

RUNNING HEAD: EI AND SI IN LEADERSHIP

The Contribution of Emotional and Spiritual Intelligence
To Explaining Leadership

by

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Abstract

The current study investigated the contribution of emotional intelligence (EI) and spiritual intelligence (SI) to leadership effectiveness (LE). Participants were 42 company CEOs and their staff members ($N = 210$). Each participant provided ratings on the CEO's personality, EI, and SI. LE was measured by the CEO's staffs' composite score of commitment, satisfaction, morale, productivity, and the like. For CEOs, self-reported SI significantly correlated with LE, but not their self-reported EI. Staff's ratings of CEO's EI and SI significantly correlated with LE, and remained significant after controlling for other variables. Further analysis revealed that EI and SI are distinct constructs, each distinctly contributing to leadership effectiveness. Implications for leadership development along these two dimensions are offered.

Key Words:

Leadership

Emotional Intelligence

Spiritual Intelligence

CEO Effectiveness

Introduction

Many studies show that cognitive intelligence, as measured by traditional IQ scores, explains only a small portion of career success or well-being (Goleman, 2001; Sternberg, 1997b). Over the last few decades, theories of multiple intelligences have broadened the concept of intelligence beyond IQ to include emotional, creative, practical, social, existential, and spiritual intelligences (Bar-On, 2000; Emmons, 1999; Gardner, 1983, 2000; Goleman, 2001; Halama & Strizenec, 2004; Mayer, Salovey, & Caruso, 2004; Silvera, Martinussen, & Dahl, 2001; Sternberg, 1997a, 1997b).

Traditional IQ, a measure of cognitive intelligence focusing on linguistic and logical-mathematical abilities, explains only a small portion of leader effectiveness (Sternberg, 1997b). The study of leadership over the last few decades 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 (Bar-On, 2000; Emmons, 1999; Gardner, 2000; Goleman, 2001; Halama & Strizenec, 2004; Mayer, Salovey, & Caruso, 2004; McCrae, 2000; Piedmont, 1999; Silvera, Martinussen, & Dahl, 2001; Sternberg, 1997a, 1997b). The current study investigated the extent to which these non-IQ forms of intelligence, particularly emotional and spiritual intelligences, contribute to the effectiveness of business leaders as reflected in outcome measures such as the commitment, morale, and satisfaction of their direct reports.

Despite the vast popular press on leadership—with an estimated over 2000 books on leadership published per year—a consistent view of what defines leadership does not exist (Higgs & Rowland, 2002). One useful definition 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” (Chermers, 2001, 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 (e.g., 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, 2006, 2007).

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). Furthermore, researchers have 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 suffer from a common method bias as they relied on the self-report of the leader in measuring EI, as well as they typically lack tangible or objective performance outcome measures (e.g., Hartsfield, 2003; Higgs & Rowland, 2002). 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).

Hence, due to methodological concerns and some conflicting and mixed results (Antonakis, 2003; Feyerhem & 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 (Feyerhem & Rice, 2002; Hogan, Raskin, & Fazzini, 1990).

Paralleling the growing interest in EI and its application to business leadership is an 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 incorporating 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 supports 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.

Unfortunately, little empirical research has been conducted on the relationship between spirituality and leadership effectiveness (Fry, Vitucci, & Cedillo, 2005; Posner, Slater, & Boone, 2006). The limited research that has examined the relationship of spirituality and leadership suffers 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.

Furthermore, 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 (Salovey & Mayer, 1990), spiritual intelligence (SI) is not equivalent to spirituality (Amram, 2007; Mull, 2004). Spirituality refers to the individual's 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), and 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 and embody spiritual resources 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. These dimensions included: 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.

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, 2006, 2007), 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, 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 (2007) 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, current leadership constructs 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, 2007; Sternberg, 2007). With IQ only accounting for small part of leader performance, there has been an evolution and broadening understanding of intelligence to include emotional and spiritual intelligences. 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).

Furthermore, 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 (e.g., Covey, 2004; Mussig, 2003; Solomon & Hunter, 2002). However, no empirical studies have measured the contribution of spiritual intelligence to effective business leadership. What limited research has been done on the relationship between spirituality and leadership suffered from reliance on self-reports only, rather than more objective assessments.

This study investigated the extent to which emotional and spiritual intelligences contribute to CEO effectiveness as measured in their direct staff's assessment of their leadership

effectiveness, even after controlling for established constructs such as personality. Also examined is the unique variance that accounted for EI and SI in this relationship.

Method

Hypotheses

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 explains leadership effectiveness.

Specifically,

- a. Self-reported emotional intelligence is positively correlated 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 spiritual intelligence.

2. Self-reported spiritual intelligence by the CEO explains leadership effectiveness. Specifically,

- a. Self-reported spiritual intelligence is positively correlated 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 emotional intelligence.

3. Observer ratings of their CEO's emotional intelligence explain leader effectiveness.

Specifically,

- a. Observer ratings of CEO emotional intelligence are positively correlated with leadership effectiveness.
 - b. Observer ratings of CEO emotional intelligence contribute to leadership effectiveness even after controlling for observer ratings of personality.
 - c. Observer ratings of CEO emotional intelligence contribute to leadership effectiveness even after controlling for the observer ratings of personality and spiritual intelligence.
4. Observer ratings of their CEO's spiritual intelligence explain leader effectiveness.

Specifically,

- a. Observer ratings of CEO spiritual intelligence are positively correlated with leadership effectiveness.
- b. Observer ratings of CEO spiritual intelligence contribute to leadership effectiveness even after controlling for observer ratings of personality.
- c. Observer ratings of CEO spiritual intelligence contribute to leadership effectiveness even after controlling for the observer ratings of personality and emotional intelligence.

Sample and Procedure

A convenience population was used to recruit 60 CEOs to participate in this study. They were 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 his or her leadership

effectiveness. A minimum of two staff respondents were required for each CEO participant to be included in the data analysis. As part of the incentive for participating in the study, CEOs were subsequently provided with an individualized debrief of their results within the overall context of the study population.

In the sample, a total of 42 CEOs were involved along with 210 of their constituents (direct reports). Twelve CEOs were excluded from the study because they failed to complete their self-assessment and another 6 were eliminated because they failed to obtain the minimum number of constituent respondents. The number of constituents ranged from 2 to 11, with an average of 5 direct reports for each CEO. It should be noted that most of the constituents (direct reports) had organizational titles at the vice-president level.

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 were CEOs of very small companies (less than 20 employees), 9 companies employed between 20 and 49 employees, 8 companies employed between 50 and 99 employees, another 8 companies employed between 100 and 249 employees, 3 companies employed between 250 and 499 employees, and 1 company employed over 1,000 employees.

Half of the CEOs ($N = 21$) were people known by the research team before the beginning of the study. Subsequent analyses did not find any statistically significant differences between the responses of this group and those “not previously known.” No demographic information was collected on the constituents reporting to each CEO in order to ensure their anonymity.

Instruments and Measures

Each CEO 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, the CEO provided demographic information about their age, gender, ethnicity, and company size. Each CEO also rated the growth and expansion opportunities of their business (GRTH-S). The CEOs rating of GRTH was used in order to control for other potential variables that may influence their constituents' ratings of commitment, satisfaction, morale, and the like since it might be hypothesized that those working in faster growth companies may exhibit higher satisfaction, commitment, and morale independent of the quality of their leader.

A 45-item self- and observer-report short-form of the Integrated Spiritual Intelligence Scale (ISIS, Amram & Dryer, 2008) was used to measure SI. 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 that were identified from a thematic analysis of interviews Amram (2007) conducted with people nominated by others as spiritually intelligent. ISIS items are scored on a six-point scale rating behavioral frequency (rather than beliefs) from 1—never or almost never, to 6—always or almost always. Cronbach's alpha for the ISIS is reported at .97 in previous research.

A 16-item self- and observer-report measure of the emotional intelligence scale (EIS, Wong & Law, 2002) was used to measure EI. EIS includes 4 factors of EI with reported Cronbach's alpha ranging from 0.83 to 0.90 in previous research. EIS uses a seven-point Likert-type scale from 1 (disagree strongly), to 7 (agree strongly).

The 10-item personality inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003) was used to assess personality on the five factor model (FFM) of personality. TIPI uses two items (one positively and one reverse-scored) for each of the five dimensions of the FFM of personality. 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.

Each of the CEOs' direct reports or constituents (subsequently referred to as "observers") completed assessments of their CEO's EI, SI, and FFM personality measures. Measures used were observer versions of the Wang and Law (2002) EIS-O, the Amram and Dryer (2008) ISIS-O, and the Gosling, Rentfrow, and Swann (2003) TIPI-O. The CEO's leadership effectiveness (EFF) was computed as the average score on seven aspects of leadership performance outcomes as rated by the observers and averaged to form a single overall score of leadership effectiveness (EFF), with internal reliability at 0.88 (Cronbach's alpha).

The specific components of the leadership effectiveness scale were: (a) the nine-item short form of the Organizational Commitment Questionnaire (OCQ, Mowday, Steers, & Porter, 1979, 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 the 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 ("Overall, employee morale in this company is low."—item reverse-scored); (f) the three-item Intention to Quit (ITQ) subscale also developed by Milliman, Czaplewski, and Ferguson (2003); and (g) three items relating to the staff's assessment of CEO's leadership ability (LDR). For this last dimension, observers were asked to

assess their CEO's leadership abilities by rating the following three statements: (a) "Overall, our CEO is a great leader," (b) "Overall, our CEO is a great manager," and (c) "Our CEO really inspires the very best in me in the way of job performance." Cronbach's alpha for these 3 items was 0.88.

Each of the CEOs' direct reports (participants) were also asked to rate their perception of the growth and expansion opportunities of their business (GRTH-O). This again was used to control for other potential confounding variables which may influence participants' ratings of satisfaction, commitment or morale, which are independent of leadership qualities.

Results

The demographic variables of Gender, Age, Ethnicity did not show any statistically significant correlations with leadership effectiveness ($p < .05$), nor did subsequent t-tests show any significant differences between the groups based on these variables (results not shown). Consequently, these demographic variables were eliminated from further analysis.

Table 1 shows correlations between leadership effectiveness and self- and observer-reported assessments of emotional and spiritual intelligences, personality, as well as company variables including size and growth. The correlation between leadership effectiveness (EFF) and CEO self-reported emotional intelligence (EIS-S) was not statistically significant ($r = 0.07$), which does not support Hypothesis 1a. The correlation between leadership effectiveness (EFF) and CEO self-reported spiritual intelligence (ISIS-S) was significant ($r = 0.17, p < .02$), which lends support to Hypothesis 2a. Support was found for Hypotheses 3a and 4a, as strong correlations were found between observers' assessments of CEO emotional intelligence ($r = 0.64, p < .001$) and spiritual intelligence ($r = 0.68, p < .001$) and their assessments of the leader's effectiveness.

Table 1

Correlations of Self- and Observer-Reports with Leadership Effectiveness

Variable	<i>R</i>
Company Size	-.13
Growth-S (self-report)	-.03
TIPI-Extraverted-S (self-report)	.02
TIPI-Agreeable-S (self-report)	.01
TIPI-Conscientious-S (self-report)	-.09
TIPI-Neuroticism-S (self-report)	.08
TIPI-Openness-S (self-report)	.11
EIS-S (self-report)	.07
ISIS-S (self-report)	.17*
Growth-O (observer-report)	.23**
TIPI-Extraverted-O (observer-report)	.28***
TIPI-Agreeable-O (observer-report)	.50***
TIPI-Conscientious-O (observer-report)	.44***
TIPI-Neuroticism-O (observer-report)	-.49***
TIPI-Openness-O (observer-report)	.36***
EIS-O (observer-report)	.64***
ISIS-O (observer-report)	.68***

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

A set of hierarchical regression models was used to test the contribution of self- and observer-reported emotional intelligence to leader effectiveness after controlling for personality and spiritual intelligence. A similar set of hierarchical regression models was used to test the contribution of self- and observer-reported spiritual intelligence to leader effectiveness after controlling for personality and emotional intelligence.

Table 2 shows a hierarchical regression model in which the company variables of size and CEO reported growth (GRTH-S) were entered in the equation first, followed by the five

dimensions of self-reported personality (TIPI-S), followed by self-reported emotional intelligence (EIS-S), and then the self-reported spiritual intelligence was added. Hypothesis 1b was not supported (or only marginally so) as adding self-reported emotional intelligence into the regression equation after accounting for personality did not account for any statistically significant ($p = .096$) increase in the explained variance for leadership effectiveness. Similarly, Hypothesis 2c was not supported as adding self-reported spiritual intelligence after accounting for personality, and emotional intelligence did not account for statistically significant increase in explained variance.

Table 2

Hierarchical Reg. with Co Variables, Self-Reported Growth, Personality, EI, and SI

Variables	R^2	Adj. R^2	Delta in Adj. R^2
1: Co. Variables (Size & Growth-S)	.02	.01	.01
2: add TIPI-S (5 dimensions)	.05	.02	.01
3: add EIS-S	.07	.03	.01#
4: add ISIS-S	.08	.04	.01

Note. $N = 210$; # $p < .1$.

Table 3 shows a hierarchical regression model in which the company variables of size and CEO reported growth (GRTH-S) were entered in the equation first, followed by the five dimensions of self-reported personality (TIPI-S), followed by self-reported spiritual intelligence (ISIS-S), and then the self-reported emotional intelligence was added. Hypothesis 2b was supported as adding self-reported spiritual intelligence into the regression equation after accounting for personality was statistically significant ($p < .05$). However, Hypothesis 1c was not supported as adding self-reported emotional intelligence after accounting for personality, and spiritual intelligence did not account for statistically significant increase in explained variance.

Table 3

Hierarchical Reg. with Co. Variables, Self-Reported Growth Personality, SI, and EI

Variables	R^2	Adj. R^2	Delta in Adj. R^2
1: Co. Variables (Size & Growth-S)	.02	.01	.01
2: add TIPI-S (5 dimensions)	.05	.02	.01
3: add ISIS-S	.08	.04	.02*
4: add EIS-S	.08	.04	-

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

Results were more significant from the perspective of the observers. In both instances, their assessment of leadership effectiveness was significantly enhanced by the contribution of their assessment of their leader's emotional intelligence and spiritual intelligence. Table 4 shows a hierarchical regression model in which the company variables of size and observer-reported growth (GRTH-O) were entered in the equation first, followed by the five dimensions of observer-reported personality (TIPI-O), followed by observer-reported emotional intelligence (EIS-O), and then the observer-reported spiritual intelligence was added. Hypothesis 3b was supported as adding observer-reported emotional intelligence into the regression equation after accounting for personality accounted for a statistically significant ($p < .001$) increase in the explained variance of leadership effectiveness. Similarly, Hypothesis 4c was supported as adding observer-reported spiritual intelligence after accounting for personality, and emotional intelligence accounted for statistically significant ($p < .001$) increase in explained variance.

Table 4

Hierarchical Reg. with Observer-Reported Growth, Personality, EI, and SI

Variables	R^2	Adj. R^2	Delta in Adj. R^2
1: Co. Variables (Size & Growth-O)	.07	.06	.06**
2: add TIPI-O (5 dimensions)	.46	.45	.39***
3: add EIS-O	.52	.50	.05***
4: add ISIS-O	.55	.53	.03***

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

Table 5 shows a hierarchical regression model in which the company variables of size and observer-reported growth (GRTH-O) were entered in the equation first, followed by the five dimensions of observer-reported personality (TIPI-O), followed by observer-reported spiritual intelligence (ISIS-O), and then the observer-reported emotional intelligence was added. Hypothesis 4b was supported as adding observer-reported spiritual intelligence into the regression equation after accounting for personality accounted for a statistically significant ($p < .001$) increase in the explained variance. Similarly, Hypothesis 3c was supported as adding observer-reported emotional intelligence after accounting for personality, and spiritual intelligence accounted for statistically significant ($p < .001$) increase in explained variance.

Table 5

Hierarchical Reg. with Co. Variables, Observer-Reported Growth, Personality, SI, and EI

Variables	R^2	Adj. R^2	Delta in Adj. R^2
1: Co. Variables (Size & Growth-O)	.07	.06	.06**
2: add TIPI-O (5 dimensions)	.46	.45	.39***
3: add ISIS-O	.52	.50	.05***
4: add EIS-O	.55	.53	.03***

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

Additional Investigations

Since these results revealed that CEO self-reported emotional and spiritual intelligences were much less strongly predictive of leadership effectiveness than EI and SI as reported by 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, observers who were pleased with their leaders and committed to their jobs attributed higher emotional and spiritual intelligences to their CEO leaders.

Post hoc analyses were conducted to test this proposition and examine the predictive validity of the contribution of emotional and spiritual intelligences to leadership effectiveness, by computing an “out-of-sample” measure of emotional and spiritual intelligences and correlating them with each observer’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 CEO’s staff, the correlation between the member’s own rating of leadership effectiveness was computed against the average observer’s rating of the CEO’s EI and SI when the emotional and spiritual intelligence variables were assessed based on averaging the input of the remaining members of the group, 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 would predict the organizational outcomes, such as commitment, morale, and job satisfaction, as reported by a different member of the team. This analysis revealed statistically significant correlations between leader effectiveness and the “out of sample” measure of emotional intelligence ($r = .34, p < .001$) as well as spiritual intelligence ($r = .31, p < .001$).

In order to investigate their relative contribution to explaining the variance in leadership effectiveness, a stepwise regression model using observer-ratings of growth, personality, EI, and SI, as the independent variables was run. Table 6 shows the results of such step regression analysis. The largest contribution to explaining the variance in leadership effectiveness was the observer ratings of the CEO's spiritual intelligence (ISIS-O), accounting for nearly 46% (adjusted R^2 , $p < .001$) of the variance. Another 5% (delta in adjusted R^2 , $p < .001$) 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 helped to explain the variance in leader effectiveness.

Table 6

Stepwise Reg. on Co. Size and Staff Ratings of Growth, Personality, EI, and SI

Step	Variable Entered	Cum. Adj. R^2	Delta Adj. R^2
1	ISIS-O (observer)	.46	.46***
2	EIS-O (observer)	.51	.05***
3	TIPI-Extraverted-O (observer)	.53	.02**
4	Growth-O (observer)	.54	.01*

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

Discussion and Conclusions

The primary purpose of this research was to investigate the extent to which emotional and spiritual intelligences contribute to the effectiveness of leaders (CEOs) as reflected in tangible outcome measures assessed by independent observers. The leader's 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 leader's leadership ability.

To overcome the prevalent common method bias, EI and SI were assessed using self-report by the leaders themselves, as well as using staff-observer ratings from their direct reports. In addition, an effort was made to control for other established constructs such as demographic variables (age, gender, and ethnicity), personality, and company size and growth, which might impact these relationships.

The results from this study demonstrated that the CEO's self-reported measure of SI significantly correlated with leadership effectiveness as assessed by her or his staff, and was significant even after controlling for company variables, such as company size and growth, and self-reported personality variables. 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 contribution of the SI construct to leadership performance. In fact, the SI was far more predictive than the other self-report ratings, such as the five dimensions of personality. However, the relationship between self-reported EI and leadership effectiveness was not found to be significant.

Further support for the contribution of both EI and SI to leadership effectiveness was provided by the significant correlations between observer-reported EI and SI and leadership effectiveness. These results remained significant even after controlling for other variables such as company, size, growth, and personality. Furthermore, demonstrating the distinct contribution of both EI and SI to leadership effectiveness, each construct remained significant after controlling for the other. In other words, EI remained significant even after controlling for SI in addition to personality as well as other company variables, and similarly, SI remained significant even after controlling for EI as well as personality and other company variables.

The key role played by emotional and spiritual intelligence is further underscored by the findings that EI and SI accounted for a significant portion of the variance in leadership effectiveness. Some of the explanatory power is a consequence of the robustness of the EI and SI measures. The EI measure aggregated responses from four domains of emotional intelligence and the SI measure aggregated scores across five domains and 22 subscales of spiritual intelligence competencies.

Furthermore, it is important to note that such variables as the leader's age, gender, ethnicity, or company size did not impact the relationships between leader effectiveness, and emotional and spiritual intelligences. This finding strengthens the argument that EI and SI intelligences are independent of individual and organizational differences.

No evidence was found to support the alternative hypothesis that the strong correlations between observer-reported emotional and spiritual intelligences and leadership effectiveness were due to a "halo" effect. 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 and spiritual intelligence 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.

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 spiritual intelligence measure

(Amram & Dryer, 2008) used to assess spiritual intelligence is still relatively new with limited evidence of reliability and validity. Similarly, the emotional intelligence measure (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 tend to have many more items 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.

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, these respondents 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 other demographic variables, personality, or organizational characteristics, such as hierarchical level and functional roles. The limited geographic and industry sectors of the sample population also reduces the potential generalizability of these findings.

In summary, results from this study suggest that emotional and spiritual intelligences contribute to the leadership effectiveness of CEOs. 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 characteristics, organizational context such as company size and growth, and personality information for the leaders. Cross-method predictive validity analysis demonstrated the robustness and utility of the EI and SI constructs for their distinct contribution to understanding leadership effectiveness.

The challenge ahead for leaders, and leadership development practitioners, is how to best enhance and develop the emotional and spiritual intelligence dimensions of those with leadership responsibilities. Indeed, future research is needed to study if and how EI and SI abilities can be developed in leaders, to experimentally test if and how their development may contribute to leadership outcomes, and to see if their assessment can be used to aid in leadership selection. Not surprisingly, results suggest that assessment methods that go beyond self-report are required for reliable use in leader selection applications.

References

- Agor, W. (1986). The logic of intuition: How executives make important decisions. *Organizational Dynamics*, 14(3), 5-18.
- Agor, W. (1989). Intuitive ability of executives: Findings from field research. In W. Agor (Ed.), *Intuition in organizations: Leading and managing productively* (pp. 145-156). Newbury Park, CA: Sage.
- Amram, Y. (2007). *The seven dimensions of spiritual intelligence: An ecumenical grounded theory*. Paper presented at the 115th Annual (August 2007) Conference of the American Psychological Association, San Francisco, CA. Retrieved December 15, 2007, from <http://www.yosiamram.net/papers>
- Amram, Y., & Dryer, C. (2008). *The Integrated Spiritual Intelligence Scale (ISIS): Development and preliminary validation*. Paper presented at the 116th Annual (August 2008) Conference of the American Psychological Association, Boston, MA. Retrieved September 17, 2008, from <http://www.yosiamram.net/papers>
- Andersen, J. (2000). Intuition in managers: Are intuitive managers more effective? *Journal of Managerial Psychology*, 15(1), 46-67.
- Antonakis, J. (2003). Why “emotional intelligence” does not predict leadership effectiveness: A comment on Prati, Douglas, Ferris, Ammeter, and Buckley (2003). *International Journal of Organizational Analysis*, 11(4), 355-361.
- Ashmos, D., & Duchon, D. (2000). Spirituality at work: A conceptualization and measure. *Journal of Management Inquiry*, 9(2), 134-145.
- Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory. In R. Bar-On & J. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment and applications at home, school, and in the workplace* (pp. 363-388). San Francisco, CA: Jossey-Bass.

- Bass, B. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.
- Bass, B. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist*, 52(2), 130-139.
- Bass, B. (2001). Cognitive, social and emotional intelligence of transformational leaders. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.), *Multiple intelligences and leadership* (pp. 105-118). Mahwah, NJ: Lawrence Erlbaum.
- Bennis, W. (2000). *Managing the dream: Reflections on leadership and change*. Cambridge, MA: Perseus.
- Bennis, W. (2001). Foreword. In C. Cherniss & D. Goleman (Eds.), *The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations* (pp. xv-xvii). San Francisco, CA: Jossey-Bass.
- Bennis, W. (2007). Challenges of leadership in the modern world. *American Psychologist*, 62(1), 2-5.
- Buber, M. (1958). *I and Thou*. New York: Scribner & Sons.
- Caruso, D., Mayer, J., & Salovey, P. (2001). Emotional intelligence and emotional leadership. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.), *Multiple intelligences and leadership* (pp. 55-74). Mahwah, NJ: Lawrence Erlbaum.
- Cavanagh, G. (1999). Spirituality for managers: Context and critique. *Journal of Organizational Change Management*, 12(3), 186-199.
- Chermers, M. (2001). Efficacy and effectiveness: Integrating models of intelligence and leadership. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.), *Multiple intelligences and leadership* (pp. 139-160). Mahwah, NJ: Lawrence Erlbaum.
- Collins, J. (2001). Level 5 leadership: The triumph of humility and fierce resolve. *Harvard Business Review*, 79(1), 66-76.
- Costa, P., & McCrae, R. (1992). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment*, 4(1), 5-13.
- Covey, S. (2004). *The 8th habit: From effectiveness to greatness*. New York: Simon & Schuster.
- Creighton, T. (1999). Spirituality and principalship: Leadership for the new millennium. *International Electronic Journal for Leadership in Learning*, 3(11). Retrieved November 19, 2006, from <http://www.ucalgary.ca/~iejll/volume3/creighton.html>

- Dent, E., Higgins, E., & Wharff, D. (2005). Spirituality and leadership: An empirical review of definitions, and embedded assumptions. *Leadership Quarterly*, *16*, 625-653.
- Duchon, D., & Plowman, D. (2005). Nurturing the spirit at work: Impact on work unit performance. *Leadership Quarterly*, *16*(5), 807-833.
- Emmons, R. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Guilford.
- Emmons, R. (2000a). Is spirituality an intelligence? Motivation, cognition and the psychology of the ultimate concern. *International Journal for the Psychology of Religion*, *10*(1), 3-26.
- Emmons, R. (2000b). Spirituality and intelligence: Problems and prospects. *International Journal for the Psychology of Religion*, *10*(1), 57-64.
- Feyerherm, A., & Rice, C. (2002). Emotional intelligence and team performance: The good, the bad and the ugly. *International Journal of Organizational Analysis*, *10*(4), 343-362.
- Fry, L. (2003). Toward a theory of spiritual leadership. *Leadership Quarterly*, *14*, 693-727.
- Fry, L. (2005). Toward a theory of ethical and spiritual well-being, and corporate social responsibility through spiritual leadership. In R. Giacalone, C. Jurkiewicz, & C. Dunn (Eds.), *Positive psychology in business ethics and corporate responsibility* (pp. 47-83). Greenwich, CT: Information Age.
- Fry, L., Vitucci, S., & Cedillo, M. (2005). Spiritual leadership and army transformation: Theory, measurement, and establishing a baseline. *Leadership Quarterly*, *16*, 835-862.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: HarperCollins.
- Gardner, H. (1995). *Leading minds: An anatomy of leadership*. New York: HarperCollins.
- Gardner, H. (2000). A case against spiritual intelligence. *International Journal for the Psychology of Religion*, *10*(1), 27-34.
- Glaser, B. (1992). *The basics of grounded theory analysis: Emergence vs. forcing*. Mill Valley, CA: Sociology Press.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam.
- Goleman, D. (1998a). What makes a leader? *Harvard Business Review*, *1*, 93-104.

- Goleman, D. (1998b). *Working with emotional intelligence*. New York: Bantam.
- Goleman, D. (2001). An EI-based theory of performance. In C. Cherniss & D. Goleman (Eds.), *The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations* (pp. 27-44). San Francisco, CA: Jossey-Bass.
- Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership: Realizing the power of emotional intelligence*. Boston, MA: Harvard Business School Press.
- Gosling, S., Rentfrow, P., & Swann, W. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(2003), 504-528.
- Halama, P., & Strizenec, M. (2004). Spiritual, existential or both? Theoretical considerations on the nature of "higher intelligences." *Studia Psychologica*, 46(3), 239-253.
- Hartsfield, M. (2003). *The spirit of transformational leadership: Emotions or cognition?* Paper presented at the annual (2003) conference of Christian Business Faculty Association, Virginia Beach, VA.
- Higgs, M., & Aitken, P. (2003). An exploration of the relationship between emotional intelligence and leadership potential. *Journal of Managerial Psychology*, 18(8), 814-823.
- Higgs, M., & Rowland, D. (2002). Does it need emotional intelligence to lead change? *Journal of General Management*, 27(3), 62-76.
- Hogan, R., Raskin, R., & Fazzini, D. (1990). The dark side of charisma. In K. E. Clark & M. B. Clark (Eds.), *Measures of leadership* (pp. 343-354). West Orange, NJ: Leadership Library of America.
- Jurkiewicz, C., & Giacalone, R. (2004). A values framework for measuring the impact of workplace spirituality on organizational performance. *Journal of Business Ethics*, 49(2), 129-142.
- Kouzes, J., & Posner, B. (1992). Ethical leaders: An essay about being in love. *Journal of Business Ethics*, 11, 479-484.
- Kouzes, J., & Posner, B. (2006). When leaders are coaches. In M. Goldsmith & L. Lyons (Eds.), *Coaching for leadership: The practice of leadership coaching from the worlds' best coaches* (pp. 136-144). San Diego, CA: Pfeiffer.
- Kouzes, J., & Posner, B. (2007). *The leadership challenge*. San Francisco, CA: Jossey-Bass.
- Lam, L., & Kirby, S. (2002). Is emotional intelligence an advantage? An exploration of the impact of emotional and general intelligence on individual performance. *Journal of Social Psychology*, 142(1), 133-143.

- Levin, M. (2000). *Spiritual intelligence: Awakening the power of your spirituality and intuition*. London: Hodder & Stoughton.
- Loehr, J., & Schwartz, T. (2001). The making of a corporate athlete. *Harvard Business Review*, January, 120-128.
- Mayer, J., Salovey, P., & Caruso, D. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15(3), 197-215.
- McCrae, R. (2000). Emotional intelligence from the perspective of the five-factor model of personality. In R. Bar-On & J. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment and applications at home, school, and in the workplace* (pp. 263-276). San Francisco, CA: Jossey-Bass.
- Milliman, J., Czaplewski, A., & Ferguson, J. (2003). Workplace spirituality and employee work attitudes. *Journal of Organizational Change Management*, 16(4), 426-447.
- Mowday, R., Steers, R., & Porter, L. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
- Mowday, R., Steers, R., & Porter, L. (1982). *Employee-organizational linkages: The psychology of commitment, absenteeism or turnover*. New York: Academic Press.
- Mull, Holly Beth. (2004). *Spiritual intelligence in psychotherapy with grieving clients*. Unpublished doctoral dissertation, Arizona State University, Tempe, AZ.
- Mussig, D. (2003). A research and skills training framework for values-driven leadership. *Journal of European Industrial Training*, 27(2-4), 73-79.
- Nagy, M. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75, 77-86.
- Nasel, D. (2004). *Spiritual orientation in relation to spiritual intelligence: A new consideration of traditional Christianity and New Age/individualistic spirituality*. Unpublished doctoral dissertation, University of South Australia, Adelaide, AUS.
- Noble, K. (2000). Spiritual intelligence: A new frame of mind. *Advanced Development*, 9, 1-29.
- Piedmont, R. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, 67(6), 985-1013.
- Posner, B. (2003). Forward. In R. Giacalone & C. Jurkiewicz (Eds.), *Handbook of workplace spirituality and organizational performance* (pp. xi-xiii). Armonk, NY: Sharpe.
- Posner, B., Slater, C., & Boone, M. (2006). Spirituality and leadership among college freshmen. *International Journal of Servant-Leadership*, 2(1), 165-180.

- Rapisarda, B. (2002). The impact of emotional intelligence on work team cohesiveness and performance. *International Journal of Organizational Analysis*, 10(4), 363-379.
- Reave, L. (2005). Spiritual values and practices related to leadership effectiveness. *Leadership Quarterly*, 16(5), 655-687.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition & Personality*, 9(3), 185-211.
- Silvera, D., Martinussen, M., & Dahl, T. (2001). The Tromso Social Intelligence Scale, a self-report measure of social intelligence. *Scandinavian Journal of Psychology*, 42(4), 313-319.
- Solomon, J., & Hunter, J. (2002). A psychological view of spirituality and leadership: Finding meaning through Howard Gardner's notion of existential intelligence. *School Administrator*, 59(8), 38-41.
- Sternberg, R. (1997a). The concept of intelligence and its role in lifelong learning and related fields and success. *American Psychologist*, 52(10), 1030-1037.
- Sternberg, R. (1997b). Managerial intelligence: Why IQ isn't enough. *American Journal of Management*, 23(3), 475-493.
- Sternberg, R. (2007). A systems model of leadership. *American Psychologist*, 62(1), 34-42.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Vaughan, F. (2002). What is spiritual intelligence? *Journal of Humanistic Psychology*, 42(2), 16-33.
- Wheatley, M. (1999). *Leadership and the new science: Discovering order in a chaotic world*. San Francisco, CA: Berrett-Koehler.
- Wheatley, M. (2002). Leadership in turbulent times is spiritual. *Frontiers of Health Services Management*, 18(4), 19-26.
- Wolman, R. (2001). *Thinking with your soul: Spiritual intelligence and why it matters*. New York: Harmony.
- Wong, C., & Law, K. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13(3), 243-274.
- Worthington, E. (2001). Religion and spirituality. *Psychotherapy*, 38(4), 473-478.

Young, J. (2002). A spectrum of consciousness for CEOs: A business application of Ken Wilber's spectrum of consciousness. *International Journal of Organizational Analysis*, 10(1), 30-54.

Zohar, D., & Marshall, I. (2000). *SQ: Connecting with our spiritual intelligence*. New York: Bloomsbury.