

## EMOTIONAL INTELLIGENCE: ISSUES AND COMMON MISUNDERSTANDINGS

Written by:

[Robert J. Emmerling, Psy.D](#)

And

[Daniel Goleman, Ph.D.](#)

Consortium for Research on Emotional Intelligence in Organizations

October, 2003

*Comments related to this article can be posted to the website of the Consortium for Research on Emotional Intelligence in Organizations. Please see [www.eiconsortium.org](http://www.eiconsortium.org) for additional details.*

## Emotional Intelligence: Issues and Common Misunderstandings

In this article we seek to raise issues and air questions that have arisen along with the growing interest in emotional intelligence. We hope to catalyze a dialogue among all those with serious interests in the area, to surface hidden assumptions, correct mistaken impressions, and survey a range of opinions. Such open dialogue, we believe, can pay off to the degree it strengthens the research and thinking that are the foundations of the field—both in theory and in applications.

The influence of emotional intelligence on popular culture and the academic community has been rapid and widespread. While this has stimulated a surprising number of research initiatives across a wide range of domains within psychology, the swiftness with which the concept of emotional intelligence has caught on perhaps inevitably created a gap between what we know and what we need to know. Understandably, this has led to a great deal of controversy and debate among researchers and practitioners eager to understand and apply the principles associated with emotional intelligence. Such debate, of course, is not confined to emotional intelligence, but is an inherent part of the process of theory development and scientific discovery in any field.

Research and theory on emotions has waxed and waned over the history of psychology. The behavior revolution inspired by B. F. Skinner and the subsequent

cognitive revolution saw interest in emotion seriously undermined. However, beginning in the 1980s and accelerating into the present, interest in emotions has enjoyed a robust resurgence across a wide range of subdisciplines within psychology, neuroscience, and the health sciences—especially the renewed focus on positive psychology, well-being, and mind/body medicine. While such research continues to expand our knowledge of emotions, fundamental questions remain regarding emotional intelligence.

We seek to raise important questions and issues for the field. The questions we address include: What is emotional intelligence (EI)? How is it different from other established constructs within psychology? Is it possible to develop EI? Is EI a better predictor of work performance than traditional measures of intelligence—or, more precisely, which kinds of work performance does EI predict most strongly? Should EI be measured at all? Finally, what is the relationship between ethics and EI?

All of these are legitimate questions, and each has been raised by many voices in the field. In this article we seek to add to the ongoing dialogue by clarifying our own position, and helping to differentiate and sharpen the issues. We also seek to address some common claims about emotional intelligence that may foster consequential, even unfortunate misunderstandings.

As Kuhn (1970) notes, scientists' efforts to deal with data in a systematic fashion, guided by deeply held theories, lead to the formation of distinct research paradigms. Each of these paradigms has its own unique history, methods, and assumptions for dealing with its focal topic, and, in this sense, the emotional intelligence paradigm is no different than other paradigms within psychology. According to Kuhn (1970), such a scientific paradigm becomes “an object for further articulation and specification under

new and more stringent conditions.” Once models and paradigms have been articulated, the signs of scientific vigor include, “the proliferation of competing articulations, the willingness to try anything, the expression of explicit discontent, the recourse to philosophy and to debate over fundamentals” (p.91). The current debates and vigorous research efforts in the area of emotional intelligence suggests just this state of affairs; by Kuhn’s criteria, the emotional intelligence paradigm would seem to have reached a state of scientific maturity (Goleman, 2001). As paradigms mature, specific theories within the paradigm begin to emerge and differentiate, as has occurred since the first formal formulation of an emotional intelligence theory by Peter Salovey and John Mayer in 1990. All these new variations on their theme—like the original theory—must be held to Karl Popper’s test: A new theory can be justified if it has the potential to explain things that other theories cannot, or if it has the potential to explain things better than other competing theories. Any new theory must lead to testable hypotheses which will allow it to be compared with other theories, with the goal of determining whether the theory would constitute a scientific advance should it survive in light of research aimed at testing its specific hypotheses (Popper, 1959). Moreover, if such a theory is able to withstand rigorous tests of its validity, the question then becomes one of application. Can such a theory be applied without giving rise to inconsistencies? Will such a theory help us to achieve some useful purpose? Is such a theory really needed at all? (Popper, 1959). If a theory can pass these crucial tests, then the theory can be compared with other competing theories to see if the current theory represents a replacement or extension of theories currently in use.

### Predictive Validity of Emotional Intelligence in the Workplace

Perhaps central to the current interest in emotional intelligence is its potential utility in predicting a range of criterion across disparate populations. As with claims associated with traditional intelligence, the predictive validity of emotional intelligence will likely vary widely depending on the context, criterion of interest, and specific theory used. Traditional measures of intelligence, although providing some degree of predictive validity, have not been able to account for a large portion of the variance in work performance and career success. As Goleman (1998, p. 19) states, “When IQ test scores are correlated with how well people perform in their careers the highest estimate of how much difference IQ accounts for is about 25 percent (Hunter & Hunter, 1984; Schmidt & Hunter, 1981). A careful analysis, though, suggests a more accurate figure may be no higher than 10 percent and perhaps as low as 4 percent” (Sternberg, 1997). These are still significant correlations, even at the low end of the estimates, and there is no doubt that IQ will remain a significant predictor of work “success”, especially in predicting which job, profession, or career path a person can follow. In a recent meta-analysis examining the correlation and predictive validity of EI when compared to IQ or general mental ability, Van Rooy and Viswesvaran (in press) found IQ to be a better predictor of work and academic performance than EI. However, when it comes to the question of whether a person will become a “star performer” (in the top ten percent, however such performance is appropriately assessed) within that role, or be an outstanding leader, IQ may be a less powerful predictor than emotional intelligence (Goleman 1998, 2001, 2002). While social scientists are mainly interested in the main predictive relationship between IQ and work success, practitioners and those who must make decisions on hiring and promotion

within organizations are understandably far more interested in assessing capabilities related to outstanding performance and leadership. There has been virtually no quantitative social science research on top leaders, however, in part because of the taboo noted by the anthropologist Laura Nader (1996) against “studying up” the power structure—CEOs and others who hold power are resistant to allowing themselves to be assessed by objective measures, including IQ tests. Qualitative research, however, suggests that IQ measures fail to account for large portions of the variance related to performance and career success, especially among top managers and senior leaders (Fernandez-Araoz, 2001). There has, however, been a much larger body of research on top performers (e.g. Kelly, 1998; Spencer & Spencer, 1993), which suggests that IQ alone does not predict in this domain as well as competencies that integrate cognitive, emotional and social abilities.

However, the issue of separating abilities related to cognitive intelligence from abilities, traits, and competencies related to emotional intelligence remains a complex one; all definitions of emotional intelligence represent a combination of cognitive and emotional abilities (Cherniss, 2001). This reflects the growing understanding in neuroscience that cognition and emotions are interwoven in mental life (through thick connections between the emotional centers and the neocortex) rather than discretely independent, especially in complex decision-making, self-awareness, affective self-regulation, motivation, empathy, and interpersonal functioning (Davidson, 2001); all these are aspects of emotional intelligence. IQ, however, appears to represent a more “pure” case from the neuroscience perspective, since the brain regions it draws on are

localized in the neocortex, and can function relatively well on the items in IQ tests even when lesions isolate these structures from emotional centers (Damasio, 1994).

The failure of IQ to predict a large portion of the variance in performance among managers may be attributable to range restriction on the variable of IQ among managers and senior executives. To assume a position of leadership in today's workplace often requires that an individual demonstrate at least average, and more often above average intelligence; leadership requires a high level of cognitive ability in order to process the complexity of information leaders face daily. The completion of undergraduate and graduate programs as well as successfully passing testing and credentialing procedures typically serves to ensure that those able to pass such hurdles are of above average intelligence. This renders given levels of IQ a "threshold" competence, a minimal capability that all who are within a given job pool must have in order to get and keep their job. For example, physicians, CPAs and CEOs may all need an IQ at least one standard deviation above the mean in order to hold their job. However, simply having an IQ in that superior range does not in itself guarantee that they will be superior doctors, accountants, or leaders (McClelland, 1973; Spencer & Spencer, 1993). IQ, then, suffers from range restriction in many applied organizational settings, and thus is even more limited in its ability to predict performance and career success within a given vocation. While IQ may account for a more substantial amount of the variance in performance in entry-level positions, even in this context it rarely acts to reliably distinguish average and star performers. Even in educational settings the use of traditional testing procedures has often left much of the variance in educational outcomes unexplained. This combined

with the adverse impact that traditional testing procedures may have on minority groups has motivated interest in developing alternative methods of assessment (Steele, 1997).

While the assessment of constructs within the emotional intelligence paradigm have shown significant utility and predictive validity in applied settings (e.g. Boyatzis, 1982; Spencer & Spencer, 1993), claims of the relative importance of emotional intelligence compared to traditional forms of intelligence needs further empirical investigation to better determine the relative contribution of each in the prediction of specific criterion (Goleman, 2000). While IQ should remain an important predictor of the types of vocations a given individual can assume, once within that vocation the predictive validity of IQ would seem to diminish significantly. The notion of IQ as a threshold competence is an important distinction and one that has often been overlooked or down played by many theorists as well as in the popular media. The excitement generated in the popular media has often left the impression that high emotional intelligence might somehow compensate for a low IQ and allow those with below average IQ, but high emotional intelligence, to thrive in spite of below average intelligence – in essence giving the false impression that IQ matters little. While we agree that IQ is clearly an important construct, we join other theorists who argue that by expanding our definition of intelligence we obtain a more realistic and valid assessment of the factors that lead to personal effectiveness and adaptation (see Sternberg, 1997, 2002). To the degree that popular and scientific interest in emotional intelligence has begun to challenge long held assumptions of what leads to success in life, the emotional intelligence paradigm, and those working in it, have helped to bring a more balanced view of the role of cognition and emotion in determining life outcomes.



While research on emotional intelligence has progressed significantly since its inception, more research will be needed to further validate claims of the relative importance that traditional intelligence and emotional intelligence hold to the prediction of specific criterion. Longitudinal research looking at the relative contribution of IQ and specific theoretical constructs within the emotional intelligence paradigm would help better clarify the relative importance of each as it relates to specific criterion, such as work performance over an individual's career. Such direct comparisons between IQ and emotional intelligence would be a welcome addition to the growing literature.

#### The "Problem" of Multiple Theories of Emotional Intelligence

People are often surprised to find that within the emotional intelligence paradigm there exists not one, but several theories (e.g. Bar-On, 2000; Goleman, 1995:1998; Mayer & Salovey, 1997). Each theory has been put forward in an attempt to better understand and explain the skills, traits, and abilities associated with social and emotional intelligence. While some might argue that the goal of research should be to identify and define a singular theoretical framework to be labeled as the "correct" version of emotional intelligence, another approach would be to acknowledge that having multiple theories can often serve to elucidate additional aspects of complex psychological constructs. For example, research looking at the correlation between the MEIS (a measure of Mayer and Salovey's model of emotional intelligence), and the EQ-i (Bar-On, 1997) (a measure of Reuven Bar-On's model of emotional intelligence) has shown the two measures are not highly correlated with one another, suggesting that these two measures are tapping different aspects of the construct (however, each major theory

differs somewhat in its version of the basic definition of EI). Moreover, research on the MEIS (and its successor the MSCEIT v2.0) have shown it to be correlated with traditional measures of intelligence (Van Rooy & Viswesvaran, in press). This moderate correlation with IQ is consistent with the author's view that all forms of intelligence should show some degree of correlation to be properly classified as an intelligence. The low to moderate correlations between IQ, specifically verbal intelligence, and emotional intelligence suggests that the relationship between these two constructs is relatively orthogonal in nature. While less correlated with traditional intelligence, the Bar-On EQ-i, and other trait-based theories of emotional intelligence, show a higher degree of overlap with traditional measures of personality (Bar-On, 1997; Saklofske, Austin, & Minski, 2003; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dorheim, 1998). While the correlations between these trait-based emotional intelligence measures and traditional measures of personality, such as measures that assess the Big Five, are moderate to high, researchers have often been able to demonstrate the discriminant validity of trait-based approaches to emotional intelligence (Ciarrochi, Chan, & Caputi, 2000; Saklofske, Austin, & Minski, 2003; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dorheim, 1998; Van Der Zee, Thijs, Schakel, 2002; Van Rooy & Viswesvaran, in press; Wong & Law, 2002) While correlations with traditional psychological constructs are to be expected, more recent research on the incremental validity of emotional intelligence when IQ and personality are controlled for has shown that emotional intelligence is indeed a unique construct that accounts for unique variance (Ciarrochi, Chan, & Caputi, 2000; Palmer, Gardner, & Stough, 2003; Saklofske, Austin, & Minski, 2002; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dorheim, 1998; Van Der Zee, Thijs, Schakel, 2002; Van

Rooy & Viswesvaran, in press). Given the relative youth of the emotional intelligence construct, scientific evidence continues to mount that suggests the construct represents a constellation of traits and abilities that are not fully accounted for by cognitive intelligence and traditional measures of personality.

However, the evidence here remains murky. For one, each of the studies that speak to the issue have used different measures of EI, which are in turn based on different definitions of the construct. For instance, Schutte et al. (1998) use a measure based on the Mayer and Salovey definition which, we would expect, should overlap little with personality. The issue of personality overlap pertains mainly to the Bar-On and Goleman models of EI. Another problem with many of these studies is that they look at the relationship between specific aspects of EI and specific personality traits. For instance, there are small to moderately high correlations between Extraversion (from the Big Five) and each of the four clusters as assessed on the ECI (Sala, 2002). What is needed to clarify the question of overlap is a study that combines personality traits and then examines incremental validity for EI. While Van Rooy and Viswesvaran (in press) did this, they combine all the measures of EI; what is needed, though, is an analysis that does this separately for the ECI and the EQ-i.

We should remember, too, that the existence of several theoretical viewpoints within the emotional intelligence paradigm does not indicate a weakness, but rather the robustness of the field. This kind of alternative theorizing, of course, is not unique to the study of emotional intelligence and should not be viewed as undermining the validity and utility of this emerging field. In describing the current status of the overall field of intelligence, Sternberg, Lautrey, and Lubart (2002) comment, “few fields seem to have

lenses with so many colors.” (p.3). Yet the field of traditional intelligence (IQ) has not seriously been threatened or discredited for having multiple theories; continuing debate and research on traditional intelligence has significantly increased our knowledge and practical applications of intelligence assessment to a wide range of populations and issues. Moreover, within the field of intelligence theory, this debate has continued for almost 100 years, and promises to continue well into the foreseeable future. While still in its infancy, the field of emotional intelligence would seem to be following a similar trajectory.

While several theories associated with the emotional intelligence paradigm currently exist, the three that have generated the most interest in terms of research and application are the theories of Mayer and Salovey (1997), Bar-On (1988; 2000a) and Goleman (1998b; 2002). While all of these theorists have been associated with the emotional intelligence paradigm, a closer reading of their writing over time will reveal a significant divergence in the specific language they use to label their theories and constructs. While each theory represents a unique set of constructs that represents the theoretical orientation and context in which each of these authors have decided to frame their theory, all share a common desire to understand and measure the abilities and traits related to recognizing and regulating emotions in ourselves and others (Goleman, 2001). As Ciarrochi, Chan, & Caputi, (2000) point out, although definitions within the field of emotional intelligence vary, they tend to be complementary rather than contradictory. All theories within the emotional intelligence paradigm seek to understand how individuals perceive, understand, utilize and manage emotions in an effort to predict and foster personal effectiveness. An awareness of the origins and motivations of each of these theories

provides additional insight into why the specific constructs, and methods used to measure them, vary among the major theories.

The first of the three major theories to emerge was that of Bar-On (1988). In his doctoral dissertation he coined the term *emotional quotient* (EQ), as an analogue to intelligence quotient (IQ). The timing of the publication of his dissertation in the late 1980s was consistent with an increasing interest in the role of emotion in social functioning and well-being, but before interest in emotional intelligence enjoyed the widespread interest and popularity that it does today. Bar-On (2000a) currently defines his model in terms of an array of traits and abilities related to emotional and social knowledge that influence our overall ability to effectively cope with environmental demands, as such, it can be viewed as a model of psychological well-being and adaptation. This model includes (1) the ability to be aware of, to understand, and to express oneself; (2) the ability to be aware of, to understand and relate to others; (3) the ability to deal with strong emotions and control one's impulses; and (4) the ability to adapt to change and to solve problems of a personal or social nature. The five main domains in this model are *intrapersonal skills*, *interpersonal skills*, *adaptability*, *stress management*, and *general mood* (Bar-On, 1997b). The EQ-i, which Bar-On constructed to measure the model, is a self-report measure that specifically measures emotionally and socially competent behavior that estimates an individual's emotional and social intelligence, as opposed to traditional personality traits or cognitive capacity (Bar-On, 2000). The use of a self-report measure to assess individuals on this model is consistent with established practice within personality psychology, where self-report measures represent the dominant, though certainly not the only, method of assessment. However, it

must be noted that since its initial publication the Bar-On EQ-i has also been published as a 360-degree measure. While correlations between the EQ-i and subscales of other established measures of personality, especially ones that are thought to tap closely related constructs, have been moderate to high, overall the EQ-i seems to provide a valid and reliable estimate of an individual's ability to effectively cope with the pressures and demands of daily life, as conceptualized by Bar-On (Bar-On, 2000a).

Emotional intelligence as formulated in the theory of Mayer and Salovey (1997) has been framed within a model of intelligence. The motivation to develop a theory of emotional intelligence, and instruments to measure it, came from a realization that traditional measures of intelligence failed to measure individual differences in the ability to perceive, process, and effectively manage emotions and emotional information. The use of this frame is significant, as it defines emotional intelligence more specifically as the **ability** to perceive emotions, to access and generate emotions to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997). Like other intelligences, emotional intelligence is defined by Mayer and Salovey as a group of mental abilities, and is best measured using a testing situation that is performance or ability based. This focus on objective, performance-based assessment is similar in spirit to the methods used to measure traditional intelligence (IQ). For example, to measure spatial reasoning ability, traditionally seen as a type of cognitive intelligence, it makes sense to present an individual with a set of spatial reasoning tasks of varying difficulty in order to gauge their ability on this type of intelligence. Performance-based measures of emotional intelligence take a similar approach. For example, if you want insight into an

individual's ability to perceive emotions in others, it makes sense to present them a variety of visual images, such as faces, and ask them to identify the emotion(s) present. The most current measure of the Mayer & Salovey model, the Mayer, Salovey, Caruso, Emotional Intelligence Test v.2.0 (MSCEIT v2.0), makes use of this approach and thus yields scores that are based on an individual's performance on a set of items designed to measure the four branch model of emotional intelligence. As is evident within traditional theories and methods of measuring cognitive intelligence, the measure is viewed as applicable to a wide range of settings, for example clinical assessment, education, and the workplace. This potential for application across diverse settings and populations is a consistent theme within the general intelligence literature as well.

The framing of emotional intelligence within the larger body of theory and research on intelligence has other implications as well. As Mayer, Caruso, and Salovey (1999) point out, to qualify as an actual intelligence several criteria must be met. First, any intelligence must reflect actual mental performance rather than preferred behavior patterns, self-esteem, or other constructs more appropriately labeled traits. Second, the proposed intelligence should describe a set of related abilities that can be shown as conceptually distinct from established intelligences; and third, an intelligence should develop with age. To date, the ability-based model has provided evidence to support each of these demands required to be correctly labeled an intelligence (Mayer, Salovey, Caruso, & Sitarenios, 2001; Mayer, Caruso, & Salovey, 1999). As Sternberg (2002) recently commented, "An impressive aspect of this work is Salovey, Mayer, and their colleagues' program of careful validation to assess the construct validity of their theory

and measures. In a relatively short amount of time, they have developed measures and provided good evidence of both convergent and discriminant validity.” (p.3)

The most recent addition to theory within the emotional intelligence paradigm is the framework of emotional intelligence put forward by Goleman (1998b) in his book *Working with Emotional Intelligence*, and clarified in a later article (Goleman, 2001). This theory represents a framework of emotional intelligence that reflects how an individual’s potential for mastering the skills of Self-Awareness, Self-Management, Social Awareness, and Relationship Management translates into success in the workplace (Goleman, 2001). Goleman’s model of emotional intelligence, then, offers these four major domains. He then postulates that each of these domains becomes the foundation for learned abilities, or competencies, that depend on underlying strength in the relevant EI domain. The EI domain of Self-Awareness, for example, provides the underlying basis for the learned competency of “Accurate Self-Assessment” of strengths and limitations pertaining to a role such as leadership. The competency level of this framework is based on a content analysis of capabilities that have been identified through internal research on work performance in several hundred companies and organizations worldwide. Goleman defines an emotional ‘competence’ as “a learned capability based on emotional intelligence that results in outstanding performance at work” (Goleman, 1998b). That such competencies are learned is a critical distinction. Where *emotional intelligence*, as defined by Mayer & Salovey, represents our potential for achieving mastery of specific abilities in this domain, the emotional competencies themselves represent the degree to which an individual has mastered specific, skills and abilities that build on EI and allow them greater effectiveness in the workplace (Goleman, 2001).



In this context, emotional intelligence might predict the ease by which a given individual will be able master the specific skills and abilities of a given emotional competence.

Grounding his theory specifically within the context of work performance separates Goleman's model from those of Bar-On, and Mayer and Salovey. Where the latter frame their theories as general theories of social and emotional intelligence and emotional intelligence respectively, Goleman's theory is specific to the domain of work performance. According to the test manuals of both the MSCEIT v2.0 (Mayer, Salovey, & Caruso, 2002b) and the Bar-On EQ-i (Bar-On, 1997), these measures are applicable to a wider range of settings such as clinical assessment, educational settings, in addition to the workplace. Where Bar-On seeks to develop a general measure of social and emotional intelligence predictive of emotional well-being and adaptation, and Mayer and Salovey seek to establish the validity and utility of a new form of intelligence, the model of Goleman seeks to develop a theory of work performance based on social and emotional competencies. This "competency" based approach reflects a tradition that emphasizes the identification of competencies that can be used to predict work performance across a variety of organizational settings, often with an emphasis on those in leadership positions (Boyatzis, 1982; Bray, Campbell, & Grant, 1974; Kotter, 1982; Luthans, Hodgetts, & Rosenkrantz, 1998; McClelland, 1973; McClelland, Baldwin, Bronfenbrenner, & Strodbeck, 1958; Spencer & Spencer, 1993; Thornton & Byham, 1982). Though not originally a theory of social and emotional competence, as research on "star performers" began to accumulate, it became apparent that the vast majority of competencies that distinguished average performers from "star performers" could be classified as falling in the domain of social and emotional competencies, although

conceptual thinking or “big picture” thinking is also a hallmark of superior performance, especially among executives who often must process information in complex situations that include a myriad of interdependent factors. More recent research reviewed by Goleman (2002) has shown that the more senior the leader, the more important emotional competencies become. This finding, combined with research supporting the notion that those in higher positions within the organizational hierarchy often demonstrate higher levels of self / other discrepancies on 360 feedback measures (Sala, 2001b: 2002), helped motivate the selection of a 360-degree methodology to measure social and emotional competencies, although methods based on behavioral event interviewing (Boyatzis, 1982; Spencer & Spencer, 1993), simulations, and assessment centers (Thornton & Byham, 1982) also represent reliable and valid methods for assessing social and emotional competencies. The selection of a 360-degree methodology was also desirable for its ease of use compared to other methods, its comprehensiveness (to ensure that all competencies could be assessed with one instrument), and validity (capturing both self and others’ views) (Boyatzis, Goleman, & Rhee, 2001). The most current measure of Goleman’s theory of emotional competence is the Emotional Competence Inventory 2.0 (ECI 2.0). According to the Emotional Competence Inventory technical manual, “The ECI is a 360-degree tool designed to assess the emotional competencies of individuals and organizations. It is based on emotional competencies identified by Daniel Goleman in *Working with Emotional Intelligence* (1998), and on competencies from Hay/McBer’s *Generic Competency Dictionary* (1996) as well as Richard Boyatzis’s Self-Assessment Questionnaire (SAQ)” (Sala, 2002, pg. 1). Like other theories reviewed here, Goleman’s theory of emotional competence reflects an extension, refinement, and reconceptualization

of previous research and theory in an effort to better understand complex affective processes in order to predict relevant criterion, in this case work performance. As such, the theory of emotional competence and the instrument designed to measure its constructs (i.e. Emotional Competence Inventory 2.0) have been refined based on empirical research (Sala, 2002). The current model reflects the results of recent statistical analysis (Boyatzis, Goleman, & Rhee, 2000; Sala, 2002) intended to gain additional insight into the structure of social and emotional competencies. For a full review of reliability and validity issues related to the Emotional Competence Inventory 2.0, please refer to the ECI Technical Manual (Sala, 2002).

While continued research will be needed to further establish the validity of the current version of the Emotional Competence Inventory 2.0, recent research on the original Emotional Competence Inventory 360 (Cavallo & Brienza, 2002; Lloyd, 2001; Stagg & Gunter, 2002) combined with decades of research using a competency-based approach (see Boyatzis, 1982; Spencer & Spencer, 1993 for review), demonstrates the utility of this approach for the assessment, training and development of social and emotional competencies in the workplace. Initial concurrent validity studies using assessments based on Goleman's model have been able to account for a larger amount of variance in work performance than EI measures based on the Mayer and Salovey model of emotional intelligence (Bradberry & Greaves, 2003). Concurrent validity studies, relating to work performance, comparing Goleman's model and Bar-On's, have yet to be conducted or reported in the literature. While such findings remain tentative, we believe that a model of emotional intelligence focused specifically on the workplace, combined with a multi-rater format, provides individuals and organizations feedback on the large

majority of competencies that best account for superior work performance. However, as the emotional intelligence paradigm continues to mature, measurements and techniques for assessment should continually evolve based on empirical research.

### Can Emotional Intelligence be Developed?

Another factor contributing to the popularity of theories of emotional intelligence is the assumption that, unlike IQ, emotional intelligence can be developed. There has been a great degree of scepticism on this point. For example, McCrae (2000) recently commented, "...we know a great deal about the origins of personality traits. Traits from all five factors are strongly influenced by genes (Riemann, Angleitner, & Stelau, 1997) and are extraordinarily persistent in adulthood (Costa & McCrae, 1997). This is likely to be unwelcome news to proponents of emotional intelligence, who have sometimes contrasted a supposed malleability of emotional intelligence with the relative fixity of traditional IQ" (p. 266).

While we acknowledge that genetics likely play an important role in the development of emotional intelligence, we also note that geneticists themselves challenge as naïve the assumption that nurture does not impact nature: gene expression itself appears to be shaped by the social and emotional experiences of the individual (Meany, 2001). Bar-On (2000) has found successively older cohorts tend to score higher on his scale of EI, suggesting that, to some extent, EI may be learned through life experience. However, apart from this general, if weak, improvement in EI with maturation, we argue that without sustained effort and attention, individuals are unlikely to improve greatly a given aspect of their emotional intelligence. If the impression has been given that significant

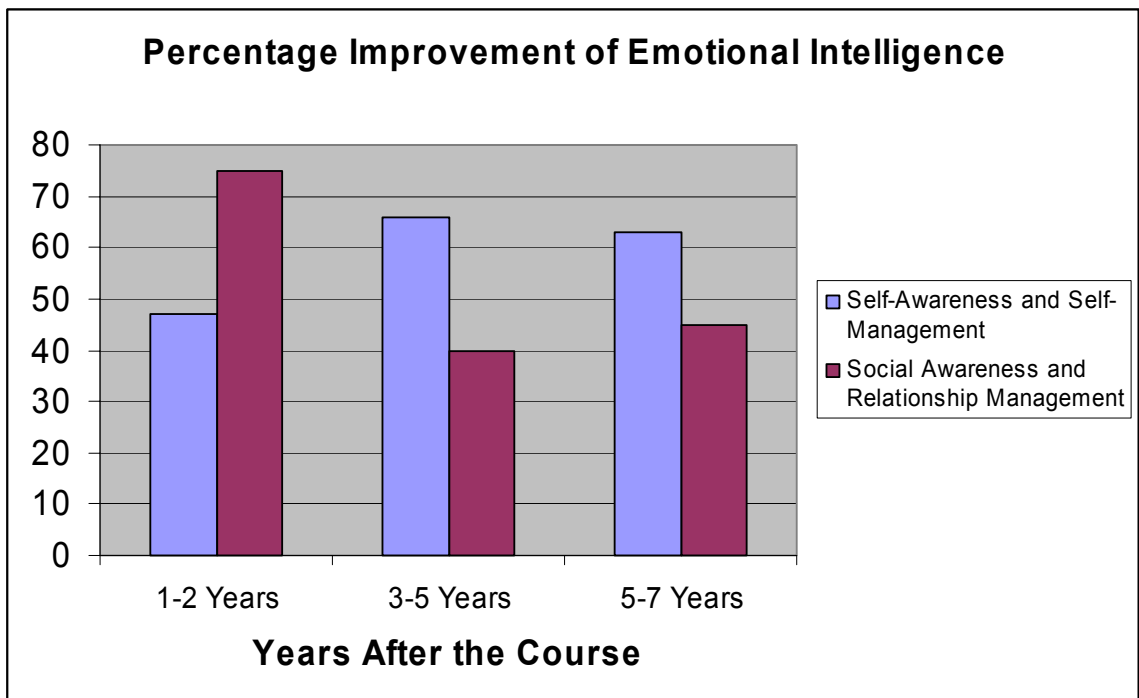
improvement of social and emotional competencies is easily accomplished, this is unfortunate. That the development of social and emotional competencies takes commitment and sustained effort, over time, is a position that we, in addition to others, have held for some time (Cherniss & Adler, 2000; Cherniss & Goleman, 2001; Cherniss, Goleman, Emmerling, Cowan, and Adler, 1998; Goleman, 1998; Goleman, Boyatzis, & McKee, 2002). However, a wide range of findings from the fields of psychotherapy (Barlow, 1985); training programs (Marrow, Jarrett, Rupinski, 1981) and executive education (Boyatzis, Cowen, & Kolb, 1995) all provide evidence for people's ability to improve their social and emotional competence with sustained effort and a systematic program. In addition, new findings in the emerging field of affective neuroscience have begun to demonstrate that the brain circuitry of emotion exhibits a fair degree of plasticity, even in adulthood (Davidson, Jackson, & Kalin, 2000).

While the evidence that people can improve on emotional intelligence competencies comes from a wide range of sources, perhaps the most persuasive evidence comes from longitudinal studies conducted at the Weatherhead School of Management at Case Western Reserve University (Boyatzis, Cowan, & Kolb, 1995). The students in this study participated in a required course on competence building, which allowed students to assess their emotional intelligence competencies, in addition to cognitive ones, select the specific competencies they would target for development, and develop and implement an individualized learning plan to strengthen those competencies. Objective assessment of students at the beginning of the program, upon graduation and again years later on-the-job allows a unique opportunity to help address the issue of whether emotional intelligence competencies can be developed. The results of this research have shown that

emotional intelligence competencies can be significantly improved, and, moreover, these improvements are sustainable over time. As can be seen in Figure 1, the effects of the program have been impressive, especially when compared to what is seen in traditional forms of executive education. These effects are much larger than the effects observed in traditional MBA programs and typical corporate leadership development initiatives.

Research on traditional MBA programs found just a 2% increase in social and emotional competencies as a result of program completion (Boyatzis, Cowan, & Kolb, 1995).

Although traditional corporate leadership initiatives tend to fare better, the effects are also relatively small and tend to fade significantly over time. That the effects observed in the Weatherhead MBA program were sustained for a period of several years provides evidence that, not only is it possible to develop emotional intelligence competencies, but that such changes can be sustained over an extended period.



In addition to research related to outcome studies and program evaluations, the findings from affective neuroscience also provide evidence for the potential to develop emotional intelligence competencies. The findings of LeDoux (1996) seem to indicate that although there are stable individual differences in activation patterns in the central circuitry of emotion, there is also pronounced plasticity. Research on animals has established that the prefrontal cortex, amygdala, and hippocampus, all of which are involved in the perception, use and management of emotions, are all sites where plasticity is known to occur (Davidson, Jackson, & Kalin, 2000). However, it has only recently been demonstrated that such plastic changes can occur in the adult human hippocampus as well (Eriksson et al., 1998 as cited in Davidson, Jackson, & Kalin, 2000). Recent research on “mindfulness” training—an emotional self-regulation strategy—has also shown that training can actually alter the brain centers that regulate negative and positive emotions. Mindfulness training focuses on helping people to better stay focused on the present, thus keeping distressful and distracting thoughts (e.g. worries) at bay, and to pause before acting on emotional impulse. R&D scientists from a biotech firm who received mindfulness training reported less stress after eight weeks, and they felt more creative and enthusiastic about their work (Davidson & Kabat-Zinn, et al., 2003). While such results serve to support our notion that emotional intelligence competencies can be developed, additional evaluation studies would be a welcome addition to the literature.

### Should We Be Measuring Emotional Intelligence?

The use of psychological measurement has always been somewhat controversial, and the measurement of theories within the emotional intelligence paradigm is no

different. That the affective experience and abilities of individuals can somehow be quantified has made some uncomfortable. This may, in part, be due to a philosophical view that has seen emotions as unpredictable, irrational, and something to be suppressed in favor of logic and reason. Viewed in this way, emotions and emotional intelligence would hardly be worth measuring even if one could. However, theories of emotional intelligence have helped to counter this view and offered the promise of a more balanced view of what it means to be intelligent about emotions, expanding our understanding of the role that emotions play in mental life.

The use of emotional intelligence measures in organizational settings has also been somewhat controversial (e.g. Davies, Stankov, & Roberts, 1998; Matthews, Zeidner, & Roberts, 2003). The application of social and emotional competencies, and the subsequent focus on work performance and assessment has led some critics to label assessments based on social and emotional competencies as reminiscent of more mechanistic or Tayloristic views that ultimately aim to increase performance and efficacy at the expense of the well-being of individual employees. However, where Taylor's attempt to apply scientific principles to the workplace was dominated by a core belief that individuals are basically rational beings, the very central tenets of emotional intelligence make clear that individuals are a complex combination of emotion and reason. Emotions had little place in the mechanistic worldview of Taylor. However, our view is that providing a theory and assessment methodology capable of assessing emotional intelligence competencies helps to identify individuals likely to succeed in a given organizational role. Moreover, without a specific theory of emotional competence, and methods to assess them, employees may be limited to feedback on issues more related to



technical competence, or left with vague feedback related to their “people skills” or “leadership style.” In order to improve on any ability—including emotional competence—people need realistic feedback of their baseline abilities, as well as their progress.

Specific and accurate assessment and feedback on these competencies is more straightforwardly obtained with a framework of emotional competence (Goleman, Boyatzis, & McKee, 2001). Providing reliable and valid feedback on specific social and emotional competencies, so long as it is provided in a safe and supportive environment, helps to provide employees with insight into their strengths and areas for development. However, in applied practice the almost exclusive focus on “performance gaps” in traditional development planning has often undermined the effective use of feedback in coaching and training and development initiatives focused on assessing and developing emotional intelligence. Providing a more balanced view, including a focus on strengths, an articulation of a personal vision and how developing emotional intelligence competencies helps one achieve that vision, paired with a supportive environment, can often help to overcome feelings of defensiveness that often undermine the development of social and emotional competencies. If done correctly, such feedback becomes a central component of work motivation as conceptualized by several experts in the field of goal setting and motivation. (Csikszentmihalyi, 1990; Locke & Latham, 1990).

### The Ethical Dimension and EI

Could there be an emotionally intelligent terrorist? This provocative question raises the issue of how morals and values relate to emotional intelligence: is EI morally

neutral, or does it interact with an ethical dimension? Typically in psychology, ethics and morality are treated as an orthogonal, independent dimension, in a domain beyond the concerns at hand; we know of no serious articles exploring, say, the moral dimensions of the Big Five personality factors, nor of personality dimensions like self-efficacy, optimism, or extraversion. The question might just as well be, Could there be an efficacious, optimistic, and extraverted terrorist? Clearly, if the answer were “Yes,” that does not invalidate the intrinsic worth of efficacy, optimism or extraversion for psychological science. As Howard Gardner (1999, p. 10) put it, “no intelligence is moral or immoral in itself;” noting that Goethe used his verbal skills in a laudable manner, the Nazi propagandist Joseph Goebbels in a hateful way.

Even so, there may be significant issues to explore at the intersection of ethics and EI. Goleman (1995, 1998) has speculated that certain aspects of EI may tend to promote prosocial behavior: Self-awareness must be deployed to act in accord with one's own sense of purpose, meaning, and ethics; empathy appears an essential step in fostering altruism and compassion. One question, then, is the extent to which cultivating abilities like empathy and self-awareness fosters a positive ethical outlook.

On the other hand, there are no doubt instances of Machiavellian types who use EI abilities—especially empathy and social skills like persuasion--to lead people astray or manipulate them, or who deploy social awareness skills to clamber over others to the top of the ladder. However, preliminary research on the Machiavellian personality suggests that those with this bent tend to have diminished empathy abilities, focusing most clearly in areas related to their self-interest, and poorly in other domains (Davis & Kraus, 1997). For those who adopt the stance that the ends justify the means, a manipulative application

of EI skills (or any other ability, for that matter) would be acceptable, no matter the moral repugnance of the goal.

We believe these issues have importance for the field, and deserve more thought, study and research.

### Conclusion

In this article we have attempted to address some of the central issues that confront the emotional intelligence paradigm. Although debate and controversy will likely continue within the field for some time, overall interest in the topic of emotional intelligence continues to increase. It is our sincere wish that the energy embodied in this debate facilitate the continued refinement of theory and practice related to emotional intelligence. While the progress of the emotional intelligence paradigm has been impressive, much remains to be discovered.

## REFERENCES

- Barlow, D. H. (Ed.). (1985). Clinical handbook of psychological disorders: A step-by-step treatment manual. New York: Guilford Press.
- Bar-On, R. (1997). The Bar-On Emotional Quotient Inventory (EQ-i): A Test of Emotional Intelligence. Toronto, Canada: Multi-Health Systems.
- Bar-On, R. (1997b). The Emotional Quotient Inventory (EQ-i): Technical Manual. Toronto: Multi-Health Systems.
- Bar-On, R. (1988). The development of an operational concept of psychological well-being. Unpublished doctoral dissertation, Rhodes University, South Africa.
- Bar-On, R. (2000). Emotional and social intelligence: Insights from the Emotional Quotient Inventory (EQ-i). In R. Bar-On & J.D.A. Parker (Eds.), Handbook of emotional intelligence (pp. 363-388). San Francisco: Jossey-Bass.
- Boyatzis, R. (1982). The competent manager: A model of effective performance. New York: Wiley.
- Boyatzis, R. E., Cowan, S. S., & Kolb, D. A. (1995). Innovations in professional education: Steps on a journey to learning. San Francisco: Jossey-Bass.
- Bradberry, T. & Greaves, J. (2003). Emotional Intelligence Appraisal: Technical Manual. TalentSmart, Inc.: San Diego, CA.
- Bray, D. W., Campbell, R. J., & Grant, D. L. (1974). Formative years in business: A long-term AT&T study of managerial lives. New York: McGraw-Hill.
- Cavallo, K. & Brienza, D. (2002). Emotional competence and leadership excellence at Johnson & Johnson. New Brunswick, NJ: Consortium for Research on Emotional Intelligence in Organizations, Rutgers University.
- Cherniss, C. (2001). Emotional intelligence and organizational effectiveness. In C. Cherniss & D. Goleman (Eds.), The emotionally intelligent workplace (pp. 3-26). San Francisco: Jossey-Bass.
- Cherniss, C., Goleman, D., Emmerling, R., Cowan, K., & Adler, M. (1998). Bringing emotional intelligence to the workplace. New Brunswick, NJ: Consortium for Research on Emotional Intelligence in Organizations, Rutgers University.
- Cherniss, C. & Goleman, D. (2001). The Emotionally Intelligent Workplace. San Francisco: Jossey-Bass.

Cherniss, C., & Adler, M. (2000). Promoting emotional intelligence in organizations. Alexandria, VA: American Society for Training and Development.

Ciarrochi, J. V., Chan, A. Y. C., & Caputi, P. (2001). A critical evaluation of the emotional intelligence construct. Personality and Individual Differences, 28, 539-561.

Costa, P. T. Jr., & McCrae, R. R. (1997). Longitudinal stability of adult personality. In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), Handbook of personality psychology (pp. 269-290). New York: Academic Press.

Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. New York: Harper Perennial.

Damasio, A. (1994). Descartes' Error: Body and Emotion in the Making of Consciousness. New York: Putnam.

Davidson, K.J., Kabat-Zinn, J. et al., (2003) Alterations in brain and immune function produced by mindfulness meditation, Psychosomatic Medicine, 65, 564-570

Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional intelligence: In search of an elusive construct. Journal of Personality and Social Psychology, 75, 989-1015.

Davidson, R., Jackson, D. C., & Kalin, N. H. (2000). Emotion, plasticity, context and regulation: Perspectives from affective neuroscience. Psychological Bulletin, 126(6), 890-909.

Davis, M., & Kraus, L. (1997). Personality and empathic empathy, in H. Ickes (ed.) Empathic Accuracy. NY: Guilford Press.

Fernandez-Araoz, C. (2001). The challenge of hiring senior executives. In C. Cherniss & D. Goleman (Eds.), The emotionally intelligent workplace (pp. 182-206). San Francisco: Jossey-Bass.

Gardner, H. (1999, February). Who Owns Intelligence? The Atlantic Monthly.

Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books.

Goleman, D. (2001). Emotional intelligence: Issues in paradigm building. In C. Cherniss & D. Goleman (Eds.), The Emotionally Intelligent Workplace, (pp. 13-26), Jossey-Bass: San Francisco.

Goleman, D., Boyatzis, R., & McKee, A. (2002). Primal leadership: Realizing the power of emotional intelligence. Boston: Harvard Business School Press.

Goleman, D., Boyatzis, R. E., & Rhee, K. S. (2000). Clustering competence in emotional intelligence: Insights from the emotional competence inventory. In R. Bar-On and J.D.A. Parker (Eds.), Handbook of emotional intelligence (pp. 343-362). San Francisco: Jossey-Bass.

Hay/McBer (1996). Generic competency dictionary. Boston: McBer & Company.

Hunter, J. E. & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. Psychological Bulletin, 96, 72-98.

Kuhn, T. S. (1970). The structure of scientific revolutions, 2nd ed. Chicago: University of Chicago Press.

LeDoux, J. (1996). The emotional brain: The mysterious underpinnings of emotional life. New York: Simon and Schuster.

Llyod, M. (2001). Emotional intelligence and Bass Brewers Ltd. Dissertation: Nottingham Business School.

Locke, E. A., & Latham, G. P. (1990). A theory of goal setting and task performance. Upper Saddle River, NJ: Prentice Hall.

Luthans, F., Hodgetts, R. M., & Rosenkrantz, S. A. (1988). Real managers. Cambridge, MA: Ballinger Press.

Marrow, C. C., Jarrett, M. Q., & Rupinski, M. T. (1997). An investigation of the effect and economic utility of corporate-wide training. Personnel Psychology, 29, 337-343.

Matthews, G., Zeidner, M., & Roberts, R. D. (2003) Emotional Intelligence: Science and Myth. MIT Press: Boston.

Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. Intelligence, 27, 267-298.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey and D. Sluyter (Eds.), Emotional development and emotional intelligence: Implications for Educators (pp. 3-34). New York, NY: Basic Books.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Emotional intelligence as zeitgeist, as personality, and as a mental ability. In R. Bar-On and J.D.A. Parker (Eds.), Handbook of emotional intelligence (pp. 92-117). San Francisco: Jossey-Bass.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) Users Manual. Toronto, Canada: MHS Publishers.

McClelland, D. C. (1973). Testing for competence rather than intelligence. American Psychologist, 28, 1-14.

McClelland, D. C., Baldwin, A. L., Bronfenbrenner, U., & Stodbeck, F. L. (1958). Talent and society: New perspectives in the identification of talent. Princeton, NJ: D. Van Nostrand.

McCrae, R. R. (2000). Emotional intelligence from the perspective of the five-factor model of personality. In R. Bar-On & J.D.A. Parker (Eds.), Handbook of emotional intelligence (pp. 263-276). San Francisco: Jossey-Bass.

Meany, M. J. (2001). Maternal care, gene expression, and the transmission of individual differences in stress reactivity across generations. Annual Review of Neuroscience, 24, 1161-1192.

Nader, L. (1996)(ed.). Naked Science: Anthropological inquiry into boundaries, power, and knowledge. London: Routledge.

Palmer, B. R., Gardner, & Stough, C. (2003). The relationship between emotional intelligence, personality, and leadership effectiveness. Paper presented at the 5<sup>th</sup> Australian Industrial & Organizational Conference. Melbourne.

Popper, K. R. (1959). The logic of scientific discovery. London: Hutchison.

Riemann, R., Angleitner, A., & Strelau, J. (1997). Genetic and environmental influences on personality: A study of twins reared together using the self-and peer reported NEO-FFI scales. Journal of Personality, 65, 449-475.

Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. Personality and Individual Differences, 34, 707-721.

Sala, F. (2001b). It's lonely at the top: Executives' emotional intelligence self [mis] perceptions. Paper available for download, from <http://www.eiconsortium.org>.

Sala, F. (2002). Emotional Competence Inventory (ECI): Technical Manual. Boston: Hay/Mcber Group.

Schmidt, F. L. & Hunter, J. B. (1981). Employment testing: Old theories and new research findings. American Psychologist, 36, 1128-1137.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J. Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. Personality and Individual Differences, 25, 167-177.

Spencer, L. M. Jr., Spencer, S. M. (1993). Competence at work: Models for superior performance. New York: Wiley.

Stagg, G. & Gunter, D. (2002). Emotional intelligence in the fire service. Working paper: London Fire Brigade.

Steele, C. (1997). A Threat in the Air: How Stereotypes Shape Intellectual Identity and Performance. American Psychologist, 52, 613-629.

Sternberg, R. J. (1997). Successful intelligence. New York: Plume.

Sternberg, R., Lautrey, J., & Lubert, T. I. (2002). Where are we in the field of intelligence, how did we get here, and where are we going. In Models of Intelligence: International Perspectives, R. J. Sternberg, J. Lautrey, T. I. Lubart (Eds.) (pp. 3-25). Washington D.C. American Psychological Association.

Thornton, G. C. III, & Byham, W. C. (1982). Assessment centers and managerial performance. New York: Academic Press.

Van Der Zee, K., Melanie, T. & Schakel, L. (2002). The relationship of emotional intelligence with academic intelligence and the Big Five. European Journal of Personality. 16, 103-125.

Van Rooy, D. L., & Viswesvaran, C. (In Press). Emotional Intelligence: A Meta-Analytic Investigation of Predictive Validity and Nomological Net. Journal of Vocational Behavior.