling for the observer ratings of personality and observer ratings of spiritual intelligence.
4. Observer ratings by the CEO's staff of his or her spiritual intelligence (SI-O) explain leader effectiveness. Specifically,
  - a. Observer ratings of spiritual intelligence correlate with leadership effectiveness.
  - b. Observer ratings of spiritual intelligence contribute to leadership effectiveness even after controlling for observer ratings of personality.
  - c. Observer ratings of spiritual intelligence contribute to leadership effectiveness even after controlling for the observer ratings of personality and observer ratings of emotional intelligence.

#### *Participants*

In this study, 252 people participated: 42 of them were company CEOs, and 210 were members of their CEO's staff and/or direct reports. This was a convenience sample

with participants being recruited through various CEO organizations such as the Young President's Organization (current and graduating members) and The Alliance of Chief Executives via email and online postings to such CEO organizations, through email introductions to other CEOs from the researcher's own network of contacts, and through introductions from other participants. Participants and their companies were all based in the United States with the majority (81%) located in the San Francisco and San Jose regions of northern California.

CEO participants signed an informed consent form and were required to invite their entire staff of direct reports to participate in order to provide anonymous ratings on the CEO and their leadership effectiveness. A minimum of two staff respondents were required for each CEO participant to be included in the study. The number of staff participants ranged from 2 to 11, with an average of 5 staff participants for each CEO.

Recruiting of participants continued until 60 CEOs agreed to participate in the study. Twelve CEOs were excluded from the study because they failed to complete their own self-assessment. Six CEOs were eliminated from the study because they failed to obtain at least two respondents from their staff.

The typical CEO was male ( $N = 36$ ) and White/Caucasian ( $N = 33$ , the remaining were Asian or Asian Americans). One CEO participant was under 30 years old, 10 participants were between 30 and 39 years old, 10 participants were between 40 and 44 years old, 10 participants were between 45 and 49 years old, 8 participants were between 50 and 54 years old, 2 participants were between 55 and 59 years old, and 1 participant was between 60 and 64 years old. In terms of company size, 13 of the participants were CEOs of very small companies (less than 20 employees), nine companies employed

between 20 and 49 employees, eight companies employed between 50 and 99 employees, eight companies employed between 100 and 249 employees, three companies employed between 250 and 499 employees, none of the participating companies employed between 500 and 999 employees, and one company employed over 1,000 employees.

Of the 42 CEOs who completed the study, half ( $N = 21$ ) were people known to the researcher before the beginning of the study. Subsequent comparisons of means (t-tests) on independent and dependent variables between this group and those that were not known to the researcher did not reveal any significant differences. This factor, accordingly, was not deemed to provide any systematic bias in the sample. In order to maximize the honesty of responses and ensure anonymity among the staff reporting to the CEO, no demographic information was collected on the staff observers who report to each CEO.

#### *Procedure*

Participants were solicited to participate in the study by email. The email briefly described the research as looking at the role that different forms of intelligence, such as emotional and newer forms, and personality play in business leadership. Among the benefits promised to participants was a customized report to each CEO that included his or her personal profile scores on different intelligences, as well as the averages of their staff's ratings, including their organizational commitment and morale, relative to the sample as whole. When CEOs had some questions or concerns, the researcher met with them in person or answered their questions via the telephone.

To maximize privacy and confidentiality, each CEO and their staff respondents were assigned a unique private code that they entered to identify their company. CEOs

who participated in the study invited their direct staff employees to complete the battery of survey instruments by sending them a link to an online survey web site. All responses were voluntary and those of all staff respondents were confidential.

No individual scores or observer ratings from their staff were given to the CEO, as only averages for the team normalized against other companies in the study were shared. This procedure was used to provide the CEO with meaningful feedback, while at the same time it attempted to encourage and maximize the confidentiality and honesty of the observer ratings so as to minimize the concerns among staff members that any negative ratings of the CEO may be linked to them individually, or used against them by the CEO. After completion of the study, CEOs were also offered as much as 2 hours of free coaching by the researcher for interpreting and applying the results within their organizational context.

#### *Instruments and Measures*

Each CEO participant was administered a battery of self-assessments that included the 45-item short form of the Amram and Dryer (2008) Integrated Spiritual Intelligence Scale (ISIS-S), the self-assessment on the 16-item emotional intelligence scale (EIS-S) developed by Wong and Law (2002), and a 10-item self-assessment of personality inventory (TIPI-S) on the five factor model (Gosling, Rentfrow, & Swann, 2003). In addition, each CEO provided demographic information about their age, gender, ethnicity, and company size. They were also asked to rate the growth and expansion opportunities of their business (GRTH-S).

In addition to the self-reports of the CEO's EI, SI, and FFM personality measures, observer data from the staff reporting to each CEO of each company completed 360

measures of the CEO's EI and SI, and FFM of personality. Measures used were 360 versions of the Wang and Law (2002) EIS-O, the Amram and Dryer (2008) ISIS-O, and the Gosling, Renfrow, and Swann (2003) TIPI-O, respectively.

The CEO's leadership effectiveness (EFF) was computed as the average score on seven aspects of leadership performance outcomes as rated by the staff members to the CEO. The seven measures of leadership effectiveness were as follows: (a) the nine-item short form of the Organizational Commitment Questionnaire (OCQ, Mowday, Steers, & Porter, 1982); (b) the seven-item Sense of Community (SOC) developed by Milliman, Czaplewski, and Ferguson (2003); (c) the three-item productivity and effort (PROD) subscale of Spiritual Leadership Theory (SLT) survey (Fry, Vitucci, & Cedillo, 2005); (d) a two-item measure of satisfaction (SAT) including one item pertaining to overall job satisfaction and one item pertaining to satisfaction with the CEO's treatment towards them (Nagy, 2002); (e) a single item measure of overall employee morale; (f) three items relating to the staff's assessment of CEO's leadership ability (LDR); and (g) the three-item Intention to Quit (ITQ) subscale also developed by Milliman, Czaplewski, and Ferguson (2003). Staff participants were also asked to rate their perception of the growth and expansion opportunities of their business (GRTH-O).

#### *Spiritual Intelligence Measure*

Since this study aimed to assess the contribution of emotional and spiritual intelligences to the effectiveness of business leaders, and SI is a relatively newer and less established construct, the greatest care and attention was devoted to selecting the most reliable and valid measure of SI. Three existing measures of SI were considered: the Psycho-Matrix Spirituality Inventory (PSI) (Wolman, 2001), the Spiritual Intelligence

Scale (SIS) (Nasel, 2004), and the Integrated Spiritual Intelligence Scale (ISIS, Amram & Dryer, 2008).

Though his book is titled *Thinking with Your Soul: Spiritual Intelligence and Why It Matters*, Wolman's (2001) instrument is more of a measure of spiritual orientation rather than spiritual intelligence. The PSI is an 80-item self-report measure on a 4-point Likert-type scale in which all items are positively scored. PSI has been administered to over 6,000 people and has a stable seven factor structure. The PSI factors are as follows: (a) Divinity—pertaining to a divine energy source, transcendent intelligence, higher power, or God; (b) Mindfulness—relating to attention, conscious living, and activities and attitudes that increase quality of life through better psychological and physical health; (c) Extrasensory Perception (ESP)—covers a wide range of alternative ways of knowing about oneself and the world; (d) Community—relating to presence and concern for others in groups and community; (e) Intellectuality—relates to energy associated with thoughts, dialog, and understanding of ultimate questions, concerns of meaning, the sacred, and spiritual matters; (f) Trauma—assesses the presence of childhood events of trauma that often appear correlated to spiritual interest and growth; (g) Childhood Spirituality—designed to measure the range and frequency of childhood spiritual experiences, again believed to predict spiritual awareness later in life. Unfortunately, these last two factors and the items assessing them lack face validity in relation to spiritual intelligence. These items include: “I think about serious physical injury that has happened to me,” or “I have witnessed serious illness in people close to me.” The PSI items relating to childhood spirituality include statements like “I have said prayers at night as a child” that Wolman believes are a stimulus to, or predictors of, spiritual development later in life. However,

these factors do not appear to tie into Wolman's own, or other, definitions of spiritual intelligence. Unfortunately, Wolman (2001) does not offer any detailed statistics for the test-retest reliability, Cronbach's alpha, or validity studies for the PSI.

The Spiritual Intelligence Scale (SIS) was developed as part of a doctoral dissertation by Nasel (2004). The SIS is a 17-item self-report measure of spiritual intelligence rated on a 4-point Likert scale from 1 (never) to 4 (almost always). The questionnaire items are all positively worded and designed to assess behaviors (e.g., "even when a situation seems hopeless, I can find a deeper meaning in it" or "I apply insights gained from self-reflection to problematic situations in my life") and attitudes (e.g., "in day to day living, I try to place my daily affairs within a larger context") rather than simple beliefs.

The SIS was developed using two samples of participants with an initial group of 76 undergraduate psychology students at the University of South Australia. A second study and further validation of SIS was done with 224 participants who were recruited from organizations specializing in New Age and alternative therapeutic courses, patrons of metaphysical bookstores, and staff and visitors to a Catholic educational organization. The Cronbach's alpha for the total SIS scale was reported at .87 and .88 at the pilot and the second study, respectively. Factor analysis of the SIS suggests a stable two factor solution across several studies. These factors are labeled by Nasel (2004) as Awareness of Divine Presence (factor 1) and Existential Questioning (factor 2). Reliability measures for each factor appear satisfactory—.86 for Awareness of Divine Presence and .70 for Existential Questioning in the initial study. The second study showed those scale reliabilities to be at .85 for factor 1 and .83 for factor 2.

A third and follow-up validation study in the same dissertation by Nasel (2004) assessed the correlation between the SIS and a subjective measure of well-being developed by the same author. Among the 297 participants who were all first and second year undergraduate students attending psychology tutorials, those who scored higher on the SIS were more likely to report higher well-being. For example, the factor of Awareness of Divine Presence correlated with overall satisfaction with life ( $r = .25, p < .001$ ), lower negative affect ( $r = -.20, p < .001$ ), greater optimism ( $r = .33, p < .001$ ), and greater relationship satisfaction ( $r = .24, p < .001$ ). The factor of Existential Questioning showed a correlation ( $r = .22, p < .001$ ) with greater optimism. In this third study, Cronbach's alpha for the total SIS scale was .87 and the reliability measures for each factor were again satisfactory (factor 1 = .82, and factor 2 = .78).

Despite the overall satisfactory reliability, construct, and some predictive validity of the SIS, among its limitations is the fact that it was designed to measure spiritual intelligence from a particular set of two perspectives—adherence to traditional Christianity and/or New Age/individualistic spirituality. Furthermore, with only 17 items, the model of spiritual intelligence used by the SIS excludes other potentially important elements of spiritual intelligence (discussed earlier) that may contribute to effective business leadership. For example, the SIS does not include any items that assess the ability to use trans-rational modes of knowing and states of consciousness such as intuition in problem solving, an I-Thou orientation manifesting compassion and empathy in human relations, or a factor corresponding to the ability to solve problems more holistically. Since it is believed that these are important dimensions of SI that are likely to

contribute to effective leadership, it does not appear as the ideal instrument in assessing the impact of spiritual intelligence on effective business leadership.

The third measure of SI reviewed and chosen due to its comprehensive nature and strong psychometric properties is the ISIS (Amram & Dryer, 2008). ISIS is an 83-item long form, and a 45-item short form, self-report and observer-rated instrument containing 22 subscales assessing separate capabilities that are grouped into five main domain scales of spiritual intelligence. In studies with 263 participants, the ISIS has shown satisfactory factor structure, internal consistency, test-retest reliability, and construct validity. ISIS correlated with existing measures of spirituality, and predicted satisfaction with life ( $r = 0.48$ ), even when controlling for the effect of spirituality. Conversely, spirituality did not predict satisfaction with life when controlling for the effect of SI. This suggests that it is SI rather than spirituality per se which contributes to satisfaction with life and well-being. ISIS scores were significantly different among groups in the study such that spiritual teachers and business leaders who were nominated for their embodiment of spirituality in daily life scored higher than other groups such as MBA students, even when controlling for other confounding variables such as gender, and age.

ISIS items are scored on a six-point scale rating behavioral frequency (rather than beliefs) from 1—never or almost never, 2—very infrequently, 3—somewhat infrequently, 4—somewhat frequently, 5—very frequently, 6—always or almost always. The five ISIS domains are as follows:

1. **Consciousness**—This domain reflects the ability to raise or shift consciousness, to tap intuition, and to synthesize multiple points of view in ways that enhance daily functioning and well-being. The Consciousness

domain includes three capability subscales: Intuition, Mindfulness, and Synthesis.

2. Grace—This domain reflects inner-directedness (combining discernment and freedom) and love for life, drawing on the inspiration, beauty, and joy inherent in each present moment to enhance functioning and well-being. The Grace domain includes five capability subscales: Beauty, Discernment, Freedom, Gratitude, Immanence, and Joy.
3. Meaning—This domain reflects the ability to experience meaning, link activities and experiences to values, and construct interpretations in ways that enhance functioning and well-being, even in the face of pain and suffering. The Meaning domain includes two capability subscales: Purpose and Service.
4. Transcendence—This domain reflects the ability to align with the sacred and transcend the egoic self, with a sense of relatedness and holism in ways that enhance functioning and well-being. The Transcendence domain includes five capability subscales: Higher-Self, Holism, Practice, Relatedness, and Sacredness.
5. Truth—This domain reflects the ability to be present to, love, and peacefully surrender to truth, manifesting open receptivity, presence, humility, and trust in ways that enhance daily functioning and well-being. The Truth domain includes six capability subscales: Egolessness, Equanimity, Inner-Wholeness, Openness, Presence, and Trust.

With Amram and Dryer (2008) reporting a Cronbach's alpha value of .97, the internal consistency of the ISIS is quite strong. (All Cronbach's alpha and other statistics

pertaining to instruments discussed in this Methods chapter are based on their original authors published results. Actual coefficient values measured in this study are reported in the Results chapter.) The reported Cronbach's alpha for each of the five ISIS domains was as follows: Consciousness, 0.84; Grace, 0.91; Meaning, 0.86; Transcendence, 0.95; Truth, 0.90. The internal consistency of the capability subscales is also moderate to high. Cronbach's alpha scores range from 0.62 to 0.88, with a mean value of 0.75. The Cronbach's alpha values for the subscales are as follows: Beauty, 0.79; Discernment, 0.75; Egolessness, 0.62; Equanimity, 0.74; Freedom, 0.77; Gratitude, 0.72; Higher-Self, 0.87; Holism, 0.82; Immanence, 0.77; Inner-Wholeness, 0.71; Intuition, 0.71; Joy, 0.74; Mindfulness, 0.71; Openness, 0.70; Practice, 0.88; Presence, 0.73; Purpose, 0.70; Relatedness, 0.68; Sacredness, 0.87; Service, 0.82; Synthesis, 0.70; and Trust, 0.77. The test-retest reliability of ISIS was reported at 0.77.

In addition to an 83-item full scale, a 45-item short-form version of the ISIS is available. The short version uses two items for each of the capability subscales, plus one overall validity item. This short-form shows correlation of .99 with the overall long-form ISIS score. Correlations of the short form with the long form range from 0.94 to 0.98 for each of the five domain scales and from 0.82 to 1.00 for each of the 22 capability subscales. (Correlation of 1.00 is reported for the Gratitude subscale, which contains the same two items in both the long- and short-forms.)

The ISIS was selected for this research given its strong psychometric properties, and because it offers the best match with the theoretical model and definition of spiritual intelligence. The short form of the ISIS was used because it takes less time to administer and is highly correlated with the long form. Saving administration time was important

given the time sensitivity of the high level executives and CEOs who participated in this research.

### *Emotional Intelligence Measure*

In addition to assessing the contribution of SI to business leaders' effectiveness, this study aimed to examine the contribution of emotional intelligence as well. Emotional intelligence was assessed with a 16-item self-report emotional intelligence scale (EIS) developed by Wong and Law (2002). EIS was chosen after consideration of several alternate measures of EI, including a 33-item measure of emotional intelligence (MOEI; Schutte et al., 1998), the 133-item EQI (Bar-On, 2000), the MSCEIT (Mayer, Salovey, Caruso, & Sitarenios, 2003), and the Boyatzis, Goleman, and Rhee (2000) ECI. The EIS has the advantage of being relatively brief to administer (16 items) and is based on a narrower and a more "pure" model of emotional intelligence than the Bar-On EQI or Goleman's ECI, and hence more likely to show discriminant validity relative to a measure of spiritual intelligence. Furthermore, the EQI and the ECI were not used because they are proprietary, cover abilities and competencies that are seen as outside the scope of core emotional intelligence, and require considerable time to administer. The MSCEIT was not selected as it also requires a long administration time, and as a true ability measure, it is not amenable to self-report or 360. The somewhat longer MOEI was not selected because it contains only a single factor, and has not been validated or used in any other leadership related studies. In summary, the EIS was chosen as the shortest instrument that offered a clear factor structure corresponding to the purest model of EI discussed earlier, and as it has been used in other business leadership studies (e.g., Hartsfield, 2003).

The EIS was administered as a self-report (EIS-S) to each of the CEOs, as a 360 measure for observers of the CEO from his or her staff (EIS-O), and optionally as a self-report for each of the staff on their own EI. This self-report measure uses a seven-point Likert-type scale and was originally developed using a sample of 189 undergraduate students in Hong Kong. It was developed with, and exhibits, the four factors of the Salovey and Mayer (1990) model of emotional intelligence. Internal consistency reliability for each of the four factors ranges from .83 to .90. The four factors show mild correlations (from  $r = .13$  to  $.42$ ) suggesting that they are related, but not identical, dimensions of emotional intelligence. Additionally, this measure of EI correlates negatively with powerlessness measures among subjects. Follow-up validation studies with different samples of 72 and 146 students by the same authors show that this measure has good reliability and validity properties (Wong & Law, 2002). Further validation studies with 110 undergraduate business students and 116 nonteaching employees from a Hong Kong university show convergent, discriminant, and incremental validity, relative to other established measures such as the big five personality dimensions (Wong & Law, 2002).

#### *Personality Measure*

Since prior studies have shown some significant relationships between personality and certain dimensions of performance among CEOs (e.g., Wolfe, 2000), the FFM 10-item personality inventory (TIPI) (Gosling, Rentfow, & Swann, 2003) was used to control for personality among respondents. TIPI was administered as a self-report to each of the CEOs (TIPI-S), as well as a 360-degree measure for the CEOs among their staff (TIPI-O). TIPI uses two items (one positively and one reverse-scored) for each of the five

dimensions of the FFM of personality: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Each of the items are rated on a seven-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). The TIPI reports convergent correlations with longer measures of the FFM of personality such as the 60-item Costa and McCrae (1992) NEO personality inventory. Test-retest reliability for the TIPI scales range from 0.62 for Openness, 0.70 for Neuroticism, 0.71 for Agreeableness, 0.76 for Conscientiousness, to 0.77 for Extraversion, with an overall mean of test-retest of 0.72. TIPI has also shown convergence between self- and observer ratings.

#### *Leadership Effectiveness Measures*

Seven component measures of effective leadership were assessed and averaged to come up with a single overall score of leadership effectiveness (EFF). Component measures were as follows: organizational commitment, sense of community, productivity and effort, staff satisfaction, employee morale, staff observer ratings of the CEOs' leadership, and intention to quit (reverse-scored), and are further described below.

*Organizational commitment.* One of the seven elements used to assess EFF was the staff ratings of their level of organizational commitment. The nine-item short form of the Organizational Commitment Questionnaire (OCQ) (Mowday, Steers, & Porter, 1979, 1982) was used to measure organizational commitment among those reporting to each company CEO. The OCQ is a 15-item questionnaire that was originally developed through administration to 2,563 employees in nine different economic sectors of the United States, including hospitals, banks, telecommunications companies, science and engineering, automotive, psychiatric technicians, and retail management trainees. Some of the OCQ items are negatively scored and responses for each item are on a seven-point

scale from 1-7 (i.e., strongly disagree, moderately disagree, slightly disagree, neither disagree nor agree, slightly agree, moderately agree, strongly agree). The nine-item short form excludes any of the negatively scored items. Sample items include “I find that my values and the organization’s values are very similar,” and “This organization really inspires the very best in me in the way of job performance,” and “I talk up this organization to my friends as a great place to work.” (To make the language more relevant and less ambiguous to the context of this study, since some of the participants who are executives responsible for their own departments or organizations within the company, the word “company” was substituted for the word “organization” where it made the statements more clear in this and other published measures that use the word organization).

Most items in the OCQ appear to measure affective commitment which relates to positive feelings of identification, attachment, and involvement in the company. The OCQ shows evidence for convergent, discriminant, and predictive validity as it predicts higher job performance, reduced absenteeism and voluntary turnover, and greater overall organizational effectiveness. The OCQ exhibits good Cronbach’s alpha values ranging from 0.82 to 0.93 (mean of 0.90) across various studies showing a single factor, which is suggestive of a single common underlying construct. Test-retest reliabilities range from 0.53 to 0.75 across various studies. It has been widely used in other leadership studies to assess leader effectiveness (e.g., Barling, Weber, & Kelloway, 1996; Milliman, Czaplewski, & Ferguson, 2003).

*Sense of community.* The second of the seven elements used to assess EFF was the executive staff ratings of their sense of community. Milliman, Czaplewski, and Ferguson

(2003) developed a measure of a sense of community (SOC) among employees that has been shown to contribute to positive outcomes such as greater organizational commitment, lower intention to quit, intrinsic work satisfaction, greater job involvement, and greater organizational-based self-esteem. This sense of community measure contains seven items ranked on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). Sample items are as follows: “I think employees are linked with a common purpose,” “I feel part of a community,” and “I feel free to express opinions.” This measure reports a Cronbach’s alpha value of 0.91.

*Productivity and effort.* The third element of leadership effectiveness is the level of effort and productivity of employees in the company. To assess this level of effort the three-item productivity subscale of Spiritual Leadership Theory (SLT) survey (Fry, Vitucci, & Cedillo, 2005) was used. The Cronbach’s alpha for this subscale was 0.83. Sample items include “in our company, everyone gives his/her best efforts” and “in our company, work quality is a high priority for all workers.” Again, paralleling the prior measures, a seven-point scale was used.

*Satisfaction.* The fourth measure of leadership effectiveness was job satisfaction among the staff reporting to the CEO. The single item of “Overall, how satisfied are you with your job?” (Nagy, 2002) was used to measure job satisfaction. Such single item measure of job satisfaction has shown significant and high correlations (0.60 to 0.72 with a mean of 0.66) with longer job satisfaction instruments, and in some instances, accounted for incremental variance in self-reported job performance and intentions for turnover (Nagy, 2002). A single item captures the employee’s own assessment and weighting of various factors contributing to overall job satisfaction, rather than relying on

implicit weights built into the scale. Additionally, the following statement “Overall, I am satisfied with our CEO’s treatment towards me” adapted from Reed’s (2002) measure of workplace morale was used to assess satisfaction with management treatment by the CEO. To parallel the other outcome items, responses were assessed on a seven-point scale from 1 (strongly dissatisfied) to 7 (strongly satisfied).

*Morale.* The fifth element contributing to overall leadership effectiveness was overall ratings of employee morale in the company. Since some measures of employee morale are quite long and / or contain many items which overlap with the prior measures of organizational commitment and job satisfaction, and are not likely to be relevant to executive vice president level reports to the CEO, a single global measure of employee morale was used. The statement “Overall, employee morale in this company is low” (reverse-scored) was used to assess overall morale in the organization. This item was reverse-scored on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree).

*Leadership.* The sixth element contributing to EFF was an assessment of the CEO’s management and leadership abilities (LDR). Respondents were asked to assess their CEO’s management and leadership abilities by rating the following three statements: “Overall, our CEO is a great leader,” “Overall, our CEO is a great manager,” and “Our CEO really inspires the very best in me in the way of job performance.” These items were assessed on a seven-point scale from 1 (strongly disagree), to 7 (strongly agree).

*Intention to quit.* The seventh element to measure leadership effectiveness (EFF) was an assessment of respondents’ intention to quit (ITQ) that used a three-item scale (Milliman, Czaplewski, & Ferguson, 2003). Items are scored on a seven-point scale from

strongly disagree to strongly agree. The items are as follows: “I frequently think about quitting my job,” “I scan sources of prospective jobs,” and “I will probably look for a new job next year.” Cronbach’s alpha is reported at 0.84. This scale was reverse-scored with regards to leadership effectiveness (i.e., lower scores on ITQ are seen as a sign of higher leadership effectiveness).

### *Demographic Information*

Each CEO was asked to provide demographic information on his or her age, gender (male or female), and ethnic background. Each CEO was provided the following age range choices: (a) 18 to 29, (b) 30 to 39, (c) 40 to 44, (d) 45 to 49, (e) 50 to 54, (f) 55 to 59, (g) 60 to 64, and (h) 65 years or older. Each CEO was provided the following choices regarding ethnic background: (a) African American, African, Black; (b) Asian American, Asian; (c) Latino, Mexican American; (d) Middle Eastern; (e) Native American or Alaska Native; (f) White or Caucasian; or (g) Other (please specify). This demographic information was used to control for potential confounding contribution of various other factors to performance outcomes.

### *Company Variables*

Since some of the performance outcome measures used to assess leadership effectiveness as described above, such as employee satisfaction, job commitment, and morale, may be linked to the workplace environmental conditions, such as company size and its growth prospects (e.g., companies whose business or organization is shrinking are likely to have lower employee morale), an attempt was made to control for such company variable factors. For each company, the size of the organization in terms of number of employees was assessed. Company size (SIZE) fell into one of the following categories:

(a) less than 20 employees, (b) between 20 and 49 employees, (c) between 50 and 99 employees, (d) between 100 and 249 employees, (e) between 250 and 499 employees, (f) between 500 and 999 employees, and (g) companies employing over 1,000 people.

Each CEO and their staff members were asked to assess the growth prospects of the company (GRTH). CEO self-ratings (GRTH-S) and staff ratings (GRTH-O) were based on responses to “Our company’s and business prospects and organization are” rated on a seven-point scale: 1 (shrinking significantly), 2 (shrinking slightly), 3 (flat/constant), 4 (growing or improving slowly), 5 (growing or improving moderately), 6 (growing or improving rapidly), or 7 (growing or improving explosively).

*Summary of Assessment Instruments.*

Table 1 summarizes the assessment instruments and measures used for each type of participant: CEO, and their staff. Items in which the person rates his or her own abilities or attitudes are labeled with “self”; items in which the person provides 360-degree feedback on the CEO are labeled as “observer”; and scales which were included in the overall assessment of leadership effectiveness (EFF) are labeled as “EFF.”

Table 1

*Summary of Assessment Instruments*

Variable	Scale	Item Length	CEOs	Staff
SI (self, short form)	ISIS	44	SI-S	-
EI (self)	EIS	16	EI-S	-
Personality (self)	TIPI	10	TIPI-S	-
SI (observer, short form)	ISIS	44	-	ISIS-O
EI (observer, short form)	EIS	8	-	EIS-O
Personality (observer)	TIPI	10	-	TIPI-O
Org. Commitment (EFF)	OCQ	9	-	OCQ
Sense of Community (EFF)	SOC	7	-	SOC
Productivity/Effort (EFF)	PROD	3	-	PROD
Satisfaction (EFF)	SAT	2	-	SAT
Morale (EFF)	MORL	1	-	MORL
Leadership (EFF)	LDR	3	-	LDR
Intention to Quit (EFF)	ITQ	3	-	ITQ
Demographics	DMGR	3	Yes	-
Company Size	SIZE	1	Yes	-
Company Growth	GRTH	1	GRTH-S	GRTH-O
Validity	VAL	1	Yes	Yes
Total			76-items	92-items

Each CEO was required to rate 76 items: 44 items on the ISIS-S, 16 items on the EIS-S, 10 items on the TIPI-S, 3 demographics items, 2 company variables assessing the growth (GRTH) and size (SIZE) of the company, and 1 validity item. Each staff respondent was required to rate a total of 92 items: 62 items providing 360-feedback on the CEO, including 44 items on ISIS-O, 8 items on EIS-O, and 10 items on TIPI-O, as

well 28 items relating to leadership effectiveness (EFF) outcomes, 1 item rating their observer perception of business growth (GRTH-O), and 1 validity item.

## Chapter 4: Results

Data analysis was done using the software package of SPSS v15 running in a Windows XP Professional Service Pack 2 environment. Before specific hypothesis were tested, the internal reliability of the dependent variable outcome measure EFF or Leadership Effectiveness (EFF), as well as for the ISIS and EIS measures of spiritual and emotional intelligence were analyzed.

### *Internal Reliabilities*

Internal reliability, as measured by Cronbach's alpha values were acceptable and ranged from .69 (SAT) to .92 (ISIS-S, ISIS-O). Table 2 summarizes the Cronbach's alpha for some of the key scales used in the study, including the scales used to calculate overall leadership effectiveness. Cronbach's alpha was not calculated for each of the TIPI personality dimension scales as only two items were used in each.

Table 2

### *Internal Reliability Analysis for Instruments*

Scale	Cronbach's Alpha
Emotional Intelligence (self, EIS-S)	.76
Emotional Intelligence (observer, EIS-O)	.78
Spiritual Intelligence (self, ISIS-S)	.92
Spiritual Intelligence (observer, ISIS-O)	.92
Leadership Effectiveness (EFF)	.88
Organizational Commitment (OCQ)	.84
Sense of Community (SOC)	.90
Productivity/Effort (PROD)	.82
Satisfaction (SAT)	.69
Leadership (LDR)	.88
Intention to Quit (ITQ)	.83

The overall Cronbach's alpha for Leadership Effectiveness (EFF) was .88. All seven component measures of organizational outcomes indicative of effectiveness included in calculating the overall Leadership Effectiveness (EFF) contributed positively. Table 3 shows how the Cronbach's alpha of EFF would have been modified if any one of the component measures of leadership effectiveness were eliminated.

Table 3

*Cronbach's Alpha for Leadership Effectiveness (EFF) If Subscale Was Deleted*

Scale	EFF Alpha If Subscale Was Deleted
Organizational Commitment (OCQ)	.86
Sense of Community (SOC)	.85
Productivity/Effort (PROD)	.87
Satisfaction (SAT)	.85
Morale (MORL)	.86
Leadership (LDR)	.86
Intention to Quit (ITQ)	.86

*Hypothesis Testing*

In order to maximize the potential power of the statistical tests by retaining the highest level of degrees of freedom, first the impact of the demographic variables of Gender, Age, and Ethnicity were analyzed. Since Gender, Ethnicity, and Age did not show any significant correlations with leadership effectiveness, nor did subsequent t-tests show any significant differences between the groups based on these variables, these variables were eliminated from further analysis of the results. Similarly, t-tests showed no significant differences between the group of 21 CEO participants who were known to the

researcher before the beginning of the study and the 21 that were not known, and hence this variable was also eliminated from further analysis of the results.

Table 4 shows correlations between staff-reported leadership effectiveness (EFF) and the company variables of size (SIZE) and CEO self-reported growth (GRTH-S), as well as the CEO's self-reported personality (TIPI-S), self-reported emotional intelligence (EIS-S), and self-reported spiritual intelligence (ISIS-S).

Table 4

*Correlations of CEO Self-Reports with Leadership Effectiveness*

Scale	<i>R</i>
Company Size (SIZE)	-.13
Growth (self, GRTH-S)	-.03
TIPI-Extraverted (self, EXT-S)	.02
TIPI-Agreeable (self, AGR-S)	.01
TIPI-Conscientious (self, CONS-S)	-.09
TIPI-Neuroticism (self, NERO-S)	.08
TIPI-Openness (self, OPEN-S)	.11
EIS (self, EIS-S)	.07
ISIS (self, ISIS-S)	.17*

*Note.*  $N = 210$ ; \*  $p < .05$ .

As the data reveals, hypothesis 1a was not confirmed as the correlation between self-reported emotional intelligence (EIS-S) and leadership effectiveness (EFF) showed an insignificant value ( $r = .07, p = .34$ ). Hypothesis 2a was confirmed as the correlation between self-reported spiritual intelligence (ISIS-S) and leadership effectiveness (EFF) rated by the staff was significant with  $r = .17, p = .016$ . None of the self-reported personality or company variables showed significant correlations with leadership

effectiveness, though company size (SIZE) was marginally significant ( $p = .054$ ) and hence was kept in subsequent hierarchical regression analysis.

Table 5 shows the correlations between various company variables: observer-reported personality (TIPI-O), observer-reported emotional intelligence (EIS-O), and observer-reported spiritual intelligence (ISIS-O), and leadership effectiveness also reported by the observer staff.

Table 5

*Correlations of Staff Observer-Reports with Leadership Effectiveness*

Scale	<i>R</i>
Company Size (SIZE)	-.13
Growth (observer, GRTH-O)	.23**
TIPI-Extraverted (observer, EXT-O)	.28***
TIPI-Agreeable (observer, AGR-O)	.50***
TIPI-Conscientious (observer, CONS-O)	.44***
TIPI-Neuroticism (observer, NERO-O)	-.49***
TIPI-Openness (observer, OPEN-O)	.36***
Emotional Intelligence (observer, EIS-O)	.64***
Spiritual Intelligence (observer, ISIS-O)	.68***

*Note.*  $N = 210$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Hypothesis 3a was confirmed as observer-reported emotional intelligence (EIS-O) correlated positively ( $r = .64$ ) and significantly ( $p = .000$ ) with leadership effectiveness (EFF). Similarly hypothesis 4a was confirmed as the correlation between observer-reported spiritual intelligence (ISIS-O) and leadership effectiveness (EFF) was  $r = .68$ ,  $p = .000$ . Staff ratings of company growth (GRTH-O) also correlated significantly with leadership effectiveness ( $r = .23$ ,  $p = .001$ ).

A set of hierarchical regression models was used to test the contribution of self-reported emotional intelligence (EIS-S) with leader effectiveness after controlling for personality (hypothesis 1b), and after controlling for personality and spiritual intelligence (hypothesis 1c). A similar set of regression models were used to test the contribution of self-reported spiritual intelligence (ISIS-S) to leader effectiveness after controlling for personality (hypothesis 2b), and personality and emotional intelligence (hypothesis 2c).

Table 6 shows the hierarchical regression results. The company variables of company size and CEO reported growth (GRTH-S) were entered in the equation first, followed by the five dimension set of self-reported personality (TIPI-S), and then self-reported emotional intelligence (EIS-S) was added. The variance explained by the two company variables was negligible (adjusted  $R^2$  of .01), and adding the personality variables only increased explained variance by a small amount (.01) from .01 to .02. Adding self-reported emotional intelligence (EIS-S) to the regression only increased the adjusted  $R$  Squared from .02 to .03 with a  $p$  value of .096. Hence hypothesis 1b was not supported (or only marginally so).

Table 6

*Hierarchical Reg. with Co. Variables, Self-Reported Personality, & EI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.02	.01
Growth-S	-.03	.07	-.03		
Co. Size	-.09	.04	-.13		
Step 2: add TIPI-S				.05	.02
Growth-S	-.02	.07	-.02		
Co. Size	-.10	.04	-.16*		
TIPI-EXT-S	-.01	.05	-.02		
TIPI-AGR-S	.00	.07	.00		
TIPI-CONS-S	-.13	.07	-.14		
TIPI-NERO-S	-.12	.06	-.15		
TIPI-OPEN-S	.08	.08	.07		
Step 3: add EIS-S				.07	.03
Growth-S	-.02	.07	-.02		
Co. Size	-.12	.05	-.19*		
TIPI-EXT-S	-.02	.05	-.03		
TIPI-AGR-S	-.02	.07	-.02		
TIPI-CONS-S	-.16	.07	-.17*		
TIPI-NERO-S	-.11	.06	-.15		
TIPI-OPEN-S	.07	.08	.06		
EIS-S	.27	.16	.13		

*Note.*  $N = 210$ ; \*  $p < .05$ .

A similar analysis was used to test the contribution of self-reported spiritual intelligence (ISIS-S) to leadership effectiveness, after controlling for company variables and the self-reported five dimensions of personality, as shown in Table 7. Again, neither company variables nor personality explained significant amount of variance (as was the case with EI). Support for hypothesis 2b was generated with the addition of self-reported

spiritual intelligence (ISIS-S) resulting in an increase of adjusted  $R^2$  from .02 to .04 with  $p$  value of .021.

Table 7

*Hierarchical Reg. with Co. Variables, Self-Reported Personality, & SI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.02	.01
Growth-S	-.03	.07	-.03		
Co. Size	-.09	.04	-.13		
Step 2: add TIPI-S				.05	.02
Growth-S	-.02	.07	-.02		
Co. Size	-.10	.04	-.16*		
TIPI-EXT-S	-.01	.05	-.02		
TIPI-AGR-S	.00	.07	.00		
TIPI-CONS-S	-.13	.07	-.14		
TIPI-NERO-S	-.12	.06	-.15		
TIPI-OPEN-S	.08	.08	.07		
Step 3: add ISIS-S				.08	.04*
Growth-S	-.05	.07	-.05		
Co. Size	-.09	.05	-.14*		
TIPI-EXT-S	-.02	.05	-.04		
TIPI-AGR-S	-.01	.07	-.01		
TIPI-CONS-S	-.15	.07	-.16*		
TIPI-NERO-S	-.08	.06	-.11		
TIPI-OPEN-S	.07	.08	.06		
ISIS-S	.32	.14	.17*		

*Note.*  $N = 210$ ; \* Significant at  $p < .05$ .

A hierarchical regression was used to test Hypothesis 1c. Table 8 shows the results in which the company control variables along with self-reported personality (TIPI-

S) and spiritual intelligence (ISIS-S) were first included, and then the self-reported emotional intelligence (EIS-S) was added. Hypothesis 1c was not supported as no increase in adjusted  $R^2$  was found with the addition of self-reported emotional intelligence (EIS-S) and  $p = .440$ .

Table 8

*Hierarchical Reg. with Co. Variables, Self-Reported Personality, SI, & EI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: TIPI-S + ISIS-S				.08	.04*
Growth-S	-.05	.07	-.05		
Co. Size	-.09	.05	-.14*		
TIPI-EXT-S	-.02	.05	-.04		
TIPI-AGR-S	-.01	.07	-.01		
TIPI-CONS-S	-.15	.07	-.16*		
TIPI-NERO-S	-.08	.06	-.11		
TIPI-OPEN-S	.07	.08	.06		
ISIS-S	.32	.14	.17*		
Step 2: add EIS-S				.08	.04
Growth-S	-.05	.07	-.05		
Co. Size	-.10	.05	-.16*		
TIPI-EXT-S	-.02	.05	-.04		
TIPI-AGR-S	-.01	.07	-.02		
TIPI-CONS-S	-.16	.07	-.17*		
TIPI-NERO-S	-.09	.06	-.11		
TIPI-OPEN-S	.06	.08	.06		
ISIS-S	.27	.15	.14		
EIS-S	.13	.17	.06		

*Note.*  $N = 210$ ; \*  $p < .05$ .

Hierarchical regression was used to test hypothesis 2c regarding the contribution of self-reported spiritual intelligence (ISIS-S) to leadership effectiveness, after controlling for self-reported personality (TIPI-S), and self-reported emotional intelligence (EIS-S). Table 9 shows the results of such hierarchical regression in which the company control variables, along with self-reported personality (TIPI-S), and self-reported emotional intelligence (EIS-S) were first included, and then the self-reported spiritual intelligence (ISIS-S) was added. Hypothesis 2c was not supported as Table 9 shows a small increase in adjusted  $R^2$  from .03 to .04 ( $p = .078$ , suggesting only marginal support) when adding self-reported spiritual intelligence (ISIS-S).

Table 9

*Hierarchical Reg. with Co. Variables, Self-Reported Personality, EI, & SI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: TIPI-S + EIS-S				.07	.03
Growth-S	-.02	.07	-.02		
Co. Size	-.12	.05	-.19*		
TIPI-EXT-S	-.02	.05	-.03		
TIPI-AGR-S	-.02	.07	-.02		
TIPI-CONS-S	-.16	.07	-.17*		
TIPI-NERO-S	-.11	.06	-.15		
TIPI-OPEN-S	.07	.08	.06		
EIS-S	.27	.16	.13		
Step 2: add ISIS-S				.08	.04
Growth-S	-.05	.07	-.05		
Co. Size	-.10	.05	-.16*		
TIPI-EXT-S	-.02	.05	-.04		
TIPI-AGR-S	-.01	.07	-.02		
TIPI-CONS-S	-.16	.07	-.17*		
TIPI-NERO-S	-.09	.06	-.11		
TIPI-OPEN-S	.06	.08	.06		
EIS-S	.13	.17	.06		
ISIS-S	.27	.15	.14		

*Note.*  $N = 210$ ; \*  $p < .05$ .

A similar set of hierarchical regression models on leader effectiveness was constructed using the company variables including staff observer assessment of growth (Growth-O), and the staff observer and assessments of personality, EI and SI. Table 10 shows that the additional contribution of staff-reported EI to a model with staff observer

company variables and personality is statistically significant (increase in adjusted  $R^2$  from .45 to .50 with  $p = .000$ ), which supports hypothesis 3b.

Table 10

*Hierarchical Reg. with Co. Variables, Staff-Reported Personality, & EI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.07	.06***
Growth-O	1.24	.35	.24**		
Co. Size	-.64	.30	-.14*		
Step 2: add TIPI-O				.46	.45***
Growth-O	.74	.29	.14*		
Co. Size	-.33	.23	-.07		
TIPI-EXT-O	1.12	.25	.24***		
TIPI-AGR-O	1.09	.27	.27***		
TIPI-CONS-O	1.04	.30	.20**		
TIPI-NERO-O	-.85	.29	-.20**		
TIPI-OPEN-O	.61	.32	.11		
Step 3: add EIS-O				.52	.50***
Growth-O	.65	.27	.12*		
Co. Size	-.26	.22	-.06		
TIPI-EXT-O	1.01	.24	.21***		
TIPI-AGR-O	.63	.27	.15*		
TIPI-CONS-O	.60	.30	.12*		
TIPI-NERO-O	-.30	.30	-.07		
TIPI-OPEN-O	.46	.30	.08		
EIS-O	.61	.13	.37***		

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

A similar hierarchical regression model was used to test the contribution of observer-reported spiritual intelligence (ISIS-O) to leadership effectiveness, after

controlling for company variables and observer-reported personality variables. Table 11 shows that the additional contribution of staff-reported SI to a model with staff observer company growth, and personality is statistically significant (increase in adjusted  $R^2$  from .45 to .50 with  $p = .000$ ), thus supporting hypothesis 4b.

Table 11

*Hierarchical Reg. with Co. Variables, Staff-Reported Personality, & SI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.07	.06***
Growth-O	1.24	.35	.24**		
Co. Size	-.64	.30	-.14*		
Step 2: add TIPI-O				.46	.45***
Growth-O	.74	.29	.14*		
Co. Size	-.33	.23	-.07		
TIPI-EXT-O	1.12	.25	.24***		
TIPI-AGR-O	1.09	.27	.27***		
TIPI-CONS-O	1.04	.30	.20**		
TIPI-NERO-O	-.85	.29	-.20**		
TIPI-OPEN-O	.61	.32	.11		
Step 3: add ISIS-O				.52	.50***
Growth-O	.64	.27	.12*		
Co. Size	-.22	.22	-.05		
TIPI-EXT-O	.88	.24	.18***		
TIPI-AGR-O	.55	.28	.13		
TIPI-CONS-O	.57	.30	.11		
TIPI-NERO-O	-.54	.29	-.12		
TIPI-OPEN-O	.01	.33	.00		
ISIS-O	.89	.19	.39***		

Note.  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

A hierarchical regression model was used to test the contribution of observer-reported emotional intelligence (EIS-O) on leadership effectiveness, after controlling for company variables, observer-reported personality (TIPI-O), and observer-reported spiritual intelligence (ISIS-O). Table 12 shows that the additional contribution of staff reported EI (EIS-O) to a model with staff observer company variables, personality, and spiritual intelligence results in a statistically significant increase in  $R^2$  from .50 to .53 ( $p = .000$ ), which supports hypothesis 3c.

Table 12

*Hierarchical Reg. with Co. Variables, Staff-Reported Personality, SI, & EI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: TIPI-O + ISIS-O				.52	.50***
Growth-O	.64	.27	.12*		
Co. Size	-.22	.22	-.05		
TIPI-EXT-O	.88	.24	.18***		
TIPI-AGR-O	.55	.28	.13		
TIPI-CONS-O	.57	.30	.11		
TIPI-NERO-O	-.54	.29	-.12		
TIPI-OPEN-O	.01	.33	.00		
ISIS-O	.89	.19	.39***		
Step 2: add EIS-O				.55	.53***
Growth-O	.59	.27	.11*		
Co. Size	-.19	.22	-.04		
TIPI-EXT-O	.84	.24	.18***		
TIPI-AGR-O	.28	.28	.07		
TIPI-CONS-O	.31	.30	.06		
TIPI-NERO-O	-.16	.29	-.04		
TIPI-OPEN-O	.01	.32	.00		
ISIS-O	.71	.19	.31***		
EIS-O	.49	.13	.30***		

Note.  $N = 210$ ; \*  $p < .05$ ; \*\*\*  $p < .001$ .

To test hypothesis 4c, about the contribution of observer-reported spiritual intelligence (ISIS-O) to leadership effectiveness after controlling for company variables, observer-reported five dimensions of personality (TIPI-O), and observer-reported emotional intelligence (EIS-O), an analogous hierarchical regression model and analysis was conducted. The results in Table 13 show support for this hypothesis 4c as the addition of staff-reported SI (ISIS-O) resulted in an increase in adjusted  $R^2$  from .50 to .53 ( $p = .000$ ).

Table 13

*Hierarchical Reg. with Co. Variables, Staff-Reported Personality, EI, & SI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: TIPI-O + EIS-O				.52	.50***
Growth-O	.65	.27	.12*		
Co. Size	-.26	.22	-.06		
TIPI-EXT-O	1.01	.24	.21***		
TIPI-AGR-O	.63	.27	.15*		
TIPI-CONS-O	.60	.30	.12*		
TIPI-NERO-O	-.30	.30	-.07		
TIPI-OPEN-O	.46	.30	.08		
EIS-O	.61	.13	.37***		
Step 2: add ISIS-O				.55	.53***
Growth-O	.59	.27	.11*		
Co. Size	-.19	.22	-.04		
TIPI-EXT-O	.84	.24	.18***		
TIPI-AGR-O	.28	.28	.07		
TIPI-CONS-O	.31	.30	.06		
TIPI-NERO-O	-.16	.29	-.04		
TIPI-OPEN-O	.01	.32	.00		
EIS-O	.49	.13	.30***		
ISIS-O	.71	.19	.31***		

Note.  $N = 210$ ; \*  $p < .05$ ; \*\*\*  $p < .001$ .

### *Additional Investigations*

Since these results revealed that self-reported emotional and spiritual intelligences by the CEO were less strongly predictive of reported leadership effectiveness, than reported from the perspective of their staff, it could be argued that the correlations between observer-reported emotional and spiritual intelligence and leadership effectiveness was due to a “halo” effect—that is staff members who are happy with their leaders and committed to their jobs assign high emotional and spiritual intelligences to their CEO leaders.

To further test the predictive validity of the contribution of emotional and spiritual intelligences to leadership effectiveness, “out-of-sample” measures of emotional and spiritual intelligences were computed and correlated with each staff member’s rating of leadership effectiveness. The out-of-sample measure was based on the average of the remaining staff members reporting to the CEO, excluding the person rating the overall leadership effectiveness outcomes, against which the correlations of EI and SI were run. In other words, for each member of the staff, the correlation between the member’s own rating of leadership effectiveness was computed against the average observer rating of the CEO personality (TIPI-OX), EI (EIS-OX), and SI (ISIS-OX), when the personality, emotional, and spiritual intelligence variables were assessed based on averaging the input of the remaining members of the staff, excluding the person rating the leader’s effectiveness themselves. Hence, it was hypothesized that surveying the “out-of-sample” observer-reported emotional and spiritual intelligence of the CEO from different members of the team will predict the organizational outcomes, such as commitment, morale, and job satisfaction, as reported by a different member of the team.

Table 14 shows the correlations between leadership effectiveness and various company variables such as company size and growth, as well as personality, emotional, and spiritual intelligence, using out-of-sample observer-ratings of those variables. Sizable and statistically significant correlations are shown between leader effectiveness and emotional and spiritual intelligences, as well as all the five dimensions of personality. The control variable of company size was not statistically significant (perhaps marginally so with  $p = .054$ ), while company growth was not significantly correlated with leader effectiveness.

Table 14

*Out-of-Sample Observer Correlations with Leadership Effectiveness*

Scale	<i>R</i>
Co. Size (SIZE)	-.13
Growth (observer, GRTH-OX)	.07
TIPI-Extraverted (observer, EXT-OX)	.14*
TIPI-Agreeable (observer, AGR-OX)	.27***
TIPI-Conscientious (observer, CONS-OX)	.17*
TIPI-Neuroticism (observer, NERO-OX)	-.31***
TIPI-Openness (observer, OPEN-OX)	.14*
Emotional Intelligence (observer, EIS-OX)	.34***
Spiritual Intelligence (observer, ISIS-OX)	.31***

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*\*  $p < .001$ .

Similarly combining the CEOs' self-reported emotional and spiritual intelligences with the out-of-sample observer ratings of those constructs (putting a 50% weight the self-report and 50% weight on the average among the out-of-sample observers) and examining how this might impact leader effectiveness was investigated. Table 15 shows these correlations, revealing as hypothesized significant correlations between both

emotional and spiritual intelligences and leader effectiveness. A combined self-report and out-of-sample observer-report score on emotional intelligence (EIS-CX) correlated significantly with reported leadership effectiveness by excluded member of the staff ( $r = .30, p = .000$ ). Similarly, a combined self-report and out-of-sample observer-report score on spiritual intelligence (ISIS-CX) correlated significantly with reported leadership effectiveness by the excluded members of the staff ( $r = .28, p = .000$ ). Some of the personality dimensions, such as Agreeableness, Neuroticism, and Openness did show significant correlations with leader effectiveness, while Extraversion and Conscientiousness did not. A combined self-report and out-of-sample observer-report score on Growth (GRTH-CX) showed no statistically significant correlation with reported leader effectiveness.

Table 15

*Combined Self & Out-of-Sample Observer Correlations with EFF*

Scale	<i>R</i>
Company Size	-.13
Growth (observer, GRTH-CX)	.02
TIPI-Extraverted (combined, EXT-CX)	.07
TIPI-Agreeable (combined, AGR-CX)	.19**
TIPI-Conscientious (combined, CONS-CX)	.05
TIPI-Neuroticism (combined, NERO-CX)	-.24***
TIPI-Openness (combined, OPEN-CX)	.15*
Emotional Intelligence (combined, EIS-CX)	.30***
Spiritual Intelligence (combined, ISIS-CX)	.28***

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

To investigate if the increase in leadership effectiveness associated with emotional and spiritual intelligences was due to a contribution of some or only a few of the organizational outcomes, the correlations between EI and SI and each of the outcome variables that contributed to the overall leadership effectiveness score were computed. The combined self-report and out-of-sample observer report for emotional intelligence (EIS-CX) were correlated with all different organizational outcomes (Organizational Commitment, Sense of Community, Productivity, Satisfaction, Leadership, Morale, and Intention to Quit) as reported by an excluded observer. Similarly the combined self-report and out-of-sample observer reports for spiritual intelligence (ISIS-CX) were correlated with all the different organizational outcomes as reported by an excluded observer. The data in Table 16 shows that EI-OX and SI-OX are significantly correlated with each one of the organizational outcome scales that were included in the measure of leadership effectiveness.

Table 16

*EI-CX & SI-CX Correlations with Different Components of Effectiveness*

Outcome Scale	EIS-CX <i>R</i>	ISIS-CX <i>R</i>
Leadership Effectiveness (EFF)	.30***	.28***
Org. Commitment (OCQ)	.22**	.27***
Sense of Community (SOC)	.30***	.27***
Productivity/Effort (PROD)	.23**	.23**
Satisfaction (SAT)	.23**	.14*
Leadership (LDR)	.27***	.24***
Morale (MORL)	.23**	.22**
Intention to Quit (INTQ)	-.14*	-.18**

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\* at  $p < .01$ ; \*\*\*  $p < .001$ .

Since the company variables (company size and perceived growth), observed personality dimensions (e.g., extraversion), as well as observer-reported emotional and spiritual intelligences were often significantly correlated with leadership effectiveness, it was decided to investigate which observed intelligence and personality dimensions contributed most significantly to explaining the variance in leadership effectiveness. Hence, another set of hierarchical regression analyses were run on the observer-reported data exploring what the relative contribution to  $R^2$  from EI and SI as single constructs would be compared to the addition of five personality variables. Based on the hierarchical regression in Table 10, it appears that the five dimensions of personality combined in total contributed to an increase in adjusted  $R^2$  from .06 to .45 (i.e., a total delta of .39). In comparison Table 17 shows a slightly smaller increase in adjusted  $R^2$  from .06 to .42 (i.e., a total delta of .36) for adding a single observer-reported score for emotional intelligence (EIS-O).

Table 17

*Hierarchical Reg. with Co. Variables & Staff-Reported EI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.07	.06***
Growth-O	1.24	.35	.24**		
Co. Size	-.64	.30	-.14*		
Step 2: add EIS-O				.43	.42***
Growth-O	.73	.28	.14**		
Co. Size	-.31	.24	-.07		
EIS-O	1.01	.09	.61***		

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

In comparison, Table 18 shows the increase from adding a single observer-reported score of spiritual intelligence (ISIS-O) to be equal to the increase from adding the five dimensions of personality combined (as reported in Table 10) with an increase in adjusted  $R^2$  from .06 to .45 (i.e., a delta of .39).

Table 18

*Hierarchical Reg. with Co. Variables & Staff-Reported SI*

Variable	Beta	SE Beta	Standard Beta	$R^2$	Adjusted $R^2$
Step 1: Co. Variables				.07	.06***
Growth-O	1.24	.35	.24**		
Co. Size	-.64	.30	-.14*		
Step 2: add EIS-O				.46	.45***
Growth-O	.57	.28	.11*		
Co. Size	-.25	.23	-.06		
EIS-O	1.48	.12	.64***		

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Another approach to investigating the relative contribution to the variance in leadership effectiveness among company variables, personality, emotional intelligence, and spiritual intelligence was using a stepwise regression analysis. Stepwise regression is particularly useful to investigate the relative contribution of different factors which exhibited colinearity. Appendix B provides the correlation matrix between the five self-reported TIPI-S dimensions of personality, the self-reported emotional intelligence EIS-S, and self-reported spiritual intelligence ISIS-S. Appendix C provides the correlation matrix among those same variables for observer reports of personality (TIPI-O), EI (EIS-O), and SI (ISIS-O).

A stepwise regression using company size, observer-ratings of growth, observer-rating on the five dimensions of personality, observer-ratings on EI, and observer-ratings on SI, as the independent variables was run. The stepwise regression model identified successively those variables which make the largest contribution to explaining the remaining variance in leadership effectiveness, showing a statistical significance with a  $p$  value less than .05. Table 19 shows the results of such step regression analysis. The largest contribution to explain the variance in leadership effectiveness was the observer ratings of the CEO's spiritual intelligence (ISIS-O), accounting for nearly 46% of the variance. Another 5% of the variance was explained by observer rating of emotional intelligence (EIS-O). While making a statistically significant addition, the contribution of observer-ratings of TIPI-O Extraversion and observer-ratings of Growth (GRTH-O) to the explained variance was substantively small. None of the other personality dimensions or company variables helped to explain staff-observers' views about their leader's effectiveness.

Table 19

*Stepwise Reg. on Staff Ratings of Co. Variables, TIPI, EI, & SI*

Step	Variable Entered	Cumm. Adj. $R^2$	Delta Adj. $R^2$
1	SI Observer (ISIS-O)	.46	.46***
2	EI Observer (EIS-O)	.51	.05***
3	TIPI-Extraverted (observer, EXT-O)	.53	.02**
4	Growth (observer, GRTH-O)	.54	.01*

*Note.*  $N = 210$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

It was further hypothesized that observers' perceptions of different domains of emotional and spiritual intelligences might contribute differentially to explaining the variance in leadership effectiveness. Given the colinearity among the four EIS subscales

and five ISIS domains, another stepwise regression analysis that included the company size and observer ratings of growth and the five dimensions of personality, the four subscales emotional intelligence, and the five domain scales of spiritual intelligence was run to assess their relative contribution of each domain and personality dimension to explaining the variance in leadership effectiveness. (Appendix D reports the correlations among the four EIS subscales and the five ISIS domains for self-reported assessments, while Appendix E provides them for observer ratings.)

Table 20 shows the results of the stepwise regression analysis. Most of the variance around leadership effectiveness was accounted for by the observer rating of the CEO's ISIS-O scores on the Truth Domain (delta in adjusted  $R^2$  equal .38,  $p = .000$ ), followed by rating of ISIS-O Consciousness Domain (delta in adjusted  $R^2$  equal .08,  $p = .000$ ). Some additional variance was explained by observer ratings of TIPI-O Extraversion (incremental delta in adjusted  $R^2$  equal .03,  $p = .001$ ), and observer ratings of EIS-O Self-Awareness subscale (incremental delta in adjusted  $R^2$  equal .02,  $p = .002$ ). A small amount of additional variance was accounted for by observer ratings of EIS-O Use of Emotion (delta in adjusted  $R^2$  equal .01,  $p = .043$ ), and EIS-O Other Awareness subscale (incremental delta in adjusted  $R^2$  equal .01,  $p = .040$ ).

Table 20

*Stepwise Reg. with Co. Variables, 4 EIS Subscales, & 5 ISIS Domain Scales*

Step	Variable Entered	Cumm. Adj. $R^2$	Delta Adj. $R^2$
1	ISIS-O Truth domain	.38	.38***
2	ISIS-O Consciousness domain	.46	.08***
3	TIPI-O Extraverted dimension	.49	.03**
4	EIS-O Self-Awareness subscale	.51	.02**
5	EIS-O Use of Emotion subscale	.51 <sup>a</sup>	.01*
6	EIS-O Other-Awareness subscale	.52	.01*

*Note.*  $N = 210$ ; <sup>a</sup> Does not add up due to rounding; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

It was further hypothesized that observer perception of different ratings on the 22 spiritual intelligence subscales (each of the five SI domain contains several subscales) contributes differentially to explaining the variance in the observer ratings of leadership effectiveness. Hence a stepwise regression which included the company size, and observer ratings for growth and the five dimensions of personality, the four EIS subscales emotional intelligence, and the 22 ISIS subscales of spiritual intelligence was run to assess their relative contribution to explaining the variance in leadership effectiveness. Table 21 shows the results of such step regression analysis. The majority of the explained variance in leadership effectiveness was the observer rating of the CEO's ISIS-O Grace domain Joy subscale (delta in adjusted  $R^2$  equal .34,  $p = .000$ ). An additional contribution was made by rating of ISIS-O Consciousness domain Mindfulness subscale (delta in adjusted  $R^2$  equal .08,  $p = .000$ ), followed by rating of ISIS-O Grace domain Discernment subscale (delta in adjusted  $R^2$  of .04,  $p = .005$ ). An additional contribution made by ratings of EIS-O Regulation of Emotion subscale (delta in adjusted  $R^2$  of .03,  $p = .012$ ), followed by TIPI-O Extraverted scale (incremental delta in adjusted  $R^2$  equal .02,  $p =$

.008). A small amount of additional variance was accounted for by EIS-O Use of Emotion subscale (delta in adjusted  $R^2$  equal .01,  $p = .010$ ), ISIS-O Truth domain Egolessness subscale (delta in adjusted  $R^2$  of .01,  $p = .010$ ), and EIS-O Other Awareness subscale (incremental delta in adjusted  $R^2$  equal .01,  $p = .030$ ).

Table 21

*Stepwise Reg. with Co. Variables, TIPI, 4 EIS, & 22 ISIS Subscales*

Step	Variable Entered	Cumm. Adj. $R^2$	Delta Adj. $R^2$
1	ISIS-O Joy subscale	.34	.34***
2	ISIS-O Mindfulness subscale	.42	.08***
3	ISIS-O Discernment subscale	.46	.04**
4	EIS-O Regulation of Emotion subscale	.49	.03*
5	TIPI-O Extraverted subscale	.51	.02**
6	EIS-O Use of Emotion subscale	.53 <sup>a</sup>	.01*
7	ISIS-O Egolessness subscale	.54	.01*
8	EIS-O Other-Awareness subscale	.55	.01*

*Note.*  $N = 210$ ; <sup>a</sup> Does not add up due to rounding; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

### *Summary of Hypothesis Testing Results*

The following Table 22 summarizes the results from the formal and post hoc hypothesis testing.

Table 22

*Summary of Hypothesis Testing Results*

Hypothesis	Table	Independent Variable	Control Variable	Confirm?
1a	4	EIS-S		No
1b	6	EIS-S	Co. Variables, TIPI-S	Marginal
1c	8	EIS-S	Co. Variables, TIPI-S, ISIS-S	No
2a	4	ISIS-S		Yes
2b	7	ISIS-S	Co. Variables, TIPI-S	Yes
2c	9	ISIS-S	Co. Variables, TIPI-S, EIS-S	Marginal
3a	5	EIS-O		Yes
3b	10	EIS-O	Co. Variables, TIPI-O	Yes
3c	12	EIS-O	Co. Variables, TIPI-O, ISIS-O	Yes
4a	5	ISIS-O		Yes
4b	11	ISIS-O	Co. Variables, TIPI-O	Yes
4c	13	ISIS-O	Co. Variables, TIPI-O, EIS-O	Yes
Post Hoc	14	EIS-OX		Yes
Post Hoc	14	ISIS-OX		Yes
Post Hoc	15	EIS-CX		Yes
Post Hoc	15	ISIS-CX		Yes

## Chapter 5: Discussion

Many studies show that intelligence, as measured by the traditional IQ score, explains only a small portion of leader effectiveness (Bahn, 1979; Fiedler, 2001; Sternberg, 1997b, 2001). Over the last few decades, the study of leadership has widened to include different forms of intelligence (Chermers, 2001), including emotional and spiritual intelligences (Mussig, 2003) that may relate to motive- and trait-level qualities which have also come under the rubric of intelligence (McCrae, 2000; Piedmont, 1999).

Indeed a growing body of research has investigated the contribution of EI to leadership (Feyerhem & Rice, 2002; Goleman, 1998a, 1998b; Hartsfield, 2003; Higgs & Aitken, 2003, Higgs & Rowland, 2002). However, many of these studies suffered from a common method bias as they relied on the self-report of the leader in measuring EI, as well as lacking tangible or objective performance outcome measures (e.g., Hartsfield, 2003; Higgs & Rowland, 2002). Furthermore, when correlations between EI and leadership have been found, it has been argued that “if EI does not predict variance in leadership emergence or effectiveness beyond that which is predicted by established psychological constructs, then either EI is redundant or inutile” (Antonakis, 2003, p. 356).

Similarly, little empirical research has been done on the relationship between spiritual intelligence and leadership effectiveness. What empirical research that does exist has studied the relationship between spirituality, rather than spiritual intelligence, and leadership (e.g., Fry, Vitucci, & Cedillo, 2005; Posner, Slater, & Boone, 2006). Similarly, most studies that do examine the relationship of spirituality and leadership suffer from a

common method bias by relying on the self-report of the leader in assessing both their spirituality and leadership competencies and/or performance outcomes.

In an attempt to address some of these gaps in the literature, the primary purpose of this research was to investigate the extent to which emotional and spiritual intelligences contribute to the effectiveness of leaders as reflected in tangible measures assessed by independent observers. The CEO's leadership effectiveness was defined as the composite score of his or her staff's assessment of organizational outcomes such as organizational commitment, sense of community, productivity/effort, job satisfaction, morale, low intention to quit, and her or his staff's independent assessment of the CEO's leadership ability.

To overcome the common method bias, EI and SI were assessed using self-report by the leaders themselves, as well as using staff-observer ratings. In addition, an attempt was made to control for other established constructs such as demographic variables (age, gender, and ethnicity), company context/environment (company size and growth), and the five dimensions of personality, in order to investigate the extent to which EI and SI made independent value-added contributions to understanding the effectiveness of leaders.

#### *The Contribution of EI and SI to Leadership Effectiveness*

The results from this study demonstrated that the CEO's self-reported measures of SI significantly correlated with leadership effectiveness as assessed by her or his staff, and were significant even after controlling for company variables, such as company size and growth, and self-reported personality variables. However, self-reported SI was not statistically significant in explaining the variance in leadership effectiveness as reported

by the CEO's staff even after controlling for company variables, and self-reported personality, as well as self-reported EI. Perhaps with a marginal  $p = .078$  and delta in adjusted  $R^2 = .01$ , a larger sample would have revealed greater statistical significance.

Such cross-method results, showing significant correlations between self-reported SI and leadership effectiveness as reported by the observing staff, lends strong predictive validity to the SI construct and its contribution to leadership performance. In fact, the other self-report ratings, such as the five dimensions of personality, did not provide much in the way of understanding assessments of leadership effectiveness.

In contrast, and somewhat surprisingly as contrary to one of the hypotheses, self-reported EI by the CEO did not correlate significantly with leadership effectiveness as assessed by their staff. However, self-reported EI did account for a small increment in explained variance in leadership effectiveness, after controlling for company variables and the self-reported personality variables, but was not statistically significant (marginal with  $p = .09$ ), suggesting again that perhaps a larger sample would have revealed greater significance. Furthermore, the weak relationship between self-reported EI and leadership effectiveness reported by the staff may be due to the limitations of the specific measure of EI used, or to the limitations of self-report measures because they are susceptible to manipulation based on perceived social desirability (Lopez & Snyder, 2003).

Indeed, when using the same assessment method, the staff's observer ratings of the CEO's EI correlated strongly with those observers' assessment of the CEO's leadership effectiveness ( $r = .64, p < .001$ ). Furthermore, observer-reported EI was significant in explaining the variance in that observer's assessment of leadership effectiveness even after controlling for that observer's ratings of personality. It was also

significant even after controlling for observer ratings of personality and spiritual intelligence. The incremental contribution of observer-reported EI, after controlling for observer-reported SI, suggests that EI and SI are measuring distinct constructs, in spite of the fact that EI and SI were significantly correlated with one another. The fact that the correlations between the constructs are lower for self-reports (CEOs) than for their staff suggests that emotional and spiritual intelligence may be easier to distinguish internally than by outside observers. This makes sense in that some of the items pertaining to spiritual intelligence, such as aligning with the sacred or the use of spiritual practices that help in daily functioning, may be harder for external observers to assess. On the other hand, such observers may very well be able to notice and appreciate the external manifestations of those SI abilities, through greater embodiment of qualities such as relatedness and mindfulness, which may overlap somewhat with emotional intelligence abilities, such as greater emotional self- and other-awareness. At the same time, observers are able to distinguish between EI and SI through the more unique SI qualities, such as purpose, egolessness, joy, and discernment, which are not covered in domain assessment of EI.

Similar to the contribution of observer-rated EI, the staff's observer ratings of the CEO's SI strongly and significantly correlated with their assessment of the CEO's leadership effectiveness ( $r = .68, p < .001$ ). Observer-reported SI was significant in explaining leadership effectiveness, even after controlling for company variables and the observer ratings of personality. Furthermore, observer-reported SI was significant in explaining leadership effectiveness after controlling for company variables, and observer ratings of personality, and observer ratings of EI. These results reinforce the predictive

validity of SI and its incremental contribution to understanding leadership effectiveness above and beyond the more established personality, as well as EI, constructs.

*Observer Ratings Add Predictive Validity Beyond Self-Report Measures*

It might be argued that the strong correlations between observer-reported emotional and spiritual intelligences and leadership effectiveness were due to a “halo” effect. This means that staff members who are satisfied with their CEOs and are committed to their organizations ex post facto attribute high emotional and spiritual intelligences to their leaders. However, this argument was not empirically supported. An “out-of-sample” measure of emotional and spiritual intelligences, as rated by a subset of the staff, correlated significantly with the other staff members’ rating of leader effectiveness. The out-of-sample observer ratings of both the CEO’s emotional intelligence (EI-OX) and spiritual intelligence (SI-OX) were significantly correlated with leadership effectiveness, as reported by different members of the staff. In surveying a subset of the staff reporting to the CEO about their observer ratings of their CEO’s emotional and spiritual intelligences, results significantly correlated with leadership effectiveness and organizational outcome performance ratings from other employees in the company.

Similarly, establishing a composite measure of emotional intelligence (EI-CX) and spiritual intelligence (SI-CX), that combines the CEOs’ self-reported EI and SI weighted at 50% with the out-of-sample observer ratings of EI and SI also weighted at 50%, also correlated significantly with the leadership effectiveness and organizational outcomes ratings by other staff members. EI-CX correlated significantly with leadership effectiveness as did SI-CX. Such results suggest that emotional and spiritual intelligences

contribute to leadership effectiveness beyond a simple “halo” effect explanation, and indeed, contribute to greater organizational commitment, sense of community, productivity/effort, inspirational leadership, overall morale, and lower intentions to quit. Since outcomes such as greater organizational commitment, increasing sense of community, higher morale, and lower intention to quit have been shown to contribute to tangible organizational performance (Milliman, Czaplewski, & Ferguson, 2003; Mowday, Steers, & Porter, 1979, 1982), these findings further support the important contribution that EI and SI have to leadership effectiveness, and go a long ways towards overcoming the limitation of common method bias studies.

That more robust findings resulted from the combination of observer ratings with self-reports than from a self-report alone is consistent with previous studies demonstrating greater reliability and validity from aggregating observer ratings in addition to self-reports. For example, Mount, Barrick, and Strauss (1994) found that observer ratings accounted for significant variance in the criterion measure beyond self-ratings alone for the relevant dimensions of personality. Boyatzis, Goleman, and Rhee (2000) report greater reliability and predictive validity from a 360 measure of emotional intelligence compared to self-report alone.

#### *Relative Contribution of EI and SI Compared to Other Constructs*

The key role played by emotional and spiritual intelligence is further underscored by the findings that EI and SI accounted for a greater portion of the variance in leadership effectiveness and were more statistically significant in comparison to company and personality variables. For example, self-reported spiritual intelligence showed the greatest correlation significance with staff ratings of leadership effectiveness among all

the demographic, company variables, and self-report variables by the CEO. In comparison, even the CEO's self-assessments of their company's growth did not show any statistical significance in explaining leadership effectiveness as rated by their staff. This may seem surprising as it would be expected that companies where the CEO was more optimistic or confident in their company's growth would report greater organizational commitment or lower intentions to quit among their staff. Perhaps the CEO's self-reported business growth suffers from social desirability bias.

Furthermore, none of the self-ratings on the five dimensions of personality showed any statistical significance in explaining leadership effectiveness. Nor were traditional demographic factors like age, gender, or ethnicity important in explaining any differences. The only company variable that had a marginally significant relationship with leader effectiveness was company size and this was in a negative direction. This would suggest that employees in a smaller company feel a greater sense of organizational commitment, sense of community, higher productivity or effort, greater overall morale, and greater satisfaction with their jobs.

In contrast to the more limited explanatory power of the CEO's self-report on the staff's ratings of leadership effectiveness, observer-reported scores on emotional and spiritual intelligence accounted for significant portions of the variance in leadership effectiveness. Observer-reported emotional intelligence accounted for 41% of the variance in leadership effectiveness, and observer-reported spiritual intelligence accounted for 46% of the variance. In comparison, the greatest contribution to the explained variance among the five personality dimensions came from observer ratings of Agreeableness (positively correlated,  $R^2$  equal .25) and Neuroticism (negatively

correlated,  $R^2$  equal .24). In fact, hierarchical regression analysis showed that the observer-reports for the five dimensions of personality combined accounted for a significant increase in explained variance with delta in adjusted  $R^2$  of 39%. Observer-ratings of spiritual intelligence also accounted for an equal increase in explained variance with delta in adjusted  $R^2$  of 39%. Similarly, observer-reported emotional intelligence accounted for a significant, if somewhat smaller, increase in explained variance with incremental increase in adjusted  $R^2$  of 36%. The fact that a single spiritual intelligence score accounts for the same amount of the variance in leadership effectiveness as all five of the dimensions in the FFM of personality combined, suggests that SI contributes significantly to explaining leadership effectiveness.

Indeed, stepwise regression analysis revealed that the staff's perception of the CEO's spiritual intelligence accounted for the greatest portion of variance in their ratings of leadership effectiveness. The second most significant factor contributing to the variance in leadership effectiveness were the staff's observer-ratings of the CEO's emotional intelligence. Among the five personality dimensions, only the staff's observer ratings of the CEO's Extraverted dimension accounted for an incremental increase in adjusted  $R^2$  after accounting for both emotional (EIS) and spiritual (ISIS) intelligences. Staff's ratings of the company's growth and business prospects only accounted for a .01 increase in adjusted  $R^2$ .

These results, again, suggest that a significant portion of the variance in leadership effectiveness is explained by spiritual and emotional intelligences. This claim is further substantiated by finding that EI and SI were correlating positively with every single one of the subcomponent measures of leadership effectiveness: (a) Organizational

Commitment, (b) Sense of Community, (c) Productivity/Effort, (d) Satisfaction, (e) Leadership, (f) Morale, and (g) Low Intention to Quit. Indeed, it was somewhat surprising that the personality dimensions, and even the environmental context of the company's growth prospects, accounted for such small incremental variance in leadership effectiveness after accounting for emotional and spiritual intelligences. Equally surprising was that none of the other personality dimensions beyond Extraversion accounted for any incremental variance in leadership effectiveness. Once spiritual and emotional intelligences were both accounted for, the Agreeableness, Conscientiousness, Neuroticism, and Openness dimensions of personality did not make any significant contribution to explaining variance around leadership effectiveness. This finding was in contrast with previous studies that have found Conscientiousness positively contributed to all job performance criteria across all occupational groups (Barrick & Mount, 1991). Conscientiousness did contribute significantly to leadership effectiveness when including the five dimensions of personality on their own in the regression equation ( $p = .001$ ), and remained significant when adding EIS as a measure of emotional intelligence ( $p = .045$ ), but was only marginally significant when adding ISIS as a measure of spiritual intelligence ( $p = .057$ ). However, Conscientiousness was not statistically significant ( $p = .296$ ) when both EIS and ISIS were in the mix.

#### *Understanding the Contributors to Leadership Effectiveness*

The stepwise regressions results (Tables 19, 20, 21) shed some light on what contributes to positive leadership effectiveness. As discussed earlier, this analysis revealed that observer rating of spiritual intelligence made the most significant contribution to explaining the CEO's leadership effectiveness. The fact that a single ISIS

score can account for 46% of the variance in leadership effectiveness outcome is relatively impressive. This may be partially understood because ISIS aggregates scores across five domains and 22 subscales of spiritual intelligence competencies, which may partially explain its predictive validity and explanatory power. Emotional intelligence also made a moderate incremental contribution (after SI) to explaining leadership effectiveness.

Though very small (only an incremental 1%), it was not a surprise that observer ratings of Growth were positively associated with positive organizational outcomes as it can be expected that employees who perceive their company and business to be growing are more likely to be committed to their jobs, display higher morale, and lower intention to quit. Observer ratings of company growth made no incremental contribution to explained variance around leadership effectiveness after accounting for the specific spiritual intelligence ISIS domains and emotional intelligence EIS subscales.

After accounting for SI and EI, the only personality dimension that made an incremental contribution is observer ratings of Extraversion. The fact that Extraversion was associated with positive leadership outcomes is consistent with prior research in which extraversion (relating to social skills) contributed to effective performance in managers (Barrick & Mount, 1991). However, it was unexpected that Conscientiousness, which has previously been found to positively contribute to all job performance criteria in all occupational groups (Barrick & Mount, 1991), did not add an incremental predictive power beyond EI, SI, and Extraversion in observer-ratings.

The most significant domain was the ISIS Truth domain which includes subscales for Egolessness, Equanimity, Inner-wholeness, Openness, Presence, and Trust. A strong

commitment to truth and reality orientation is consistent with some of the theories of leadership discussed earlier such as Koestenbaum (2002) who underscores the value of “reality orientation” in his diamond model of effective leadership. The ISIS Truth domain also seems to relate to Fry’s (2003, 2005) Spiritual Leadership Theory which stresses the values of humility, inner harmony and wholeness, and hope/faith. Similarly, greater Equanimity is associated with lower Neuroticism that was found to be negatively associated with effective leadership. Also strong trust in the future, that is related to the notions of hope and optimism, is consistent with Bennis (2007), who has highlighted the importance of optimism for leadership. Indeed, in studying 53 sales managers, George (1995) found a positive relationship between those who exhibited optimism and their productivity/output.

The second most significant domain was the ISIS Consciousness domain which contains subscales for Intuition, Mindfulness, and Synthesis. After the Extraversion dimension of personality, EIS Self-Awareness domain was the next most significant contributor. The ISIS Consciousness domain and the EIS Self-Awareness domain both seem to be consistent with the research of Bennis (2000), who found that effective leaders manifest greater self-awareness and self-knowledge. The EIS Use of Emotion and Other-Awareness subscales were also significant and are consistent with Bennis’ (2000) key leadership competencies including the management of attention, involving the ability to emotionally draw others to them, and the management of trust through relationships. The EIS Use of Emotion and Other-Awareness subscales may also relate to and contribute to the work of Kouzes and Posner (2005, 2006) in their leadership practice of enabling others to act by fostering collaboration and building trust.

Stepwise regression results provide a more detailed view about which dimensions of spiritual intelligence contribute to leadership effectiveness. The most significant contributor to leadership effectiveness was the observer ratings on the ISIS Joy subscale (part of the Grace domain). The items used to assess the CEO's score on this ISIS subscale were "brings a feeling of joy to activities" and "seems to feel free, even when s/he has very few choices." While these qualities seem to be intuitively desirable for leaders, no direct parallels were found in the leadership theory literature. Perhaps Kouzes and Posner's (2005) notion of encouraging the heart by recognizing contributions, showing appreciation for individual excellence, and by celebrating values and victories is similar to the qualities included in the Joy subscale. Yet, much has been written and discussed in the popular business press about the importance of building a culture of fun, if not in the formal academic literature on leadership theories. In fact, as cited earlier, George (1995) found that greater positive mood was associated with greater effectiveness in sales managers.

Several other observer ratings of ISIS subscales—Mindfulness (part of the Consciousness domain), Discernment (part of the Grace domain), and Egolessness (part of the Truth domain)—were significant in explaining leadership effectiveness. Items used to assess observer ratings of the ISIS Mindfulness subscale were "our CEO pauses several times to step back, observe, and re-assess the situation during meetings or conversations" and "looks for and tries to discover her/his blind spots." Such qualities seem consistent with the work of Quinn (2000), who highlights the importance of inner transformation among leaders as requiring mindfulness and greater self-knowledge.

Trying to discover one's blind spots is reminiscent of Senge's (2006) emphasis on creating an environment that encourages continuous learning.

Items used to assess observer ratings of the ISIS Discernment subscale were "our CEO acts in alignment with his/her values" and "has a hard time standing firm in her/his inner truth—what s/he knows inside to be true" (reverse-scored). Indeed, Kouzes and Posner's (2005) leadership practice of Modeling the Way—developed by finding one's voice and clarifying personal values, as well as by setting an example through aligning actions with values—seems closely related to the ISIS Discernment subscale. Similarly, the transformational leadership dimension of Idealized Influence (Avolio, Bass, & Jung, 1999; Bass, 1990, 1997, 2001) also highlights the importance of leaders setting high behavior standards for emulation, requiring the leader to embody a strong set of values and integrity in their manifestation. Bennis (2007) also addressed the importance of acting in alignment with values as well as discernment as essential qualities of effective leadership.

Items used to assess observer ratings of the ISIS Egolessness subscale were "being right is important to him/her" and "wants to be treated as special" (both reverse-scored). Indeed, humility and egolessness are consistent with the notion of Level 5 leaders (J. Collins, 2001) who combine humility with great resolve to achieve superior performance. Fry's (2003, 2005) Spiritual Leadership Theory (SLT) also has emphasized the value of humility.

What seemed surprising in the results was that the ISIS Meaning domain, including subscales for Purpose and Service, did not make a more significant contribution to explaining leadership effectiveness variance. This seems to contradict the widely

prevalent notion among many leadership theorists that one of the key tasks of leadership is mobilizing meaning (Bass, 1990, 1997, 2001; Bennis, 2000, 2001, 2007; Kouzes & Posner, 1992, 2005, 2006; Smircich & Morgan, 1982). Perhaps the items used to assess the ISIS Meaning Domain such as “sees advancing his/her career as the main reason to do a good job,” “works in service of the larger whole,” “works in alignment with his/her greater purpose,” and “derives meaning from the pain, suffering, and challenges in life” were not very relevant to assessing the meaning-making dimension of leadership in business settings.

#### *Potential Implications and Applications*

Given the statistically significant results and meaningful effect size from the contribution of emotional and spiritual intelligences to leadership effectiveness, it is interesting to contemplate how these results can be applied in practical business, and other organizational settings. For example, the emotional and spiritual intelligence instruments used in this study might be applied in leader selection, evaluation, and development.

Despite the fact that this research used correlational methods, and hence no clear cause-and-effect conclusions can be drawn, assuming these results can be replicated with other populations, the strong statistical results suggest that EIS and ISIS may be used to help predict leadership effectiveness, and hence may be useful to select leaders based on those predictions. For example, organizations that are frequently engaged in leader selection processes can administer these instruments (e.g., TIPI, EIS, and ISIS) to prospective leaders, as self-report instruments, as well using input from subordinate (and/or potentially colleague) observers to help predict the likely effectiveness of such

individuals. For example, a board of directors may consider using such assessments to assist in selecting among several CEO candidates, or given the choice of promoting one of several candidate managers, the company could administer these instruments to help predict which candidate is most likely to be a more effective leader. Such assessment may help in the selection process by more objectively calibrating the leaders, providing further input beyond looking at historical performance metrics, which may not be as directly comparable. For example, in evaluating which of two sales territory managers is a better fit for a promotion to a higher leadership position, simply looking at their relative sales performance records may not be sufficient in making the best decision, since their sales performance may be due to different economic climates in different regions. Their self-report and observer scores on the TIPI, EIS, and ISIS may be helpful in providing more normalized calibration on their EI and SI, and hence, in shedding some light on their likely leadership effectiveness.

Similarly, these instruments can be used to provide greater insight and feedback in leader evaluations. Indeed, many companies already use 360-degree instruments to assess the effectiveness of leaders. TIPI, EIS, and ISIS, given their relatively short administration time and strong predictive validity, could be used in both in self-report, and more likely, observer ratings to pinpoint areas of relative strengths, as well as areas of potential improvement among leaders. More work would be required, however, to make certain that the instruments don't suffer from any social desirability biases when used in these potential applications.

Feedback using this data could be used in coaching and leadership development. Though no cause-and-effect relationship has been established between greater EI or SI

and leadership effectiveness, the strength of the statistical results, particularly the relationship between follower observations of EI and SI competencies and those and other followers' organizational commitment, morale, and satisfaction, suggests that developing EI and SI competencies among leaders will have a positive affect on these outcomes. Such increases in follower satisfaction, morale, and commitment are likely to lead to greater organizational performance (Fry, Vitucci, & Cedillo, 2005; Mowday, Steers, & Porter, 1979, 1982).

For example, Barling, Weber, and Kelloway (1996) studied 9 treatment group leaders who were randomly selected to receive transformational leadership skills training as compared with 11 control group leaders. The results showed that the transformational skills training had a positive effect on subordinates' satisfaction and on some objective aspects of financial performance. Similarly, Luskin, Aberman, and DeLorenzo (2003) found that a 1 year long emotional competence training resulted in increased sales productivity among financial services advisors. The average productivity increase among the four groups receiving the training was 25%, compared to a corresponding increase of 10% among comparable advisors who did not receive the training. Such results suggest that developing emotional intelligence competencies can result in tangible and measurable productivity gains.

From a theoretical perspective, it is also interesting to contemplate if emotional and spiritual intelligences can be developed, and, if so, through what means and over what time frame such development could take place? With regards to EI, which has a longer research history, most researchers argue that it can be developed (Boyatzis, 2001; Dulewicz & Higgs, 2004; Goleman, 1998b, 2001; Kram & Cherniss, 2001; Saarni, 2000;

Watkin, 2000), but this perspective partially depends on what EI model is used. Whereas competencies such as impulse control or social skills would respond to quicker development, increasing ability-EI as intelligence would appear as a slower process (Mayer, Salovey, & Caruso, 2000). The literature review work of Cherniss and Adler (2002) done at the Consortium for Research on Emotional Intelligence in Organizations shows that EI competencies can be developed in adults using models of psychotherapy, training, and behavioral change. Parker (2000) discusses evidence for the effectiveness of psychotherapeutic approaches for developing EI. For example, psychotherapy has been shown as effective for the treatment of Alexithymia, a clinical condition related to poor EI, defined as difficulty identifying feelings, and distinguishing between feelings and bodily sensations, or verbalizing them.

Mayer, Salovey, and Caruso (2000) take issue with the claim by trait-EI theorists that EI can be relatively quickly developed. They reason that trait-EI measures mostly personality traits that have genetic and early-learning contributions, which are relatively stable. EI as mental ability, they also maintain, would be hard to modify or learn in a short development course as most forms of intelligence are relatively stable and change only gradually. Yet, ability-EI has been reported to increase with age into the 50s, suggesting at least a slow development in adulthood (Mayer et al., 2004).

Similarly, Amram and Dryer (2008) have found that spiritual intelligence tended to increase with age. Other researchers have found that learning a spiritual practice, such as meditation in business settings, appears to improve employee health, well-being, job satisfaction, efficiency, and productivity at the individual level (Schmidt-Wilk, Alexander, & Swanson, 1996). These results, in turn, seem to improve organizational

climate, reduce absenteeism, and improve financial performance. Meditation practice seems to also increase emotional and spiritual intelligence related abilities, such as increased empathy, improved interpersonal functioning, increased concentration and attention, increased creativity, and enhanced positive affect (Shapiro, Schwartz, & Bonner, 1998; Shapiro, Schwartz, & Santerre, 2002).

These increases in abilities related to spiritual intelligence (e.g., empathy, attention, and creativity) from spiritual practice such as meditation, suggest that spiritual intelligence can be developed. Such meditation practices may indeed even alter the brain, as suggested by research on the neuro-plasticity of the brain (Lazar et al., 2005; Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004). Furthermore, many scholars and theoreticians view spiritual maturity from a developmental perspective in the first place (Wilber, 1999).

In summary, both theoretical considerations and empirical research suggest that EI and SI can be developed, and in turn, their development may result in improved leadership effectiveness and organizational performance. Indeed, as part of the benefits to CEO participants in this study, this researcher provided detailed feedback and coaching to participating CEO leaders based on the results of the assessments used in this study. Of the 20 CEOs who received such coaching as of this writing, all of the CEOs who participated in such coaching sessions to date, have indicated that they found the feedback and coaching process highly valuable. It helped them identify areas in which they received positive feedback on their effectiveness with direct reports, which they can continue to reinforce and build on. Conversely, they also reported that identifying the

potential areas of improvements in developing EI and SI competencies was helpful in thinking about how they could improve their leadership in the future.

### *Limitations*

Despite the statistical significance and strong effect size in the relationships between emotional and spiritual intelligences and leadership effectiveness, it is important to note that this study used correlational methods and hence no clear cause-and-effect conclusions can be drawn from the results. Another limitation of this study is the fact that the ISIS measure used to assess spiritual intelligence is still relatively new with limited reliability and validity studies conducted (Amram & Dryer, 2008). Similarly, EIS (Wong & Law, 2002) used to assess emotional intelligence was chosen for its brevity and is not among the most widely used measures of EI which are much longer than this instrument and may assess abilities outside the scope of core EI constructs. Additionally, the relatively short 10-item personality inventory (TIPI) (Gosling, Rentfow, & Swann, 2003) was also chosen due to its brevity, rather than a longer and more reliable measure of personality such as the 60-item short form of the Costa and McCrae (1992) NEO personality inventory.

Furthermore, TIPI, ISIS, and EIS are all originally designed as self-report measures, which limit their validity as they are susceptible to manipulation based on perceived desirability (Lopez & Snyder, 2003). However, the fact that the ISIS self-report score seemed to predict leadership effectiveness as rated by the observer staff seems to counter this self-report limitation and provides cross-method validation for the contribution of SI to leadership effectiveness. The social desirability problem of relying solely on self-report instruments was also minimized by using the observer ratings to

supplement the self-report. However, since these observers also assessed the leadership effectiveness outcomes, a common method problem was introduced in the observer-rated analysis.

However, using the out-of-sample observer ratings of EI and SI showed that EI and SI predict leadership effectiveness when using out-of-sample observers and minimizes the common method bias problem. Likewise, the latter concern is also minimized because the correlations involving the combined out-of-sample observer ratings with self-report ratings with leadership effectiveness were also significant.

Another limitation of this study is that no effort was made to control for the effect of other established forms of intelligence, such as IQ, and its possible contribution to leadership effectiveness. Due to practical considerations, an additional limitation of this research is the relatively modest sample size (42 CEOs and 210 members of their staff). Because of the “convenience” sampling process, they may or may not be representative of CEOs in general. In addition, the diversity of the backgrounds of these CEOs was not very great. Larger sample sizes, including more robust samples of different demographic groups, would be desirable in future studies looking at these issues of emotional and spiritual intelligence, and especially the moderating effects of demographic and personality variables. It would be inappropriate to generalize too far from these particular findings to other contexts given the limited geographical and industry scope of the sample population. It is also hard to generalize the contribution of EI and SI to leadership in general, as the study sample was limited to the leadership effectiveness of CEOs. It remains to be seen if EI and SI contribute in the same way to leadership effectiveness at

different levels in the organization, such as production line supervisors, or other leadership contexts.

Furthermore, while the data on leadership effectiveness was independent of the leader's self-report, there is no objective information which validates the true effectiveness of the CEO in terms of company financial performance as opposed to how positively their constituents feel about their CEO's and company attachments. Finally, little information is known about the characteristics of the CEO staff in general, and, in particular, how biased the distribution of responses from them, based upon their selection by the CEO, may have been.

#### *Future Research*

To further investigate the contribution of emotional and spiritual intelligences to leadership effectiveness, researchers in the future would do well to replicate these findings with larger and more diverse demographic and corporate sample populations. For example, this study looked at the contribution of EI and SI to leadership effectiveness among CEOs of companies within a relatively narrow geographic and company size range. Future studies are needed to replicate these findings, for example, with companies outside of the United States, different size companies, and with leaders at different levels in their organization (i.e., not all at the CEO level). Similarly, it would be interesting to explore if there is a similar contribution from EI and SI to leadership in nonprofit, military, education, or other organizational contexts. Also interesting would be investigations of whether such variables as age, gender, function, education, length of service, or ethnic differences would moderate the results if more powerful statistical tests could be run among different demographic cells.

In order to overcome the limitations of some of the brief self-report assessments, future research can use longer or different measures to assess EI, SI, or personality. In addition, future research can control for other established constructs, such as IQ. Furthermore, by using performance and ability instruments to measure emotional intelligence, such as the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, Caruso, & Sitarenios, 2003), it would be interesting to explore how those measures of EI may explain leadership effectiveness compared to self-report and observer rating instruments of EI, such as the EIS. Unfortunately, no performance ability measure of spiritual intelligence exists and it is hard to envision how such an instrument can be constructed independent of observer ratings.

Given the surprisingly low contribution of the ISIS Meaning domain scale to leadership effectiveness, future scholars may try to construct alternative measures relating to the meaning-making function of leadership. Perhaps such alternate scales can provide more explanatory power regarding leadership effectiveness.

Finally, to overcome the limitations of a correlational statistical approach, future studies might consider using an experimental design in which a group of leaders (treatment group) will receive training and coaching to enhance and develop their emotional and spiritual intelligence competencies, and over time, can be compared in their leadership effectiveness to a control group of leaders. A related set of research questions is how, and if, emotional and spiritual intelligence competencies might be developed through such methods as training, coaching, and therapy, as well as contemplative and spiritual practices such as meditation. Further experimental research

using a variety of clinical and training interventions is required in order to evaluate how EI and SI can be developed and over what time frames.

### *Summary and Conclusions*

In summary, results from this study suggest that emotional and spiritual intelligences contribute to business leadership effectiveness. EI and SI explain an incremental and meaningful portion of the variance in leadership performance, and their contribution is more meaningful than having information about various demographic, company environment, and personality variables of leaders. Self-reported SI explained leadership effectiveness as reported by the staff observers. Such cross-method validity, even after controlling for established constructs such as personality and EI, strongly supports the contribution of SI to making leaders effective. Similarly, out-of-sample observer measures of EI and SI also predicted leadership effectiveness. Again, such cross-method predictive validity demonstrates the robustness and utility of the SI and EI constructs for their contribution to understanding leadership effectiveness.

Moreover, solely relying on self-report measures of EI and SI may not be as reliable in explaining leadership effectiveness as a combination of self-report and/or observer ratings of such constructs. Additional studies are required to refine, replicate, and expand these findings with other populations, and to further validate the importance to leadership effectiveness of emotional and spiritual intelligences. More experience and experimentation are also required to learn how to best apply these findings in pragmatic, real world applications for leader selection, evaluation, and development.

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## Appendix A: Sample Informed Consent Form

To the Participant in This Research:

As a CEO, you are invited to participate in this research that is studying the contribution of inspirational leadership, personality, and various forms of intelligence, such as emotional and spiritual intelligence, to business leadership outcomes. Your participation in the study is intended to contribute to the understanding of leadership effectiveness. As a participant, you will receive a confidential personalized report of your results. This report will compare your results to the population of approximately 30-40 other company CEOs in the study, and will include 360 feedback on your leadership abilities, interpersonal style, organizational commitment level, sense of community, morale, and intention to quit from your staff of direct reports.

Participation in this study will require approximately 15 minutes of your time to complete several survey instruments over the internet. In addition, you will invite all of your direct reports to complete a similar online questionnaire providing you with 360 feedback of your capabilities, and ratings of their morale, organizational commitment, job satisfaction, and intention to quit. The estimated time required from each of your staff to complete the online survey is approximately 15 minutes as well. A minimum of two participants from your staff will be required in order to complete your 360 assessment and for you to receive feedback from this study.

After completing the 360 feedback on you, your staff members who agree to participate may also elect to assess their own abilities by taking the same assessments as you. After completion of this optional part, your staff will be directed to create a confidential and private code that will enable them to receive and interpret their own

results. As their CEO, you will receive a report providing an aggregate view of feedback about your leadership style and competencies as well as some metrics on job satisfaction, commitment, and morale from your staff. This 360 data will be provided to you in aggregate form only without your being able to identify any of your staff's individual feedback. Hence, your staff's responses will remain absolutely confidential, yet you and they will get some valuable feedback. All contact with your staff will be done through you (including the distribution of their private reports which will only identify them by their own uniquely created private code). Hence, their identity will remain private and unknown even to you or the researcher, yet they will be able to receive and interpret their own results.

All of these reports will be provided upon completion of the study and will include comparison statistics and rankings relative to the other executives in similar positions in the 30+ other companies in the study. Furthermore, at your option any time within 6 months following the completion of the study, you may receive up to 2 hours of free coaching by the primary researcher (Yosi Amram) to interpret your results.

For the protection of your privacy, all information received from you will be kept confidential and your personal and company identity will be protected. Your company will be assigned a confidential company code. You and your staff will use this private code when entering your responses to a secure computer over the internet. To further ensure your privacy, all response data identified through this confidential company code will be stored on a secure computer only accessible by the main researcher.

All assessments used in this study are standardized measures that have been used with hundreds of participants before, have been found to be valid and reliable, and were

designed to minimize any potential risks to you. If at any time you have any concerns or questions, I will make every effort to discuss them with you and inform you of options for resolving your concerns. If you have any questions or concerns, you may call me at 650-465-2367, or Prof. Fred Luskin, Chair of my dissertation committee at the Institute of Transpersonal Psychology at 650-493-4430, or Prof. Kartikeya Patel, Head of the Ethics Committee of the Institute of Transpersonal Psychology, at 650-493-4430.

Furthermore, if you decide to participate in this research, you may withdraw your consent and discontinue your participation at any time during the conduct of the study and for any reason without penalty or prejudice.

As a participant, I attest that I am over 18 years of age, I have read and understood this consent form, and had any questions about this research answered to my satisfaction. My participation in this research is entirely voluntary.

Participant's Name:

Participant phone:

Participant email:

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

Mailing Address (if you want a personalized report of your scores and a summary of research findings) sent via mail rather than email:

\_\_\_\_\_  
\_\_\_\_\_

Researcher Signature \_\_\_\_\_ Date \_\_\_\_\_  
Researcher's Name: Yosi Amram

Phone: 650-465-2367

Email: yamram@yamram.com

467 Hamilton Ave., Suite 29

Palo Alto, CA 94301

## Appendix B: Self-Report Correlations Among TIPI-S, EIS-S, ISIS-S

Table B1

*Self-Report Correlations Among TIPI-S, EIS-S, ISIS-S*

Variable	EXTR-S	AGRE-S	CONS-S	NERO-S	OPEN-S	EIS-S	ISIS-S
EXTR-S (1)	1.00	-0.16	-0.05	0.12	0.34	0.14	0.12
AGRE-S (2)		1.00	0.21	-0.32	-0.11	0.30	0.35
CONS-S (3)			1.00	-0.22	-0.14	0.28	0.29
NERO-S (4)				1.00	0.03	-0.28	-0.49
OPEN-S (5)					1.00	0.17	0.18
EIS-S (6)						1.00	0.52
ISIS-S (7)							1.00

(1) EXTR-S: Self-report on the TIPI Extraverted scale

(2) AGRE-S: Self-report on the TIPI Agreeable scale

(3) CONS-S: Self-report on the TIPI Conscientious scale

(4) NERO-S: Self-report on the TIPI Neuroticism scale

(5) OPEN-S: Self-report on the TIPI Openness scale

(6) EIS-S: Self-report on the Emotional Intelligence Scale (EIS)

(7) ISIS-S: Self-report on the Integrated Spiritual Intelligence Scale (ISIS)

## Appendix C: Observer-Report Correlations Among TIPI-O, EIS-O, ISIS-O

Table C1

*Observer-Report Correlations Among TIPI-O, EIS-O, ISIS-O*

Variable	EXTR-O	AGRE-O	CONS-O	NERO-O	OPEN-O	EIS-O	ISIS-O
EXTR-O (1)	1.00	0.02	0.06	0.00	0.19	0.10	0.22
AGRE-O (2)		1.00	0.33	-0.57	0.30	0.62	0.65
CONS-O (3)			1.00	-0.43	0.21	0.51	0.51
NERO-O (4)				1.00	-0.26	-0.65	-0.60
OPEN-O (5)					1.00	0.33	0.52
EIS-O (6)						1.00	0.69
ISIS-O (7)							1.00

(1) EXTR-O: Observer-report on the TIPI Extraverted scale

(2) AGRE-O: Observer-report on the TIPI Agreeable scale

(3) CONS-O: Observer-report on the TIPI Conscientious scale

(4) NERO-O: Observer-report on the TIPI Neuroticism scale

(5) OPEN-O: Observer-report on the TIPI Openness scale

(6) EIS-O: Observer-report on the Emotional Intelligence Scale (EIS)

(7) ISIS-O: Observer-report on the Integrated Spiritual Intelligence Scale (ISIS)

## Appendix D: Self-Report Correlations Among 4 EIS-S and 5 ISIS-S Domains

Table D1

*Self-Report Correlations Among 4 EIS-S and 5 ISIS-S Domains*

Variable	CONSC	GRAC	MEAN	TRUT	TRAN	SA	OW	USE	REGU
CONSC									
(1)	1.00	0.58	0.45	0.22	0.62	0.45	0.58	0.20	0.09
GRAC (2)		1.00	0.61	0.47	0.68	0.56	0.39	0.24	0.06
MEAN (3)			1.00	0.43	0.61	0.05	0.20	0.10	0.06
TRUT (4)				1.00	0.16	0.30	0.25	0.03	0.21
TRAN (5)					1.00	0.38	0.60	0.21	-0.13
SA (6)						1.00	0.62	0.35	0.73
OW (7)							1.00	0.20	0.57
USE (8)								1.00	0.22
REGU (9)									1.00

(1) CONSC: ISIS Consciousness domain

(2) GRAC: ISIS Grace domain

(3) MEAN: ISIS Meaning domain

(4) TRUT: ISIS Truth domain

(5) TRAN: ISIS Transcendence domain

(6) SA: EIS Self-Awareness domain

(7) OW: EIS Other Awareness domain

(8) USE: EIS Use of Emotion domain

(9) REGU: EIS Regulation of Emotion domain

## Appendix E: Observer-Report Correlations Among 4 EIS-O and 5 ISIS-O Domains

Table E1

*Observer-Report Correlations Among 4 EIS-O and 5 ISIS-O Domains*

Variable	CONSC	GRAC	MEAN	TRUT	TRAN	SA	OW	USE	REGU
CONSC									
(1)	1.00	0.69	0.57	0.62	0.75	0.60	0.61	0.32	0.52
GRAC (2)		1.00	0.54	0.61	0.78	0.48	0.50	0.28	0.41
MEAN (3)			1.00	0.50	0.59	0.37	0.26	0.15	0.31
TRUT (4)				1.00	0.52	0.55	0.53	0.25	0.63
TRAN (5)					1.00	0.49	0.50	0.27	0.44
SA (6)						1.00	0.62	0.35	0.73
OW (7)							1.00	0.20	0.57
USE (8)								1.00	0.22
REGU (9)									1.00

(1) CONSC: ISIS Consciousness domain

(2) GRAC: ISIS Grace domain

(3) MEAN: ISIS Meaning domain

(4) TRUT: ISIS Truth domain

(5) TRAN: ISIS Transcendence domain

(6) SA: EIS Self-Awareness domain

(7) OW: EIS Other Awareness domain

(8) USE: EIS Use of Emotion domain

(9) REGU: EIS Regulation of Emotion domain