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Intelligence Beyond IQ:

The Contribution of Emotional and Spiritual Intelligences to Effective Business Leadership

by

Joseph (Yosi) Amram

Institute of Transpersonal Psychology

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Introduction and Overview

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). Recently, researchers have included broader concepts of intelligence beyond IQ in their study of leadership (Chermers, 2001). Within this line of inquiry, this paper explores the role of emotional and spiritual intelligences in developing and predicting business leader effectiveness.

Emotional intelligence (EI) - popularized by Goleman (1995) – was originally defined by Salovey and Mayer (1990) 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 EI is important for individual performance (Lam & Kirby 2002), well-being (Bar-On, 2000), and team and leader effectiveness (Goleman, 1998a, 1998b).

There is also recent interest in the construct of Spiritual Intelligence (SI). SI can be defined as the ability to create meaning based on deep understanding of existential questions, and awareness of and the ability to use multiple levels of consciousness in problem solving (Vaughan, 2002). To date there are no validated measures of SI (Halama & Strizenec, 2004), but spirituality measures have been validated and correlate spirituality to improved health and well-being (Veach & Chappel, 1992). Also, a few studies suggest that spirituality contributes to effective leadership (Jacobsen, 1994).

Hartsfield (2003) conducted a unique study that simultaneously considers the impact of spirituality and EI on leadership. He found a positive correlation among the three variables suggesting a link between EI and spirituality. Further, Orr (2001) argues that growth in EI contributes to spiritual development. Conversely, EI may be developed through mindfulness meditation, a practice aimed at the spiritual development of consciousness (Cherniss & Goleman, 2001). Noting that qualities like self-awareness manifests in high EI and spiritually developed people, Tischler, Biberman, and McKeage (2002) propose several potential models linking EI, spirituality, and work performance. Among those is the possibility that EI and SI share common factors (e.g. self-awareness) that are

responsible for greater leader effectiveness. The correlation and potential overlap between EI and SI make it inappropriate to exclude either EI or SI from a review of newer forms of intelligence in leadership.

This literature review shows that emotional relationships, inspirational motivation, and creation of meaning, which are central to EI and SI, are also central for business leader effectiveness (Bass, 1990; Bennis, 2000). Thus EI and SI hold promise for predicting and developing effective leaders. While the majority of the studies show a positive contribution of EI to leadership, there are difficulties in its measurement. EI is a multifaceted construct without a universally agreed upon definition or measurement instrument, and recent studies have methodological flaws and some mixed results. Further research is needed to establish EI's incremental predictive validity for business leader performance by looking at hard performance outcomes. The scientific study of SI has only just begun. Specific instruments to measure SI are yet to be developed and validated, and the contribution of SI to business leadership effectiveness needs to be empirically demonstrated. In sum, further research is needed to understand EI and SI's relationship and their contribution to leadership effectiveness.

To provide a context for the role of EI and SI in business leadership, the first section of this paper reviews several well-known theories and studies of business leadership. The second section reviews new forms of intelligence beyond IQ, including emotional and spiritual intelligences. The construct of EI and its contribution to business leadership performance is examined in the third section. The fourth section, explores SI, its relationship to spirituality and its impact on effective business leadership.

Modern Theories of Business Leadership

While over 2000 books published on the topic of leadership in 1999, they fail to provide a consistent view of what leaders truly are (Higgs & Rowland, 2002). A useful definition is that of Chermers (2001), who defines 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 are that leaders command influence using emotional and other kinds of motivation in groups (Gardner, 1995).

The New Context and Paradigms 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. This new economy has brought about new management paradigms (Cascio, 1995). Since knowledge workers require self-motivation, the old 3-C (command, control, and compartmentalization) model that was used to manage manual labor is widely viewed as outmoded. According to Senge (1990), the old paradigm needs to be replaced with a holistic systems view, which involves breaking barriers, using collaborative teams, and an orientation toward continuous learning. Leaders of the new economy focus on enhancing cooperation rather than enforcing compliance. The leader’s primary tasks become embedding trust, leading change, and creating a sense of purpose (Goshal et al., 1999). Leaders lead by articulating a vision and mobilizing meaning (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 the transactional leadership model of managing and manipulating rewards. In his seminal paper, Zaleznik (1977) differentiates between managers and leaders. Whereas managers coordinate necessities through transactional rewards (salary, praise, etc.), leaders inspire. To ‘inspire’ connotes both emotional and spiritual 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 (Bass, 1990). Transformational leadership scholars 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. Bass defines four elements of transformational leadership: (a) *individualized consideration* which reflects the leader's concern about developing followers; (b) *intellectual stimulation* forms an open dialog around the process of vision formation and implementation; (c) *charisma or idealized influence* that sets high behavior standards for emulation; and (d) *inspirational motivation* which provides meaning so that followers engage in shared goals.

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 as a team under transformational leadership. For example, a study by 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 to 11 control group leaders. The results showed that the transformational skills training had positive effect on subordinates' satisfaction and on some objective aspects of financial performance.

Bass and Steidlmeier (1999) argue that to be truly transformational, leaders must transmit a moral vision in their organization. Authentic transformational leaders increase awareness of what is right, help followers satisfy emotional needs for achievement and self-actualization, and inspire followers to transcend their self-interest for the good of the whole. A study by Dukerich, et al. (1990) showed that the moral reasoning level of the assigned leader influenced the moral reasoning level of the group.

Similarly, powerful dynamics are known to amplify group emotions and behaviors (Barsade & Gibson, 1998). A single dominant person or a leader with a strong emotion can influence the emotions of the entire group (Barsade, 2000). A study of sales teams showed that positive leader mood contributed to team performance (George, 1995). Such results may not generalize outside of sales teams, but they do demonstrate the ripple effect of emotions in groups and how a person or a leader with strong emotions can positively influence the group.

Qualities of Effective Leaders, Personality, and IQ

Studies using the big Five Factor Model (FFM or 'big five') of personality (openness, conscientiousness, extraversion, agreeableness, and neuroticism; McCrae & Costa, 1987, 1995), have found that conscientiousness positively contributed to all job performance criteria in all occupational groups, and extraversion (relating to social skills) contributed to effective performance in managers (Barrick & Mount 1991).

In a study of 60 leaders, well-known leadership scholar 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 knowing one's own skills. Bennis found that people who work for such leaders feel significant, are excited about their work, and form a community in which learning takes place.

Other studies of performance in managers also reveal that self-awareness (SA), operationalized as congruence between self-report and behavioral ratings by subordinates and peers, was associated with high performance (Sosik & Megerian, 1999). Church (1997) investigated 134 high-performing and 470 average-performing managers in different settings. He found that SA was statistically significant in differentiating between the high- and average-performing managers.

Bahn's (1979) meta review 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 non-

listening, and a negative correlation of $-.05$ for non-directive leaders with unsupportive and non-listening 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 summary, modern leadership theories highlight the business context in which emotional relationships, inspirational motivation, and the creation of meaning become central for leader effectiveness. While not mentioning the constructs of EI or SI directly, many of these leadership paradigms appear to suggest that EI and SI play a role in leadership effectiveness. The studies also highlight the limitation of using only IQ to predict leader effectiveness.

Intelligence Beyond IQ

In a review of prior research, Hedlund and Sternberg (2000) found that IQ, a measure of cognitive intelligence focusing on linguistic and logical-mathematical abilities, only accounts for about 20 to 30 percent of professional success. Sternberg (1997b, 2001) argues that improved prediction of leadership performance requires broadening the concept of intelligence beyond IQ.

Gardner (1983) 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. Gardner (1983) defined 7 types of intelligences including: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and two personal intelligences. The two personal intelligences resembling EI are: (a) 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). Gardner (2000) adds naturalistic intelligence, the ability to recognize patterns in the flora and fauna in the wild, and the possibility for an existential intelligence, involving the capacity to address existential questions.

Using Gardner's definition of intelligence, Emmons (2000a, 2000b) argues that spirituality is a form of intelligence. He relies on evidence that spirituality predicts functioning and adaptation as

demonstrated by correlations of spirituality with improved health or well-being. Gardner (2000) critiques Emmons, and argues for separating out those aspects of spirituality that relate to phenomenological experiences (e.g. experience of the sacred or transcendent states) and those that relate to the intellectual, problem solving, and information processing aspects of spirituality. Hence, Gardner has become convinced of the possibility for an existential intelligence, pertaining to “the fact of our existence as individuals in the cosmos and our capacity to puzzle over that fact” (p. 29).

Halama and Strizenec (2004) build on Gardner’s model to define existential intelligence as an ability to find and realize meaning in life. As mentioned earlier, the ability to create and realize meaning is also a key component of SI. Hence, Halama and Strizenec see existential and spiritual intelligences as non-identical but mutually related and overlapping constructs.

Sternberg (1984, 1997a) proposes a three-factor model consisting of analytic, creative, and practical intelligences, and Sternberg (1997b, 2001) advocates looking at practical intelligences to predict leadership effectiveness. In contrast to analytic intelligence, practical intelligence continues to develop in adulthood through the growth of tacit knowledge, knowledge to address everyday problems that may not be conscious. Tacit knowledge can be relevant when addressing emotional or social tasks, arguably subsuming EI (Hedlund & Sternberg, 2000). Research of 562 military commanders showed the validity of a tacit knowledge inventory for predicting leader effectiveness (Sternberg, 2001). And Williams and Sternberg (1988) found that the social qualities of group members, in addition to their raw IQ, contributed to group performance for even cognitive tasks.

Common to all of these models and studies is the expansion of the construct of intelligence beyond IQ. Gardner’s intra- and inter-personal intelligences and Sternberg’s practical intelligence highlight the role of non-IQ forms of intelligence in dealing with emotional and social issues. Similarly, Emmons’ spiritual and Gardner’s existential intelligences highlight the value of the ability to define, articulate and mobilize meaning. With the leader role focused on inspiring, motivating, and mobilizing meaning, EI and SI would appear to be directly relevant to leader effectiveness.

Emotional Intelligence

Definitions, Models, and Measures of EI

Salovey and Mayer (1990) conceived of EI as an ability combining cognitive processing with emotional information, hence, emotional intelligence. 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 is the capacity to recognize emotions in self and others; (b) facilitation of thought through the use of emotional information; (c) understanding of emotions is 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 EI Test (MSCEIT) (Mayer et al., 2003). Consistent with other measures of intelligence, the MSCEIT is a performance test in which subjects are assessed based on the four-ability EI model. For example, subjects are asked to categorize the emotion conveyed in a picture as sad, afraid or angry.

During the 1980’s, Bar-On developed the Emotional Quotient Inventory (EQI) to parallel Intelligence Quotient (IQ). The EQI measures a broad set of non-cognitive abilities, competencies, and emotional skills 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 psychological well-being (Bar-On, 2000). The EQI asks one to rate their skills in five broad 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.

Goleman (1995) builds on these prior models and expanded 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 (2001a) defines emotional competence as “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 percent of success that is not explained by IQ. Based on Goleman's model, Boyatzis, et al (2000) describe the Emotional Competence Inventory (ECI), which uses a 360-degree feedback mechanism to gather self, subordinate, peer, and supervisory ratings on twelve social and emotional competencies.

Whereas Mayer and Salovey (1990, 1993) emphasize the term ‘intelligence’ rather than competencies or traits in their four-ability EI model, Bar-On and Goleman expanded the EI construct to include broader emotional competencies such as impulse control (Bar-On, 2000) and traits such as conscientiousness or extraversion (Goleman, 1998b). 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 (Petrides & Furnham, 2003).

The Validity and Contribution of EI to Performance and Well-Being

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, et al., 2003). In social contexts, those who have higher ability-EI were more valued by the opposite sex even after controlling for the big five of personality (Mayer et al., 2004).

Additionally, studies find predictive power in the trait-EI model. Gowing (2001) found that scores on the self-report EQI are predictive of occupational success for US 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 in an Executive MBA program.

Criticism, confusion and some further support for the EI construct

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 subjects and found that self-reported trait-EI measures exhibited low reliability. Even ability-EI measures, showed lower than acceptable reliability. However, subsequent ability-EI instruments like MSCEIT have shown satisfactory overall reliability of over .90 and subscale reliabilities of .76 to .96 (Mayer et al., 2004). Reliability measures for the EQI are reported at an average of .76 with subscale reliabilities from .69 to .86 (Bar-On, 2000). Self assessment reliabilities on the ECI range from .59 on trustworthiness scale to .82 on the conscientiousness scale (Boyatzis, Goleman, & Rhee, 2000). And 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, et al., 2000).

Davies et al. (1998) and McCrae (2000) argue that there is no incremental predictive power in trait-EI because of the correlations between trait-EI and personality inventories. For example, high trait-EI people are low on the FFM neuroticism scale (Bar-On, 2000), and are intuitive on the Myers-Briggs type indicator (Higgs, 2001). Pfeiffer (2001) also critiques the trait-EI models arguing that empathy, persistence, and optimism are positive qualities that enhance performance, but are more representative of the elements of personality and do not fall under a single construct of intelligence.

Additionally, the various EI measurement instruments have shown limited correlation with each other. Correlation between the MSCEIT and the EQI was reported at .21 (Mayer et al., 2004) and .46

(Bar-On, 2000). The low correlations suggest that either self-report is not an accurate predictor of ability or that the instruments are measuring different constructs. This resulted in confusion and backlash in scientific circles (MacCann, Matthews, Zeidner, & Roberts, 2003).

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 the big five in the FFM. In summary, despite important criticisms, modern measures of EI show satisfactory reliability and the EI construct appears to offer incremental predictive validity for performance measures such as happiness social sensitivity.

The Contribution of EI to Business Leadership Effectiveness

Having established the reliability and validity of several EI constructs, there is an increasing interest in the role of EI in business organizations and leadership 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 team as a whole (Prati, et al., 2003).

Ashkanasy and Tse (1998) review 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 reducing their predictive value, these studies measure the outcomes with the MLQ, a self-report measure of transformational leadership style, rather than business performance outcomes such as productivity, financial returns, employee turnover, or customer satisfaction.

Some authors suggest that EI accounts for over 80 percent 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 star leaders than in the average performers. In comparison, emotional competencies showed greater weight, as they were 53% more frequent in the stars. Such data, while suggestive, lacks objective measures of star performance or EI. For example, measuring performance 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).

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 the big five (Mayer, et al., 2004).

Wong and Law (2002) developed and used their own short self-report trait-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 but failed 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 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. Furthermore, this study suffers from a limitation of many studies that use their own self-report trait-EI measure and makes the results hard to generalize.

Higgs and Rowland (2002) found that trait-EI predicts leadership competency, but again the constructs were made operational using the authors own unique self-report measures. 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 center staff, which unfortunately could be biased by certain traits or competencies that may not translate into higher actual performance.

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, 58 managers from the UK and Ireland were assessed on personality traits, cognitive ability, and EI. Dulewicz and Higgs (2000) found that 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.

Collins (2001) collected IQ, personality, ability-EI, 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, he did not find any significant relationship between EI and leadership success. However, after he controlled 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 understanding the effect of EI.

In a sample of only 11 managers leading 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 service 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 causal factors are likely to 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 that show positive correlation 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, mixed results, and few hard data outcomes, conceptual analysis and the majority of empirical studies suggest a positive contribution of EI to leadership effectiveness. Overall, greater predictive evidence (at least for success in terms of organizational advancement) exists for trait-EI measures that use self-reports for assessment. Such self-report measures could be useful in leadership coaching and development when concerns about 'faking' of self-report are reduced. However they are of limited use in selection decisions as they are prone to bias compared to external performance tests. Hard performance data is needed to fully test the predictive power of EI on effective business leadership.

Spiritual Intelligence

Parallel to the growing interest in EI, there is an emerging interest in combining the constructs of spirituality and intelligence into spiritual intelligence (SI) (Emmons, 2000a, 2000b; Halama & Strizenec, 2004; Noble, 2000; Vaughan, 2002; Zohar & Marshall, 2000). There are many definitions and measures of spirituality (Elmer, MacDonald, & Friedman, 2003; Lopez & Snyder, 2003; Stanard, Sandhu, & Painter, 2000). And despite the overlap between religion and spirituality, there is general agreement on their distinction: religion is focused on the sacred within institutional organizations, and spirituality refers to 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, 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 greater whole.

Emmons (2000a, 2000b) attempts to integrate spirituality into the framework of intelligence, drawing on Gardner's definition of intelligence. He argues that spirituality can be viewed as a form of intelligence because it predicts functioning and adaptation (e.g. better health) and offers capabilities that enable people to solve problems and attain goals. Analogous to the themes used above to define spirituality, Emmons (2000b) proposes four components for SI: (a) ability to utilize spiritual resources to solve problems; (b) ability to enter into heightened states of consciousness; (c) ability to invest everyday activities and relationships with a sense of the sacred; and (d) capacity for transcendence.

Some elements of spirituality, such as the sense of sacredness of life and transcendence of self, are more often seen as experiential qualities of consciousness rather than abilities or forms of intelligence (Mayer, 2000). Excluding those more experiential elements of spirituality, Vaughan (2002) characterizes SI as "a capacity for a deep understanding of existential questions and insight into multiple levels of consciousness" (p. 19). Adapting Vaughan's language to focus on intelligence or 'abilities', rather than simple 'understanding' or 'insight', SI is defined in this paper as the ability to create meaning based on deep understanding of existential questions, and awareness of and the ability to use multiple levels of consciousness in problem solving.

Unfortunately, without any validated measures for SI, researchers are limited to spirituality subscales when using SI to predict performance (Halama, et al. 2004). Hence, for the empirical review of the effect of SI on performance I use studies measuring the impact of spirituality rather than SI per se.

In demonstrating the validity of the construct and measures of spirituality, several studies suggest a relationship between spirituality, individual life purpose and satisfaction, and health (George, et al., 2000; Kass, et al., 1991; Veach & Chappel, 1992). Elmer et al. (2003) reviewed research on the impact of spirituality on health and found that it contributes to lower disease rate and longer life. When faced with an injury, spiritually oriented people seem to respond better to remedial intervention, better handle trauma (Emmons, 2000), and have lower depression rates (MacDonald et al, 2002).

Further, there is an increasing body of evidence suggesting that spiritual practices aimed at the increasing awareness and insight into multiple levels of consciousness (meditation) positively impact functioning. To the extent that such practices enhance one's awareness of and the ability to utilize multiple levels of consciousness, a component of SI, these practices can be viewed as enhancing SI. In a study of 60 children who practiced transcendental meditation (TM) and 75 controls, Warner (1987) found that TM practice positively influences mental developmental as measured by attention, and cognitive flexibility tests. In another study, Kember (1985) concludes that meditation positively affects academic performance. And Cranson, et al., (1991) showed that over a 2-year period, compared to controls, those who practice TM showed improved IQ scores, learning ability, and reaction time.

Alexander et al. (1993) found that, compared to controls, employees who practiced meditation over a 3-month period showed less anxiety and stress, increased job satisfaction, and improved personal relationships at work. Ellison (1983) describes a measure of spirituality, the Spiritual Well Being Scale, which includes subscales for spiritual belief and existential well-being (EWB). EWB was positively correlated with self-esteem and social skills. Spiritually oriented people appear to have improved human relations and exhibit greater empathy (Elmer, et al., 2003).

Trott (1996) studied 184 workers in a Fortune 100 company, finding a positive correlation between spiritual well-being and general self-efficacy. Schmidt-Wilk et al. (1996) review retrospective, prospective, and case research on applications of meditation in business settings and

conclude that the practice appears to improve employee health, well-being, job satisfaction, efficiency, and productivity at the individual level. This, in turn, seems to improve organizational climate, reduce absenteeism, and improve financial performance.

The positive changes in performance and well-being that result from spiritual development and meditation practices that aim to develop awareness of multiple levels of consciousness, a component of SI, suggest a positive contribution from spirituality and SI to performance. While, it could be argued that the positive effects from meditation are simply the result of other factors such as a greater relaxation response, they do suggest a possible positive impact on performance from greater SI.

SI and Spirituality in Business Leadership: Conceptual Motivations

The growing interest in how spirituality affects business and leadership is reflected in the growing number of journal articles and books devoted to it (Cavanagh, 1999). The spiritual qualities discussed earlier like 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. Indeed, as work forms one of people's most significant communities, people expect work (where they spend the bulk of their waking hours) to satisfy their deeply held need for meaning (Fairholm, 1996). Fairholm's research with mid-level managers points to the spiritual as well as economic rewards people receive from work.

McCormick (1994) argues that the integration of spirituality and management provides a source of enduring meaning for all currently working in turbulent times. Based on her experience as leadership consultant, Wheatley (1999, 2002) argues that the need for union between spirituality and work is an unavoidable consequence of our 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 and life?'

Furthermore, an inspirational leader helps people to expand their capacity to understand the complexities of work and to inspire or ‘breath life into’ the vision for the organization (Creighton, 1999). Fry (2003) calls for more holistic leadership that integrates the four essential dimensions of the person: physical body, mind thoughts, 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).

Based on his own leadership experience and consistent with the teachings of the spiritual traditions Greenleaf (1977) describes effective leadership as service. The servant leader points the way by showing initiative, listening, demonstrating acceptance and empathy, exhibiting awareness, using persuasion, and having conceptual foresight. Furthermore, the effective leader uses insight into multiple levels of consciousness and “knows the unknowable—beyond conscious rationality” (p. 35).

From his anecdotal experience as a leadership trainer, Covey (1990) sees both emotional and spiritual development as important for effective leaders. Given the communal inter-dependence 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 implement the five practices of effective leaders: challenge the process; inspire a shared vision; empower others; model the way; and encourage the heart.

In looking at leaders’ ability to utilize multiple levels of consciousness, one of the components of SI, Young (2002) argues that as CEOs move from lower to higher development on Wilber’s (1975) spectrum of consciousness model they will be more effective by using intuition and higher modes of consciousness to gain insight and solve problems more holistically.

In summary, review of the elements of SI suggests several possible links to effective leadership: (a) the ability to mobilize meaning based on understanding of existential questions helps leaders

motivate followers; and (b) the capacity to use multiple levels of consciousness enables leaders to use higher modes of knowing, such as intuition, in problem solving.

SI and Spirituality in Business Leadership: Empirical Studies

Parish (1999) did qualitative detailed in-person interviews with 6 educational, 3 ministerial, and 3 political leaders on 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 were 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 yet a significant minority was concerned about the role of spirituality in a religiously diverse culture.

Delbecq (2000) reports on the impact of a course on spiritual development for business leaders in which 9 CEOs and 9 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 on the impact of the course in their practice of business leadership.

While suggestive of the role of spirituality and SI in leadership, the three qualitative studies reviewed in this section are limited by their small sample size and lack of random selection of subjects. These factors limit their validity and make it hard to generalize their conclusions.

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. He 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

($p < .01$). Combined, spirituality, EI, and self-efficacy accounted for 40% of the variance in transformational leadership. As noted earlier, transformational leadership seems to contribute to leader effectiveness, so these results can be interpreted to suggest the positive contribution of spirituality to effective business leadership.

As impressive as these results are, Hartsfield's study suffers from common method bias because the dependent and all the independent variables were measured using self-reported data. This reduces the external 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 SI, this correlation also suggests that the regression estimating their impact on leadership suffers from multi-collinearity. This makes the reported results biased in unknown manner. Unfortunately the appropriate corrections for multi-collinearity were not carried out.

Although spirituality appears to be correlated with transformational leadership, other research results are mixed. 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. Such divergence of results between the Hartsfield and Zwart studies highlight the need to use common definitions and measures of spirituality.

While theoretical arguments and a number of qualitative studies do suggest a positive contribution of spirituality (and presumably SI) to leadership, some of the quantitative studies failed to show such a relationship and/or suffer from methodological flaws. Furthermore, there has been no research using a validated instrument for SI, nor research on the contribution of SI to effective business leadership.

Limitations and Skepticism for the Application of SI and Spirituality to Business Leadership

Despite the overall positive effect spirituality has on functioning and well-being, there are challenges and skepticism associated with its business application. First, there are many definitions of

spirituality and over 100 different scales of measurement, but little research on their correlations. This makes it difficult to generalize the results because it is unclear if they are measuring the same construct (Friedman & MacDonald, 2002). In addition, most spirituality measures rely on self-reports, limiting their use in leader selection decisions as they are susceptible to manipulation based on perceived desirability (Lopes & Snyder, 2003).

Further, there is significant skepticism regarding the application of spirituality in business. “The more I read on the topic of Organizational Spirituality (OS), the more apparent it became that the concept is not unclear—it is opaque.” (Brown, 2003, p. 393). With concerns about religious diversity, for many the word “spirituality” carries negative connotations in business (Egan, 1999). In the words of management guru Tom Peters, “When the talk turns to the spiritual side of leadership, I mostly want to run. It should be enough if I work like hell, respect my peers, customers, and suppliers, and perform with verve, imagination, efficiency, and good humor. Please don’t ask me to join the Gregorian Chant Club, too” (cited in Jacobsen, 1994, p. 1).

It is worth noting, however, that effective leaders may utilize their SI to mobilize meaning and inspire followers, as well as use their insights into multiple levels of consciousness in problem solving, without ever mentioning spirituality in the workplace. Yet, additional hard performance outcome data on the contribution of SI to business leadership effectiveness is needed to overcome the skepticism.

Conclusions

Modern theories of leadership find that emotional relationships, inspirational motivation, and creation of meaning are central for effective business leadership. With IQ accounting for only a small part of leader performance, EI and SI are new useful constructs of intelligence that hold promise for selecting and developing business leaders.

EI is a multifaceted construct without a universally agreed upon definition or measurement instrument. Nevertheless, some overlap between the key definitions of EI does exist and the majority

of studies do support the positive contribution of EI to effective business leadership. However, due to some mixed results and methodological flaws, further research is needed to determine the impact of each component of EI on leadership effectiveness.

The study of SI is a young endeavor, and test instruments have not been developed or validated. Despite the conceptual arguments for the role of SI in business leadership, to date there has been no empirical research directly demonstrating this and the evidence using spirituality measures is limited. Further research is required to validate a measure of SI and its contribution to business leadership.

Research results suggest correlation and overlap between EI, spirituality and SI. Tischler, et al. (2002) have proposed five possible theoretical models without empirical resolution for the relationship between spiritual development, EI and business performance. Similarly, several possible models exist for the relationship between EI, SI and leader performance. For example, common factors such as higher self-awareness or intrapersonal intelligence (Gardener, 1983) may contribute to both EI and SI and their link to leadership effectiveness. Hence, further research using qualitative and quantitative methods that addresses both EI and SI simultaneously is required to understand their relationship, and to better articulate their respective contributions to effective business leadership.

Ideally, further research should control for other established constructs such as personality or IQ, and the results should examine hard performance outcomes. Performance should be measured in terms of the three key business stakeholders (shareholders, employees, and customers) to evaluate how SI and EI differentially impact each. For example, the research may uncover an ambiguous outcome, in which EI (or SI) increase employee satisfaction, but lead to a decrease in shareholder returns – a result that would make the application of EI and SI to business leadership more difficult.

References

- Abraham, Rebecca. (1999). Emotional intelligence in organizations: A conceptualization. *Genetic, Social and General Psychology Monographs*, 125(2), 209-224.
- Alexander, Charles, Swanson, Gerald, C, Rainforth, Maxwell, Carlisle, Thomas, Todd, C, & Oates, R. (1993). Effects of the transcendental meditation program on stress reduction, health, and employee

- development: A prospective study in two occupational settings. *Anxiety, Stress & Coping: An International Journal*, 6(3), 24-262.
- Antonakis, John. (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.
- Ashforth, Blake & Humphrey, Ronald. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48(2), 97-125.
- Ashkanasy, Neal, & Tse, Barry. (2000). Transformational leadership as management of emotion: A conceptual review. In N. Ashkanasy (Ed), *Emotions in the Workplace: Research, Theory, and Practice* (pp. 221-235). Westport, CT: Quorum Books.
- Bahn, C. (1979). Can intelligence tests predict executive competency? *Personnel*, July-August, 52-58.
- Barchard, Kimberly & Hakstian, Ralph. (2004). The nature and measurement of emotional intelligence abilities: Basic dimensions and their relationships with other cognitive ability and personality variables. *Educational and Psychological Measurement*, 64(3), 437-462.
- Barchard, Kimberly. (2003). Does emotional intelligence assist in the prediction of academic success? *Educational and Psychological Measurement*, 63(5), 840-858.
- Barling, J., Weber, T., & Kelloway, E. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology*, 81, 827-832.
- Bar-On, Reuven. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory. In Reuven Bar-On & James 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.
- Barrick, Murray & Mount, Michael (1991). The big five personality dimensions and job performance: A meta-analysis. *Personal Psychology*, 44, 1-5.
- Barsade, Sigal. (2000). *The Ripple Effect: Emotional Contagion In Groups*. Yale School of Management Working Paper No. OB-01.
- Barsade, Sigal, & Gibson, Donald. (1998). Group emotion: A view from top and bottom. In Deborah Gruenfeld (Ed), *Composition: Research on Managing Groups and Teams* (pp. 81-102). Greenwich, CT: Elsevier Science/JAI Press.
- Bass, Bernard, & Steidlmeier, Paul. (1999). Ethics, character, and authentic transformational leadership behavior. *Leadership Quarterly*, 10(2), 181-217.
- Bass, Bernard. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.

- Bass, Bernard. (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 Associates.
- Bennis, Warren. (2000). *Managing the Dream: Reflections on Leadership and Change*. Cambridge, MA: Perseus Publishing.
- Bennis, Warren. (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.
- Boyatzis, Richard, Goleman, Daniel, & Rhee, Kenneth. (2000). Clustering competence in emotional intelligence: Insights from the emotional competence inventory. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 343-362). San Francisco, CA: Jossey-Bass.
- Brown, Reva. (2003). Organizational spirituality: The skeptic version. *Organization*, 10(2), 393-400.
- Caruso, David, Mayer, John, & Salovey, Peter. (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 Associates.
- Cascio, Wayne. (1995). Whither industrial and organizational psychology in a changing world of work. *American Psychologist*, 50(11), 928-939.
- Cavanagh, G. (1999). Spirituality for managers: Context and critique. *Journal of Organizational Change Management*, 12(3), 186-199.
- Chermers, Martin. (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 Associates.
- Cherniss, Cary. (2000). Social and emotional competence in the workplace. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 433-458). San Francisco, CA: Jossey-Bass.
- Cherniss, Cary. (2001). Emotional Intelligence and Organizational Effectiveness. 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. 3-12). San Francisco, CA: Jossey-Bass.
- Cherniss, Cary, & Goleman, Daniel. (2001). Training for emotional intelligence. 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. 209-233). San Francisco, CA: Jossey-Bass.

- Church, Allan. (1997). Managerial self-awareness in high-performing individuals in organizations. *Journal of Applied Psychology*, 82(2), 281-292.
- Cloninger, Robert, Svrakic, Dragan, & Przybeck, Thomas. (1993). A psychobiological model of temperament and character. *Archives of General Psychiatry*, 50, 975-990.
- Collins, V. L. (2001). Emotional intelligence and leadership success. *Dissertation Abstracts International*, University of Nebraska: Lincoln, NE
- Cooper, Robert & Sawaf, Ayman. (1997). *Executive EQ: Emotional Intelligence in leadership and organizations*. New York, NY: Perigee.
- Costa, Paul, & McCrae, Robert. (1992). Normal personality assessment in clinical practice: The NEO personality inventory. *Psychological Assessment*, 4(1), 5-13.
- Covey, Stephen (1990). *Principle-Centered Leadership*. New York, NY: Simon & Schuster.
- Cranson, Robert & Orme-Johnson, David & Gackenbach, Jayne & Dillbeck, Michael. (1991). Transcendental meditation and improved performance on intelligence-related measures: A longitudinal study. *Personality & Individual Differences*, 12(10), 1105-1116.
- Creighton, Theodore. (1999). Spirituality and principalship: Leadership for the new millennium. *International Electronic Journal for Leadership in Learning*, 3, 11.
- Davies, Michaela, Stankov, Lazar, & Roberts, Richard. (1998). Emotional intelligence: In search of an illusive construct. *Journal of Personality and Social Psychology*, 75(4), 989-1015.
- Delbecq, Andre. (2000). Spirituality for business leadership: Reporting on a pilot course for MBAs and CEOs. *Journal of Management Inquiry*, 9(2), 117-128.
- Dukerich, Janet, Nichols, Mary, Elm, Dawn, & Vollrath, David. (1990). Moral reasoning in groups: Leaders make a difference, *Human Relations*, 43(5), 473-493.
- Dulewicz, Victor & Higgs, Malcolm. (2000). Emotional intelligence: A review and evaluation study. *Journal of Managerial Psychology*, 15(4), 341-372.
- Dulewicz, Victor & Higgs, Malcolm. (2003). Leadership at the top: The need for emotional intelligence in organizations. *International Journal of Organizational Analysis*, 11(3), 193-210.
- Egan, Tom. (1999). Defining spirituality in the workplace. Downloaded on 11/19/04 from www.fourgateways.com/newsletr/art004.htm.
- Elkins, David, Hedstrom, James, Hughes, Lori, Leaf, Andrew, & Saunders, Cheryl. (1988). Toward a humanistic-phenomenological spirituality. *Journal of Humanistic Psychology*, 28(4), 5-18.
- Ellison, Craig. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology*, 11(4), 330-340.

- Elmer, Lori, MacDonald, Douglas, & Friedman, Harris. (2003). Transpersonal psychology, physical health, and mental health: Theory, research and practice. *Humanistic Psychologist*, 31, 159-181.
- Emmons, Robert. (2000a). Is spirituality and intelligence? Motivation, cognition and the psychology of the ultimate concern. *International Journal for the Psychology of Religion*, 10(1), 3-26.
- Emmons, Robert. (2000b). Spirituality and intelligence: Problems and prospects. *International Journal for the Psychology of Religion*, 10(1), 57-64.
- Fairholm, Gilbert. (1996). Spiritual leadership: Fulfilling whole-self needs at work. *Leadership & Organizational Development Journal*, 17(5), 11-17.
- Feyerherm, Ann, Rice, Cheryl. (2002). Emotional intelligence and team performance: The good the bad and the ugly. *The International Journal of Organizational Analysis*, 10(4), 343-362.
- Fiedler, Fred. (2001). Emotional intelligence and emotional leadership. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.) *Multiple Intelligences and Leadership* (pp. 91-104). Mahwah, NJ: Lawrence Erlbaum Associates.
- Friedman, Harris, & MacDonald, Douglas. (2002). Using transpersonal tests in humanistic psychological assessment. *Humanistic Psychologist*, 30(3), 223-236.
- Fry, Louis. (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly*, 14, 693-727.
- Furnham, Adrian, Petrides, K. (2003). Trait emotional intelligence and happiness. *Social Behavior and Personality*, 31(8), 815-823.
- Gardner, Howard. (1983). *Frames of Mind: The theory of multiple intelligences*. New York, NY: HarperCollins Publishers.
- Gardner, Howard. (1995). *Leading minds: An Anatomy of Leadership*. New York, NY: HarperCollins.
- Gardner, Howard. (2000). A case against spiritual intelligence. *International Journal for the Psychology of Religion*, 10(1), 27-34.
- George, Jennifer. (1995). Leader positive mood and group performance: The case of customer service. *Journal of Applied Social Psychology*, 25(9), 778-794.
- George, L., Larson, D., Koenig, H. & McCullough, M. (2000). Spirituality and health: What we know, what we need to know. *Journal of Social & Clinical Psychology*, 19(1), 102-116.
- Ghoshal, Sumantra & Bartlett, Christopher & Moran, Peter. (1999). A new manifesto for management. *Sloan Management Review*, 40(3), 9-20.
- Goleman, Daniel. (1995). *Emotional Intelligence: Why it can matter more than IQ.* New York, NY: Bantam Books.
- Goleman, Daniel. (1998a). What makes a leader? *Harvard Business Review*, 1, 93-104.

- Goleman, Daniel. (1998b). *Working with Emotional Intelligence*. New York, NY: Bantam Books.
- Goleman, Daniel. (2001a). 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, Daniel, Boyatzis, Richard, & McKee, Annie. (2002). *Primal leadership: Realizing the power of emotional intelligence*. Boston, MA: Harvard Business School Press.
- Gowing, Marilyn. (2001). Measurement of Individual Emotional Competence. 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. 83-131). San Francisco, CA: Jossey-Bass.
- Greenleaf, Robert. (1977). *Servant Leadership: A journey into the nature of legitimate power and greatness*. Mahwah, NJ: Paulist Press.
- Halama, Peter, & Strizenec, Michal. (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.
- Hedlund, Jennifer, & Sternberg, Robert. (2000). Too many intelligences? Integrating social, emotional, and practical intelligence. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 136-167). San Francisco, CA: Jossey-Bass.
- Higgs, Malcolm. (2001). Is there a relationship between the Myers-Briggs type indicator and emotional intelligence? *Journal of Managerial Psychology*, 16(7), 509-533.
- Higgs, Malcolm, & Aitken, Paul. (2003). An exploration of the relationship between emotional intelligence and leadership potential. *Journal of Managerial Psychology*, 18(8), 814-823.
- Higgs, Malcolm, & Rowland, Deborah. (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.
- Jacobsen, Stephen. (1994). Spirituality and transformational leadership in secular settings: A Delphi study. *Dissertation Abstracts International*, Seattle University, WA.
- Kass, Jared & Friedman, Richard & Leserman, Jane & Zuttermeister, Patricia & Benson, Herbert. (1991). Health outcomes and new index of spiritual experience. *Journal for the Scientific Study of Religion*, 30(2), 203-211.

- Kember, Paul. (1985). The transcendental meditation technique and postgraduate academic performance. *British Journal Education Psychology*, 55(2), 164-166.
- Lam, Laura, & Kirby, Susan. (2002). Is emotional intelligence an advantage? An exploration of the impact of emotional and general intelligence on individual performance. *The Journal of Social Psychology*, 142(1), 133-143.
- Lopez, S. & Snyder, C. (2003). Positive psychological assessment: A handbook of models and measures. Washington, DC: American Psychological Association.
- Lowe, Kevin, Kroeck, Galen, & Sivasubramaniam, Nagaraj. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 7(3), 385-425.
- MacCann, Carolyn & Matthews, Gerald & Zeidner, Moshe & Roberts, Richard. (2003). Psychological assessment of emotional intelligence: A review of self-report and performance-based testing. *International Journal of Organizational Analysis*, 11(3), 247-274).
- MacDonald, Douglas & Friedman, Harris. (2002). Assessment of Humanistic, Transpersonal and spiritual constructs: State of the science. *Journal of Humanistic Psychology*, 42(4), 102-125.
- MacDonald, Douglas. (2000). Spirituality: Description, measurement and relation to the five factor model of personality. *Journal of Personality*, 68(1), 153-197.
- Mandell, Barbara & Pherwani, Shilpa. (2003). Relationship between emotional intelligence and transformational leadership style: A gender comparison. *Journal of Business Psychology*, 17(3), 387-404.
- Mayer, John (2000). Spiritual intelligence or spiritual consciousness. *International Journal for the Psychology of Religion*, 10(1), 47-56
- Mayer, John, & Salovey, Peter. (1993). The intelligence of emotional intelligence. *Intelligence*, 17(4), 433-442.
- Mayer, John, Caruso, David & Salovey, Peter. (2000). Selecting a measure of emotional intelligence: The case for ability scale. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 320-342). San Francisco, CA: Jossey-Bass.
- Mayer, John, & Salovey, Peter & Caruso, David (2000). Emotional intelligence as zeitgeist, as personality, and as mental ability. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 92-117). San Francisco, CA: Jossey-Bass.
- Mayer, John, Salovey, Peter, & Caruso, David. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15(3), 197-215.
- Mayer, John, & Salovey, Peter & Caruso, David & Sitarenios, Gill. (2003). Measuring emotional intelligence with MSCEIT V2.0. *Emotion*, 3(1), 97-105.

- McCormick, Donald. (1994). Spirituality and management. *Journal of Managerial Psychology*, 9(6), 5-9.
- McCrae, Robert, & Costa, Paul. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81-90.
- McCrae, Robert, & Costa, Paul. (1995). Trait explanations in personality psychology. *European Journal of Personality*, 9(4), 231-252.
- McCrae, Robert. (2000). Emotional intelligence from the perspective of the five-factor model of personality. In Reuven Bar-On & James 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.
- Noble, Kathleen. (2000). Spiritual intelligence: A new frame of mind. *Advanced Development*, 9, 1-29.
- Orr, Larry George (2001). How emotional intelligence facilitates spiritual formation. *Dissertation Abstracts International*, Azusa Pacific University, CA.
- Palmer, Benjamin & Walls, Melissa & Burgess, Zena & Stough, Con. (2001). Emotional intelligence and effective leadership. *Leadership and Organizational Development Journal*, 22(1), 5-10.
- Parish, Jeanette. (1999). Women in education: Effective leadership styles as inspired by spirituality. *Dissertation Abstracts International*, University of La Verne, CA.
- Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioral validations in two studies of emotion, recognition and reactivity to mood induction. *European Journal of Personality*, 17, 39-57.
- Pfeiffer, Steven. (2001). Emotional intelligence: Popular but elusive construct. *Roepers Review*, 23(3), 138-142.
- Prati, Melita & Douglas, Ceasar & Ferris, Gerald & Ammeter, Anthony & Buckley, Ronald. (2003). Emotional intelligence, leadership effectiveness, and team outcomes. *International Journal of Organizational Analysis*, 11(1), 21-40.
- Rapisarda, Brigitte. (2002). The impact of emotional intelligence on work team cohesiveness and performance. *International Journal of Organizational Analysis*, 10(4), 363-379.
- Rizzolatti, Giacomo, & Craighero, Laila. (2004). The mirror-neuron system. *Annual Review of Neuroscience*, 27, 169-192.
- Robins, Shani. (2002). A consultant's guide to understanding and promoting emotional intelligence in the workplace. In Lowman, R. (Ed), *Handbook of Organizational Consulting Psychology*. San Francisco, CA: Jossey-Bass.

- Ross, Shirley, & Offermann, Lynn. (1997). Transformational leaders: Measurement of personality attributes and work group performance. *Personality and Social Psychology Bulletin*, 23(10), 1078-1086.
- Salovey, Peter, & Mayer, John. (1990) Emotional Intelligence. *Imagination, Cognition & Personality*, 9(3), 185-211.
- Schmidt-Wilk, Jane & Alexander, Charles & Swanson, Gerald. (1996). Developing consciousness in organizations: The transcendental meditation program in business. *Journal of Business and Psychology*, 10(4), 429-444.
- Senge, Peter. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York, NY: Doubleday.
- Smircich, Linda & Morgan, Gareth. (1982). Leadership: The management of meaning. *Journal of Applied Behavioral Science*, 18(3), 257-273.
- Sosik, John & Megerian, Lara. (1999). Understanding leader emotional intelligence and performance: The role of self-other agreement on transformational leadership perceptions. *Group & Organization Management*, 24(3), 367-390.
- Stanard, Rebecca & Sandhu, Daya & Painter, Linda. (2000) Assessment of Spirituality in Counseling. *Journal of Counseling and Development*, 78, 204-210.
- Sternberg, Robert, & Grigorenko, Elena. (2000). Practical intelligence and its development. In Reuven Bar-On & James Parker (Eds.), *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Applications at Home, School, and in the Workplace* (pp. 215-243). San Francisco, CA: Jossey-Bass.
- Sternberg, Robert. (1984). What Should Intelligence Tests Test? Implications of a Triarchic Theory of Intelligence for Intelligence Testing. *Educational Researcher*, 13(1), 5-15.
- Sternberg, Robert. (1997a). The concept of intelligence and its role in lifelong learning and success. *American Psychologist*, 52(10), 1030-1037.
- Sternberg, Robert. (1997b). Managerial Intelligence: Why IQ isn't enough. *American Journal of Management*, 23(3), 475-493.
- Sternberg, Robert. (2001). Successful intelligence: A new approach to leadership. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.) *Multiple Intelligences and Leadership* (pp. 3-12). Mahwah, NJ: Lawrence Erlbaum Associates.
- Strack, G. & Fottler, MD. (2002). Spirituality and effective leadership in healthcare: Is there a connection? *Frontiers of Health Services Management*, 18(4), 3-18.
- Tischler, Len & Biberman, Jerry & McKeage, Robert. (2002). Linking emotional intelligence, spirituality and workplace performance: Definitions, models and ideas for research. *Journal of Managerial Psychology*, 17(3), 203-218.

- Trott, David. (1996). Spiritual well-being of workers: An exploratory study of spirituality in the workplace. *Dissertation Abstracts International*, University of Texas: Austin, TX.
- Vaughan, Frances. (2002). What is spiritual intelligence? *Journal of Humanistic Psychology*, 42(2), 16-33.
- Veach, Tracy & Chappel, John. (1992). Measuring spiritual health: A preliminary study. *Substance Abuse*, 13(3), 139-147.
- Warner, Tifrach. (1987). Transcendental meditation and developmental advancement: Mediating abilities and conservation performance. *Dissertation Abstracts International*, York University, Canada.
- Wheatley, Margaret. (1999). *Leadership and the new science: Discovering order in a chaotic world*. San Francisco, CA: Berrett-Koehler Publishers.
- Wheatley, Margaret. (2002). Leadership in turbulent times is spiritual. *Frontiers of Health Services Management*, 18(4), 19-26.
- Wilber, Ken. (1975). Psychologia perennis: The spectrum of consciousness. *The Journal of Transpersonal Psychology*, 7(2), 105-132.
- Wilber, Ken. (1999) Spirituality and developmental lines: Are there stages? *The Journal of Transpersonal Psychology*, 31(1), 1-10.
- Williams, Wendy & Sternberg, Robert. (1988). Group intelligence: Why some groups are better than others. *Intelligence*, 12(4), 351-377.
- Winter, David. (2001). The motivational dimensions of leadership: Power, achievement and affiliation. In R. Riggio, S. Murphy, & F. Pirozzolo (Eds.) *Multiple Intelligences and Leadership* (pp. 119-138). Mahwah, NJ: Lawrence Erlbaum Associates.
- Wong, Chi-Sum & Law, Kenneth (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *Leadership Quarterly*, 13(3), 243-274.
- Worthington, Everett. (2001). Religion and spirituality. *Psychotherapy*, 38(4), 473-478.
- Young, John. (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.
- Zaleznik, Abraham. (1977). Managers and leaders: are they different? *Harvard Business Review*, 53(3), 67-78.
- Zohar, Danah, & Marshall, Ian. (2000). *SQ: Connecting with our spiritual intelligence*. New York, NY: Bloomsbury Publishing.
- Zwart, Gail. (2000). The relationship between spirituality and transformational leadership in public, private, and nonprofit sector organizations. *Dissertation Abstracts International*, University of La Verne, CA.