Emotional Intelligence A Literature Review

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Emotional Intelligence

A Literature Review

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Emotional Intelligence: A Literature Review

Executive Summary

To assist in supporting a proposed university-wide initiative using Emotional Intelligence (EI) concepts, five faculty in the Psychology Department have reviewed a broad selection of research and writings on EI. We explored literature which might support the application of EI and related concepts to the improvement of college students' emotional/personality, cognitive/ academic, moral/ethical, and social/civic development. The review was designed to support university planning for EI research and application, and to improve and enhance future EI efforts. These efforts had already begun through proposals in 2006 to the CASTL Leadership Program and to the AAC&U Core Commitments Leadership Consortium. The CASTL proposal focused on strengthening the affective learning of Pacific students to improve self-understanding, ethical understanding, and civic engagement. The AAC&U proposal focused on linking affective and cognitive development. A variety of activities using EI concepts to promote these goals on campus has been proposed.

Based on the background outlined above, the Psychology Department EI literature review focused on the following topics (Psychology faculty who had the primary responsibility for each area are indicated in parentheses):

Measuring Emotional Intelligence (Scott Jensen)

Emotional Intelligence, Personality, Emotional Regulation, and Coping (Carolynn Kohn)

Emotional Intelligence and Academic Success (Stacy Rilea)

Emotional Intelligence and Moral/Ethical/Values Development (Roseann Hannon)

Emotional Intelligence and Leadership (Gary Howells)

Each topic is covered in a separate chapter in this review, and each chapter has its own reference section. Because the definition and measurement of EI are particularly critical, the chapter on "Measuring Emotional Intelligence" is recommended to all readers. The remaining chapters have been written to be relatively independent of each other so that the reader can pursue topic(s) of interest

without reading the entire document. A Composite Reference listing which contains all of the references used in this review is listed at the end. Summaries of each topic reviewed follow, with overall recommendations at the end of the Executive Summary.

Measuring Emotional Intelligence (Scott Jensen)

In response to the excitement over Emotional Intelligence (EI), several measures of EI have been developed. The measures vary in their definition of emotional intelligence as well as their format. The biggest distinction related to the definition of EI is between self-report measures (Emotional Quotient Inventory [EQ-i], Emotional and Social Competence Inventory [ESCI]), which are strongly related to traditional personality measures, versus the only *non*-self-report measure, the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT). MSCEIT scores are based on performance on a variety of tasks that require various forms of emotional intelligence. Correct answers are based on experts' decisions or, alternatively, on popular consensus. While the MSCEIT has several deficits, it is the only measure developed thus far that sufficiently distinguishes itself from traditional personality measures. These personality measures have a long history of being useful in predicting a variety of performance outcomes overlapping those predicted by self-report measures of EI.

The high cost of the three best-known measures (the EQ-I, the ESCI, and the MSCEIT) makes their regular use in a university setting expensive and therefore difficult. Several EI measures can be used free of cost and appear to demonstrate adequate reliability and validity which are similar to the better-known measures. The critical issue of the distinction of EI from personality traits, as well as the demonstration of predictive validity beyond that provided by cognitive IQ and personality measures, has yet to be demonstrated for any measure of EI. This suggests that an investigation of the usefulness of EI measures in a university setting should include comparison to measures of IQ and personality. While no measure of EI distinguishes itself as the most appropriate measure, a review of each measure is provided.

It is recommended that more than one measure of EI be used across the various studies intended to implement measures of EI at the University of the Pacific, until one or two measures are determined to be the most useful. It is also recommended that measures of personality be included in these studies. It is well established that personality measures predict many of the same outcomes as EI is thought to predict. Studies including measures of EI and personality, as well as

SAT/ACT scores (as measures of IQ and achievement), would serve to find the best predictors of the variables of interest at the University of the Pacific.

Emotional Intelligence, Personality, Emotion Regulation, and Coping (Carolynn Kohn)

Emotional intelligence (EI) is not a single construct, but rather several constructs that measure different individual traits or abilities. As research on EI has progressed, many researchers have identified two distinct models of EI: *ability* EI and *trait* EI. This distinction is important to the discussion of EI because *trait* EI correlates highly with personality traits. *Ability* EI has been found to correlate with coping skills and emotional regulation; however ability EI and trait EI are only minimally related concepts, as they tend to be only slightly correlated with each other.

Common critiques of the theoretical construct of EI (especially *trait* EI) and the measures used to assess it state that EI is not much more than another measure of personality. In particular, EI overlaps substantially with the main tenets and constructs of the Five Factor Model (FFM) of personality (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness), and thus EI adds little to our knowledge base after controlling for FFM. Similar critiques have been made regarding *ability* EI and its high correlation with coping and emotion regulation. Moreover, proponents of EI – particularly of *trait* EI – cite the inherent cultural bias of current EI measures as a problem because it is difficult to understand the results of an EI measure outside of its Western cultural context. This is particularly important to multicultural college and university campuses where inappropriate uses of EI measures could lead to erroneous conclusions about the EI capabilities of a significant number of students.

Without additional empirical evidence, when attempting to measure constructs related to emotion and to associated outcome variables (e.g., health behaviors, school performance), it seems prudent to use already well-researched, psychometrically sound and inexpensive or free measures of personality and coping. There appears to be little benefit at the present time in using expensive measures of EI. A significant contribution to research on emotional/personality functioning of college students could be made at Pacific by correlating EI measures (some of which are inexpensive) with better established measures of personality.

The bulk of the current EI research tends to examine cross-sectional correlational relationships between EI and other variables. Little is known about whether EI can be improved or taught to college students, and whether the teaching of EI will make a meaningful difference in other important aspects of life (e.g., health behaviors, school performance, moral/ethical behavior). This is another area ripe for

research to which Pacific could contribute. Previous studies suggest that students graduating from universities with a strong liberal arts focus tend to score higher on measures of EI. Maintaining, enhancing, and strengthening Pacific's liberal arts curricula may therefore also assist with increased EI in the student body, and interesting research could be conducted on the relationship between the breadth of students' undergraduate coursework and their scores on EI and related measures.

Emotional Intelligence and Academic Success (Stacy Rilea)

There has been extensive empirical research demonstrating the role of cognitive ability and personality factors in academic success. Recently, research has begun to explore the role that emotional intelligence may play in academic success. To date, the research in this area is inconclusive. Some researchers have found a relation between emotional intelligence and academic success, whereas others have not. Of those researchers who do observe a relationship, they often find that cognitive ability and personality are still stronger predictors of academic performance compared with emotional intelligence.

Two areas that have shown some potential benefit from using EI concepts are related to at risk populations and transition to college, however, in both of these areas, the research is limited. For example, Petrides, Frederickson, and Furnham (2004) found that individuals who have below average intelligence, tend to benefit academically, if they have higher scores on measures of emotional intelligence (however, no benefit was observed for individuals with above average intelligence). Additionally, some research suggests that successful transition from high school to college is related to higher scores on measures of emotional intelligence.

However, research in the area of emotional intelligence and academic success is in its infancy and should be regarded with caution. The implementation of emotional intelligence programs to increase the likelihood of academic success is premature. Researchers first need to develop a better understanding of what emotional intelligence is, how to measure it, and how it is related to academic success before attempting to use EI to improve academic success.

Emotional Intelligence and Moral/Ethical/Values Development (Roseann Hannon)

A positive relationship between EI and an individual's morals, ethics, and values is implied in a much of the EI literature. Models involving *trait* EI, in particular, contain direct references to moral/ethical values. For example, Bar-On's EI model (1997) includes *social responsibility* and *empathy*, while Goleman's model (1995) includes *empathic awareness* and *attunement to what others need or want* as

examples of the major skill area of recognizing emotions in others. Despite the apparent interest of EI researchers in morals/ethics/values, however, little empirical research has been conducted on the actual relationship between EI and these concepts.

One problem in the EI literature is that terms such as *morals*, *ethics*, and *values* have a rather broad variety of meanings, yet specific definitions of these terms were seldom presented in the literature reviewed. Future research should clearly define terms of interest in a given study. Some reasonably well-developed measures of moral/ethical values are available and should be incorporated into future EI research on these topics. Special tests for assessing applied or professional ethics are also available.

Areas of EI which have been related to morals/ethics/values include educational programs (K-12, undergraduate), business and management education, and health professions programs. Much of the literature reviewed focused on the importance of morals/ethics/values in each of these areas, but little research was found on the actual relationship of EI to these topics. No studies were found in which EI concepts were taught or used in some way to try to improve moral/ethical development. Pizarro and Salovey (2002), in fact, point out that the relationship between EI and moral development may be positive or negative, given that a person could use her/his emotional skills to achieve socially undesirable goals, as well as desirable ones. Much more research is needed to determine the nature of these relationships, and to determine whether EI concepts can be used effectively to support moral/ethical development.

Interventions to increase moral/ethical judgment have been developed in research which is not related to EI concepts, and these interventions should also be explored for research on these concepts at Pacific. For example, students who engaged in an 8-week service-learning experience have been shown to score significantly higher on a test of moral judgment than comparable students who did not engage in service-learning. Ethical sensitivity in science, genetic engineering, and occupational and physical therapy has also been improved by educational interventions.

The first recommendations for future researchers in EI and morals/ethics/ values is to carefully define the constructs they are using, including the specific type of EI and the specific kind of moral/ethical development. They should next select the best measures they can for their constructs. Finally, they should use the most appropriate research designs for their studies, and be sure they have an adequate number of subject to draw accurate conclusions.

Emotional Intelligence and Leadership (Gary Howells)

The identification of effective leaders and training of leaders to be more effective, and the training of students for leadership roles in their work and community roles, are key areas for the application of emotional intelligence. All of the basic emotional intelligence measures, representing the three basic approaches to emotional intelligence (the EQ-I, the ECI/ESCI, and the MEIS/MSCEIT), have been used to assist in identifying characteristics, traits, or competencies of emotional intelligence that might be present in effective leaders. In particular, the transformational leadership style—a style which describes leaders who inspire, motivate, influence, and show individual consideration for subordinates—is deemed to reflect the features of an emotionally intelligent leader. As a result, many studies done with emotional intelligence measures have attempted to demonstrate a link to this style as opposed to styles that are more passive or less respectful of employee feelings. Some studies have found a strong link between emotional intelligence and effective leadership or transformational leadership style but other studies have had more limited success.

The methodology in leadership studies involving emotional intelligence is gradually improving. Many early studies had the leader complete measures of emotional intelligence, evaluate their own leadership style, and rate their own effectiveness as leaders. More recent studies have used multi-measures and have had both supervisors and subordinates rating the leaders for style and effectiveness. These later studies find that some traits or competencies of emotional intelligence are related to effective leadership and/or transformational leadership style but there is more support for emotional intelligence and effective leadership having a connection because they have similar features in common, e.g. empathy or involvement. Another approach to the study of emotional intelligence and leadership is through the demonstration that emotional intelligence abilities and competencies can be taught to trainees and that these abilities or competencies continue to be evident years after individuals have completed training programs.

There is a gap between the "promise" for emotional intelligence and what has been empirically demonstrated to be the abilities or competencies that are actually needed for an individual to be an effective leader. There is a need for emotional intelligence researchers to take a step backwards and consider including some of the contributions other leadership researchers have been making over the last 60 years. It is also important to determine whether it is necessary for every effective leader to have acquired the entire arsenal of emotional intelligence competencies. There is room for research in many directions with regard to emotional intelligence and

leadership. It is premature to conclude that there currently exists a complete agenda of necessary competencies leading one to become an effective leader.

Overall Recommendations

Overall, the EI literature review suggests the following:

1. A central difficulty with EI research revolves around definitions and measures of the concept. There are at least two rather different conceptions of EI (*trait* EI and *ability* EI). Those trying to study or apply EI in any given area must therefore first identify the EI concept most relevant to their goals. They should then find the best possible EI measure for their goals, noting that expensive EI measures may not necessarily be best for all purposes.

2. Many claims that EI is a better predictor of life success (e.g., academic performance, leadership) than IQ or personality traits are derived from popular science writing and are not well supported by empirical research. EI measures should therefore be used in conjunction with appropriate measures of cognitive ability and/or personality until EI measures are empirically demonstrated to contribute additional information over that provided by better validated measures.

3. The implementation of EI coursework or programs to improve social and personal functioning, academic success, moral/ethical behavior, or leadership is premature until we know how EI is related to success in these areas. Non EI interventions which have some empirical support exist in many of these areas, and should be used in combination with EI concepts in designing programs to test at Pacific.

4. There is relatively little evidence that EI traits or competencies can be taught, or that teaching it will improve other areas of functioning. Boyatzis' work in management education suggests promise in this regard, and might serve as one basis for pilot programs at Pacific.

5. Research suggests that currently used measures of EI are culturally biased, given that it is difficult to understand the results of an EI measure outside of its Western cultural context. On a multicultural campus like Pacific, this obviously poses difficulties. Use of EI measures as admissions criteria or for other evaluative/predictive purposes will not be appropriate until measures which are not culturally biased and have demonstrated predictive validity are devised.

6. Many studies of EI, like other areas, use inadequate research designs, and/or have too few participants to draw accurate conclusions. The study of EI at Pacific should avoid these problems in order to produce convincing evidence

about the value of EI concepts in achieving our goals for students. One of Pacific's EI consultants, Scott Taylor, similarly recommended that we practice our implementation of EI in an evidence-based manner, and that we proceed slowly enough to allow this to happen.

While some promising results regarding EI were found in this literature review, many problems were raised as well. Work with EI at Pacific should be done first of all to help achieve the goals cited at the beginning of this review, "The CASTL proposal focused on strengthening the affective learning of Pacific students to improve self-understanding, ethical understanding, and civic engagement. The AAC&U proposal focused on linking affective and cognitive development." To best achieve these goals, we should use practices which have the best evidence of success from both EI and related concepts. As an additional goal, Pacific can contribute significantly to a better understanding of the usefulness and applicability of EI in a university setting if we design our studies well.

Measuring Emotional Intelligence

Scott Jensen

The first step in being able to test any ideas regarding Emotional Intelligence is to develop a method for measuring it. Without adequate measurement, no conclusions can be drawn on the subject. While multiple measures have been developed in the area, three main measures have received the bulk of attention and thus this review will focus on those measures, with less information provided on the other measures. Prior to reviewing the specific measures, however, it will be helpful to first review the important features of an appropriate psychological test or measure (these two terms are used interchangeably throughout the text to mean a standardized method for gathering information on a specific characteristic). While there is a large body of information on the subject of evaluating appropriate psychological measures, this paper will briefly review the more relevant issues.

Four key issues to evaluating psychological tests will be discussed here: 1) Defining the construct, 2) Reliability, 3) Validity, and 4) Identifying the appropriate population. Each is reviewed below.

Defining the Construct

It makes sense that in order to measure a construct, you would have to clearly define what you are measuring first. Defining psychological constructs in a meaningful, succinct way, however, is difficult due to several issues. First, a construct by definition is a theoretical, intangible quality or trait in which individuals differ (Gregory, 2007). A construct, then, exists only in theory and one cannot observe the construct itself, but only its effects. This ambiguous quality leaves it open to multiple interpretations and definitions. The construct of Love illustrates the point. Individuals may mean very different things when using the word love, but if their meanings differ significantly, their communication on the matter as well as their ability to measure its presence is significantly hampered. So it is with other constructs, if a consensus definition cannot be developed, communication about and measurement of the construct is significantly limited. Second, because the theoretical and intangible construct cannot be measured directly, observable behaviors that are theoretically associated with the construct must be used to measure the construct. To continue the illustration of the construct of love, there is no direct measure of love, but we can measure the actions associated with it, the individual's tone of voice, facial expressions, and actions toward another, as well as their own self-report of their love. In this respect it is understandable that

researchers may differ in which observable related qualities they may think are the best ways of measuring the construct.

Within the area of Emotional Intelligence, we find much of this disagreement and continued work on refining the definition and even the name of the construct. Regarding varying definitions of EI, Matthews, Roberts, and Zeidner (2004) opined that the "range and scope of definitions that currently exist within the literature make inevitable comparisons between the science of EI and the allegory underlying the Tower of Babel" (p. 180). Definitions vary from the ability to adapt to challenging situations, to the personality characteristics of integrity and character, to a cognitive ability for processing and effectively using emotional information. Bar-On, author of the EQ-i has defined EI as "An array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures" (Bar-On, 1997, p. 14). Goleman, one of the authors of the ECI, has defined EI even more broadly as basically all positive qualities that are not IQ, and further stated "There is an old-fashioned word for the body of skills that Emotional Intelligence represents: character" (Goleman, 1995, p. 34). As a result of the differing definitions, it is best to interpret the measures separately as they most likely measure different constructs. This view is especially supported by the fact that several of the EI measures do not correlate significantly with each other, as would be expected of measures of the same construct. The specific definitions, as best as can be gathered from the research on each measure will be presented within the section on each measure.

Use of the term intelligence to name the construct appears to have led to a significant amount of the confusion on the topic. This confusion has, in many cases, led the research away from the appropriate question, "Is EI a viable construct?", and focused it more on the question, "Is EI truly a type of intelligence?" Intelligence, by definition is an ability or skill that can be traditionally measured by performance on tasks that require the specified skills. It is also important that a correct and incorrect response to each performance task exist, such that performance can be measured objectively. It is questionable whether any of the measures define EI in this way, though the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT) is the only one of the major measures that even attempts to measure it in a manner consistent with traditional intelligence testing (Matthews et al., 2004). Several authors have begun to use the term emotional competence, a phrase that has been common in the general literature for several decades, especially in the child development literature. Given the distraction and backlash that has resulted from the use of the phrase intelligence, it may be more appropriate to use the term Emotional Competence,

especially for those measures that use self and other report methods rather than a performance based test

Reliability

Test reliability refers to the consistency of a test. A good psychological measure should find the same results each time, given the same input and circumstances. Just as we would not trust a thermometer that reported significantly different results on two separate days that seemed to be of similar temperature, we should not trust psychological measures that find different results for the same individual in similar circumstances. There are several ways to measure reliability, but some of the most common and most useful ways include test-retest reliability and internal consistency. Test-retest reliability is done by administering a test to a group of individuals and then re-administering the test to the same individuals at a later date and comparing the two results. The test-retest reliability is measured as the correlation between the results of the two administrations. This method is most appropriate for measures of constructs that are believed to be stable, as measures of less stable characteristics would be expected to change over time. The second method, internal consistency, is most commonly accomplished by measuring the similarity of responses across all items within the same individuals. Theoretically the characteristics of the construct present in the individual causes them to respond consistently across items, assuming the items are good measures of the construct. Internal consistency is most commonly presented as a correlation coefficient based on a statistical procedure known as coefficient alpha. While there is not full agreement on what reliability coefficients are considered acceptable vs. good, most recommend that for a measure upon which important personal decisions will be made, (e.g. hiring, acceptance into a program, etc.) correlations over .90 are preferred. Reliability coefficients between .70 and .89 are considered adequate for more research analysis based on group rather than individual means and scores below .69 suggest that caution should be used in making any analysis/decisions (Guilford & Fruchter, 1978; Nunnally & Bernstein, 1984). To clarify this, on a test with a reliability of $r = .69$, an individual's true ability on the concept being measured only accounts for roughly 48% of the person's actual score on the test. The rest is error. So, if a measure of EI with a reliability of .69 is used, less than half of the score received represents the individual's actual level of EI, and the rest is chance/error, only we would not know if the error made the score higher, or lower than it actually is, making the score a very poor estimate of the individual's actual level of EI.

Validity

The general concept of validity is that the test measures what it is intended to measure. There are many ways to test this, but with measures of Emotional Intelligence, discriminant validity, concurrent validity and predictive validity are used most often. Discriminant validity is intended to show that the measure of interest differs from measures that it should not be related to (e.g., a measure of love should not be strongly related to a measure of cognitive intelligence). Discriminant validity is also used to establish whether a new measure for predicting something overlaps with previously established measures that already are known to predict the issue of interest. If a new measure overlaps too much with previous measures, it does not contribute significantly new information. Concurrent validity measures how much the measure relates to other measures with which it is expected to correlate. Predictive validity measures how well the measure predicts other behaviors/constructs that it is supposed to predict. When multiple measures are used in combination to predict another variable, the extent to which variable B predicts variable C, beyond what is predicted by variable A, is called incremental validity.

For the construct of Emotional Intelligence, this is a very important issue. Emotional Intelligence has been hypothesized to be associated with job performance, academic performance, life satisfaction, etc. There is a long history of research connecting cognitive intelligence (IQ) and personality factors (especially the Five-Factor model) to the same areas that are supposedly connected to Emotional Intelligence. While the relationships between IQ and personality and these areas of performance is strong and consistent, they far from perfectly predict performance and there is room for improvement. A new construct that proposes to fill some of this gap, however, must demonstrate that it provides predictive power beyond that already demonstrated by cognitive intelligence and the Five-Factor model (incremental validity). This means that the new variable should not correlate too strongly with IQ or the Five-Factor model, but should correlate strongly with performance.

Because the Five-Factor model of personality will be referred to throughout this literature review, it is appropriate to briefly review the construct. The Five-Factor model, also commonly referred to as the Big Five, includes five distinct personality characteristics that have been related to performance, psychopathology, and other constructs (McCrae & Costa, 1999). The five characteristics include Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Neuroticism refers to the presence of several generally negative

characteristics including anxiety and instability.   Extraversion deals with a person's preference for social contact vs. isolation and is often referred to as outgoingness. Openness to Experience measures a person's willingness to engage in, and preference for, novel experiences. Agreeableness examines compatibility with others, or how well a person tends to get along with others. Conscientiousness is a person's tendency to consider others in making decisions. The Five-Factor model is a broadly researched construct with a long history of application in both business and other settings. A meta-analytic examination of a large body of research studies examining the Five-Factor model found evidence for its incremental validity beyond that of IQ in predicting performance (Schmidt and Hunter 1998).

Identifying the appropriate population

Tests tend to be created for use with specific populations and various features of the tests make them inappropriate for use with other populations. Tests created and validated for use with elementary school children, for example, may not be appropriate or accurate if used with older adults. Through the test development and validation process, specific groups are used as the sample population for validating the test. The test, then, can only be considered valid with individuals and in situations similar to those of the validation sample. Thus, if the measure is to be used with individuals or in situations that differ from those of the validation sample, it must be validated again with the new group (Thompson & Vacha-Haase, 2000). The majority of measures for EI have been validated using business executives, and applying those results directly to university students would be a stretch. New norms would likely need to be established that accurately reflect how college students perform on each measure.

Review of the Measures

MacCann, Matthews, Zeidner, & Roberts (2003) have provided an excellent review of the three major measures of Emotional Intelligence, which makes a duplication of their work in this paper unnecessary. The serious reader is strongly encouraged to read that review as well as another by Conte (2005) for a more comprehensive understanding of the issues surrounding measurement of Emotional Intelligence. What will be presented here is intended as a brief overview/summary of the available information on measures of Emotional Intelligence. This summary will cover each measure separately, referring to the definition of Emotional Intelligence, reliability, validity, and intended population for each measure.

Emotional Quotient Inventory (EQ-i). The first measure of Emotional Intelligence created was the Emotional Quotient Inventory, created by Bar-On

(1997). It is a 133-item self-report measure that takes approximately 30 minutes to complete. It consists of fifteen subscales, each containing between seven and eleven items. The measure produces an overall score as well as 5 composite scores. It can be administered online or through a paper and pencil format. Three types of reports can be generated, varying in their thoroughness, and cost $23, $38, or $99.

In connection with the EQ-i, Bar-On has defined emotional and social intelligence as "a cross-section of inter-related emotional and social competencies that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands and pressures" (Bar-On, 2004, p. 117). The five composite areas include Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood. Though Bar-On (2004) indicates that the measure is designed to be distinct from personality, MacCann and colleagues (2003) have documented the theoretical similarity and even item wording similarity between the EQ-i and the Five-Factor model (see table 4, p. 257).

The internal consistency of the overall EQ-i varies significantly based on the study, ranging from .76 to .97 ((Bar-On, 1997; Bar-On, 2000; Petrides & Furnham, 2001). The variability of reliability estimates across the studies likely suggests that it is more reliable when used with certain populations. None of the populations examined included university students, or any similar equivalent, thus emphasizing the need to validate such a measure with a university student population. Test-retest reliability is adequate, being .85 after 1 month and .75 after four months (Bar-On, 1997). Reliability measures for the subscales however, are poor and suggest that these should not be examined on an individual level, or for making anything similar to hiring/acceptance decisions (Bar-On, 1997).

The EQ-i demonstrates strong correlations with the Five-Factor model of personality. This strong correlation, also found with several other measures of EI, has caused many to question whether the whole concept of Emotional Intelligence is just studying personality characteristics by a new name (Davies, Stankov, & Roberts, 1998; McCrae, 2000). The EQ-i correlates most strongly with Neuroticism, with correlations ranging from -.29 to -.77 (Dawda & Hart, 2000; MacCann et al., 2003). Correlations with the Conscientiousness, Extraversion and Agreeableness scales were also high (ranging from $r = .30$ to $r = .56$). The Dawda and Hart (2000) scores are especially relevant in that they were found in a college population. Given these high correlations, it would be difficult to justify the use of this measure in place of the personality measures without clearly establishing incremental validity for the EQ-i beyond that already established for the Five-Factor model. This is especially

true given that measures of the Five-Factor model have a great deal more research done with them, and better overall reliability statistics.

As reported in MacCann et al. (2003), there is some evidence of a relationship between EQ-i scores and job success $(r = .22)$ and between EI scores and university grades $(r^2 = .7 - .15)$, as well as a findings that more effective managers at certain organization have higher EQ-i scores than less effective managers. None of these studies, however, examined the Five-Factor personality model or cognitive IQ in connection with predicting performance. Again, including these measures in such experiments is important, because both are known to correlate with each of these area, and may be better predictors, accounting for the same or more variance as found with the EQ-i.

Emotional and Social Competence Inventory (ESCI), Emotional Competence Inventory (ECI). The Emotional and Social Competence Inventory (ESCI) was recently developed to replace the Emotional Competence Inventory (ECI) (Boyatzis, Goleman, & Rhee, 2000). The ESCI is a 72 item self-report measure that assesses 12 competencies organized into four clusters: Self-Awareness, Self-Management, Social Awareness, and Social Skills. The ECI is a 110 item self-report measure that assesses 20 competencies in the same four clusters. For both measures, there are also versions that can be completed by a manager, peers, and subordinates and the use of these reports is strongly encouraged by the developers. Because the ESCI was recently developed, very little information is available on it, so most of the information presented here is on the ECI, with information on the ESCI inserted when available. For the university version, there are two administration methods: paper and online. For the paper version, the ECI-U costs $10 per self-assessment and $3 per other assessment, making the cost of a complete assessment (called by the authors a 360 assessment) approximately $25. The online version costs $30 per 360 administration with up to 12 other raters.

Boyatzis and Sala (2004) have defined Emotional Intelligence competency as an "ability to recognize, understand, and use emotional information about oneself or others that leads to or causes effective or superior performance" (p. 149). They give an even shorter definition as "the intelligent use of one's emotions" (p. 149). Similar to the EQ-i, though the developers indicated that the ESCI/ECI were developed to measure a construct distinct from personality, and in this case stress that it is a measure of behavior, still the competencies share a common theoretical orientation, and even wording, with concepts and items on the Five-Factor model of personality (MacCann et al., 2003; See table 4).

Of the major measures of Emotional Intelligence, the least psychometric information is available for the ECI. Though the creators have indicated a desire to begin to publish more information on the measure, it was originally not made available to other researchers for evaluation purposes. The lack of data on the measure is now further complicated with the publication of an updated version of the measure, the ESCI. The small amount of psychometric information that was available on the ECI does not necessarily apply to the ESCI, and yet little data is available for the ESCI.

The internal consistency for the ECI cluster scores varies by type of rater. For the self-assessment, internal consistency ranges from poor to adequate for the cluster scores $(r = .61$ to $r = .85$; Sala, 2002). Individual subscales for the self-assessment are generally poor $(r = .47$ to $r = .76)$ and should not be used for analysis. For assessments completed by others (supervisors, associates, etc.), the internal consistency for the cluster scores ranges from adequate to good $(r = .76$ to $r = .96)$, with subscale consistency, though better than that of the self-assessment, still not meeting the accepted cutoffs for analysis on an individual basis. The self-assessment ratings do not correlate strongly with the ratings of others, which is problematic in establishing an overall rating. The publishers strongly recommend not using the self-assessment by itself, suggesting that the other assessments are more accurate. Currently scores are averaged across all raters.

A paucity of good data on test-retest reliability exists. The technical manual reports data on 20 Brazilian executives who were administered the ECI seven months apart. Test-retest reliability for the self-assessment is poor (average $r = .36$). Test retest for the other assessments is better $(r = .59)$, but still not adequate. It is difficult to know how to make sense of this data, give the small sample size and long interval period. It is disappointing that better information was not gathered before the publication of the technical manual, or at least set as a priority for research following its publication.

For the ESCI only internal consistency scores are available, with no information on test-retest, or validity issues addressed in the available paper on the measure. For the most part the internal consistency measures are similar to those of the ECI with other ratings ranging from $r = .74$ to $r = .87$.

Similar to the EQ-i, the ECI correlates significantly with several of the Five-Factor personality characteristics, as well as having a theoretical and item-content connection to the Five-Factor model (see table 4 in MacCann et al., 2003). Specifically, correlations between the ECI and the Openness, Conscientiousness, and Extraversion factors of the Five-Factor model correlate with the cluster scores

ranging from $r = .20$ to $r = .49$. Similar, again, to the EQ-i, there are significant questions as to whether Emotional Intelligence is a distinct construct from the Five-Factor personality model. There is very little, if any, research supporting the predictive validity or concurrent validity for the ECI/ESCI, though this research is now being encouraged and should be forthcoming.

Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT). The MSCEIT was developed by the named authors based on a previous test they had created, the Multi-factor Emotional Intelligence Scale (MEIS). The MSCEIT is a 141 item, performance based measure that is most commonly computer administered. The MSCEIT costs $32 per online administration. Differentiating itself from most other measures of EI, the MSCEIT is based on a more traditional intelligence model, and is thus a performance based measure as opposed to self or other report. Mayer and Salovey (1997) define Emotional Intelligence in the following way:

> Emotional Intelligence involves the ability to perceive accurately,
> appraise, and express emotion; the ability to access and/or generate
> feelings when they facilitate thought; the ability to understand emotion
> and emotional knowledge; and the ability to regulate emotions to
> promote emotional and intellectual growth (p. 10)

Their model focuses on these four areas in a hierarchical manner, based on the order presented in this definition, with perception, appraisal and expression of emotions being the most basic skill, and the ability to regulate emotions to promote emotional and intellectual growth being the most advanced skill. The resulting measure based on this model relies heavily on the definition of this construct as an intelligence, and thus based in ability, which leads to a focus on measuring responses to specific emotional tasks, rather than a self-report of emotional responding. Examinees must respond to ability related tasks within each of the four domains within this definition of Emotional Intelligence. For example, the examinee may be asked to rate to what extent it is being expressed in a pictured face; or to indicate how a specific mood might impact a fictional character in a specific situation; or to indicated how emotions blend to form more complex emotions; or to indicate effective ways to manage emotions to obtain desired outcomes (Bracket & Mayer, 2003, p. 1147). A more complete review of the scales on the MSCEIT may be found in Table 1 of MacCann et al. (2003).

Unlike cognitive ability tests where there is one known correct answer, the scoring of the MSCEIT ability test is somewhat more difficult. The test creators have chosen to make two scoring systems available:

1. Correct answers based on experts decisions

2. Correct answer based on consensus of what people think is correct

According to the authors, the two scoring methods are fairly similar in results, though they recommend using consensus scoring (Mayer, Salovey, & Caruso, 2002)

Reliability scores on the MSCEIT are measured using split-half reliabilities. The overall reliability scores for the MSCEIT range from $r = .91$ to $r = .93$ (Mayer et al., 2002). Reliability for the subscales range from $r = .81$ to $r = .88$ for the Emotion Perception scales, $r = .65$ to $r = .71$ for the Emotional Facilitation of Thought subscales, $r = .66$ to .70 for the Understanding Emotions subscales, and $r = .67$ to $r = .69$ for the Managing Emotions subscales. While the overall reliability is good, the subscale reliabilities, particularly the last three areas, are poor, suggesting that these subscales should not be used to make decisions on specific individuals, and that their usefulness for making comparisons across groups is questionable. Unfortunately, test-retest data on the MSCEIT is sparse, with only an overall test-retest score reported (in Bracket & Mayer, 2003) as being $r = .86$. Though this is good test-retest reliability, no data is presented on the subscales, and curiously does not seem to be a focus of validation by the researchers (MacCann et al. 2003)

MacCann and colleagues (2003) have summarized some additional concerns regarding over-inflation of reliability measures as well as concerns that a response of "no emotion present" is the correct answer on too many items. This last issue is of significant concern, in that if a test taker answered that there was no emotion present on each of the items, they would still get a fairly high score, despite their inability to recognize emotion.

The MSCEIT does not correlate significantly with "Big Five" measures of personality, suggesting it is a distinct concept. It correlates somewhat with crystallized measures of intelligence, but not significantly with fluid measures of intelligence (MacCann et al., 2003).   Little evidence is available establishing the predictive validity of the MSCEIT. Some evidence regarding its predecessor, the MEIS, suggested that a small relationship between it and self-reported empathy, parental warmth, and life satisfaction exists. Other research, however, found no relationship between the MEIS and adjustment, family emotional involvement, alexithymia (difficulties in identifying and describing emotions), and need for cognition, though there were some methodological errors in those studies (MacCann et al., 2003, p. 267). The MSCEIT is still relatively new and more research should be forthcoming.

Free or Low Cost Measures of EI

Though less commonly used, several other measures of EI exist. Most are self-report measures based on some combination of the theories used to create the three previously reviewed measures. Though minimal research is available on these measures, a few are reviewed here.

The Schutte Self-Report Inventory (SSRI; Schutte et al., 1998) is a 33-item self-report measure based on the Salovey and Mayer (1990) theory of Emotional Intelligence. Schutte and colleagues (1998) report an internal consistency of .90 for the overall scale, but no test-retest data is presented. Its authors also found the measure to be related to lower levels of alexithymia and depression and greater levels of optimism, but not to be related to nonverbal expressiveness. Significant correlations between the SSRI and the Five-Factor model have also been reported *(r = .21 to r = .51; MacCann et al., 2003).* According to Schutte et al., this measure is free for research and clinical purposes.

The Swinburne University Emotional Intelligence Test (SUEIT) is a 65-item self-report measure with five subscales. The SUEIT is available without cost. The coefficient alpha for the total scale is good *(r = .88 to r = .91).* Coefficient alphas for the subscales vary from fair to good *(r = .70 to r = .91).* Its authors have found a significant relationship between self-reported leadership style and Emotional Intelligence, a positive relationship with a transformational leadership style and a negative relationship with laissez-faire leadership style (Gardner & Stough, 2002).

The Trait Meta-Mood Scale (TMMS; (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) is a 48-item self-report measure with three subscales, based on the Mayer and Salovey model of EI. There is no cost for using the TMMS. The overall scale coefficient alpha is adequate *(r = .82)* with the subscales ranging from fair to adequate *(r = .66 to r = .83).* The TMMS has demonstrated some small incremental validity beyond IQ and the Five-Factor traits for life satisfaction, academic success and powerlessness (as reported in Tett, Fox, & Wang, 2005).

The Wong and Law Emotional Intelligence Scale (WLEIS; (Wong & Law, 2002) is a 16-item self-report measure with four subscales based on the Mayer and Salovey model of EI. It can be used free of cost. The internal consistency is adequate *(r = .78 to .89)* with similar consistency for the subscales. It has demonstrated small incremental validity over IQ and the Five-Factor model in relation to life satisfaction, interpersonal facilitation, and powerlessness (as reported in (Tett et al., 2005).

The Workgroup Emotional Intelligence Profile (WEIP; (Jordan, Sashkanasy, Hartel, & Hooper, 2002) is a 27-item self-report measure with adequate internal consistency *(r* = .86). Information on its cost could not be located. It is based on the Mayer and Salovey model of EI. Incremental validity for the WEIP has not been demonstrated, but it has been used to predict workgroup improvement over time (as reported in Tett et al., 2005).

The Trait Emotional Intelligence Questionnaire (TEIQue, Petrides & Furnham, 2003) is a 144-item self-report measure based on a blending of the Bar-On, Goleman, and Mayer and Salovey models of EI. It can be used without cost. It has 15 subscales. Internal consistency for the overall scales is adequate *(r* = .86), with subscales ranging from poor to good *(r* = .61 to *r* = .91). It has demonstrated a strong correlation with happiness and some incremental validity for induced mood states (as reported in Tett et al., 2005). A shorter 30-item version is also available, the TEIQue-s.

Summary and Recommendations

As a relatively newly studied construct, Emotional Intelligence is experiencing many of the difficulties common to the study of new constructs. While most definitions share much in common, a major split seems to have developed between more trait/personality definitions and associated measures and more performance/ability definitions and measures. While the performance/ability definitions and measures are more consistent with the construct of intelligence, the use of this term in the construct name seems to be a distracter by creating much debate as how intelligence is truly defined, and avoiding the more important issue of incremental and predictive validity.

It is encouraging that the majority of the measures demonstrate adequate to good reliability for the overall scores, though most of the subscales do not demonstrate adequate reliability for use in any individual manner, and most would be questionable even for examining research questions based on group information. Though some promise of incremental validity above what is provided by IQ and the Five-Factor personality model has been found, there is a dearth of appropriate research on this very important topic, especially for the three major measures of EI. The only meta-analysis conducted on EI, which combined the results of 69 studies found that EI correlates more strongly with measures of personality *(r* = .31) than it did with the behaviors it is supposed to predict *(r* = .23) (Van Rooy & Viswesvaran 2004). This is not a positive finding in favor of the usefulness of EI, and much more research is needed before it can be claimed even tentatively that Emotional

Intelligence, as currently measured, predicts any measure of performance in consistent ways beyond IQ and the Five-Factor model.

One issue that has prevented sufficient research in the area seems to be the cost of the best known instruments. Within the field of psychological assessment one might break the types of measures into two sets: those to be administered regularly across therapy and assessment situations (usually paper and pencil self-report measures) and those that are administered in more specific situations and must be administered/interpreted by a competent professional. For those regularly administered, the average measure ranges from $.20 to $2.00 per administration. The NEO-PI-R, a common measure used to assess the Five Factor model of personality, costs $255 for the initial manual and 25 administrations and then $1.56 per administration thereafter. Intelligence Tests and the Minnesota Multiphasic Personality Inventory (MMPI) are the most common of the selectively administered group. Because costs for the administration and scoring of these measures are generally not listed separately, but included in a full psychological assessment, it is more difficult to gauge their cost. The Wechsler Intelligence Scales, the most effective individualized intelligence tests, cost approximately $900 - $1000 to purchase the materials and then $4 per administration. A psychologist would likely charge $300 - $500 to administer the test and provide a report interpreting the results. An interpretive report for the MMPI carries a similar cost as the EI measures, ranging from $30 - $40 per administration. The cost of the three best known EI measures, ranging from $23 to $99 per administration, places them on par with the costs of measures administered much more selectively, rarely used for entire university populations. Even at the cost of $10 per administration, what Pacific paid for the ECI-U, this is significantly higher than the per use fee for the measures administered regularly, and did not even include the strongly recommended other reports, which would raise the cost. Given these costs, a cost vs. benefits analysis would likely be needed to justify their use. Several of the other measures, however, carry no cost for their use. No current data establishes the three big EI measures as being more accurate or useful than the free measures, suggesting that the lesser known measures may be more practical for widespread use.

Another difficulty in using EI measures in an educational context is that very little research with these EI measures has been done in an educational context. It is very reasonable to question whether items appropriate to, or results found within a business context would translate easily to an educational context. As such, it would be important for the University of the Pacific to include validation of the usefulness and predictive validity of the measures to be used within the university population as part of the studies it conducts. While this validation work would not have to be

conducted prior to other research projects within the area of EI, it would be best to include the issues of reliability and validity as part of some of the initial studies, as this would establish much needed credibility for the use of such measures in a university population. The University of the Pacific could be one of the leading institutions in implementing these measures in a scientifically validated way. To do this, it would be important to establish incremental validity in comparison to measures of IQ (SAT and ACT can serve as estimates) and Five-Factor personality characteristics. Any projects examined at the University of the Pacific would be best served to include such measures.

Given the lack of research with EI measures in a university context, it is difficult to recommend the use of one specific measure over the others. Even within the business field, no measure has distinguished itself as the superior alternative. The available reviews (MacCann et al., 2003; Conte, 2005) suggest that the MSCEIT shows the most promise based on the fact that it does not overlap as much with personality factors and its more clearly defined theory and relationship to accepted definitions of intelligence. While the MSCEIT is expensive, it is the most distinct measure of EI, being the only non-self-report measure of EI. If the university is interested in pursuing the best measure of Emotional Intelligence, with emphasis on the definition of intelligence, and is willing to deal with the high cost, the MSCEIT is probably the best alternative.

For predicting success in academics and other areas, however, several already available personality measures, as well as the EI measures, would likely be helpful in this area. Due to the lack of demonstrated benefit of the more costly measures, it is advisable to use one or more of the no cost measures in addition to one or more of the available personality measures. Several of the initial studies at the University of the Pacific could include a variety of these measures in an effort to help establish their usefulness as well as to decide on any benefit of one over the others.

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Emotional Intelligence, Personality, Emotion Regulation, and Coping

Carolynn Kohn

Emotional intelligence (EI) has been generally described as a competency or "ability to perceive and accurately express emotion, to use emotion to facilitate thought, to understand emotions, and to manage emotions for emotional growth (Brackett, Mayer & Warner, 2004, p. 1389)." As research on EI has progressed, many researchers have identified two distinct models of EI: *ability* EI and *trait* EI (to reduce confusion about these two terms, italics will be used throughout this section). This distinction is important to the discussion of EI because *trait* EI correlates highly with personality traits; whereas, *ability* EI has been found to correlate with general measures of intelligence, coping skills, and emotional regulation. However *ability* EI and *trait* EI appear to be only minimally related concepts, and the correlations between them are key to understanding the current standing of EI research. For example, the low association between the two types of EI is a bit disconcerting if they are purporting to measure the same construct. If we are trying to understand what predicts certain individual behaviors or outcomes, then the high correlation between *trait* EI and personality is also potentially problematic if *trait* EI does not add any new information. Thus, the purpose of this section is to briefly describe EI, define the two models that represent the current state of research (i.e., *trait* EI and *ability* EI), and then describe the constructs of personality, emotion regulation, and coping skills and how they are related to EI. Based on the literature review, conclusions will be drawn and recommendations made.

Emotional Intelligence: Trait and Ability Models

Emotional intelligence (EI) is frequently described as two different models, the *trait* model and the *ability* model (e.g., Bastian, Burns, & Nettelbeck, 2005; Petrides & Furnham, 2001). The *ability* model, as defined by Mayer, Salovey and colleagues, describes a competency or ability to accurately perceive and identify one's own emotions as well as the emotions of others, and to use this knowledge to make informed, socially appropriate and desirable responses. They suggest that the *ability* model implies just that – that EI is an ability that can be taught through training and that is measured in terms of competencies by standard measures – similar to the traditional intelligence tests. The *ability* EI model is typically assessed by the Multifactor Emotional Intelligence Scale (MEIS) or by the more recent Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (i.e., Mayer, Salovey, & Caruso, 2004). The MEIS and MSCEIT are measures of ability to perceive, understand, manage, and use emotion in a positive, productive manner. Mayer and

colleagues assess EI as a skill or ability rather than as a self-report of perceived emotional competence.

In contrast, *trait* models are assessed via self-report and are designed to measure emotional abilities and positive social behaviors (Conte, 2005). The oldest measure of *trait* EI is the Emotional Quotient Inventory (EQ-i; Bar-On, 1997), a self-report measure of traits related to emotional and social knowledge that influence an individual's ability to cope effectively. The EQ-i includes five domains; intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood (Bar-On, 1997). A second self-report measure of *trait* EI, the Emotional Competency Inventory (ECI), is based on Goleman's (e.g., 2006) model of emotional intelligence and purports to assess abilities or competencies in four domains or clusters: self-awareness, self-management, social awareness, and relationship management.

A key difference between the *ability* and *trait* models is the manner in which they are assessed. Although *ability* models are assessed in a manner somewhat similar to that used in common intelligence tests, there are important differences. Questions are designed and then given to "experts" and a large sample of the population and then "correct" answers are determined via *consensus*. This is different than cognitive intelligence testing, which arrives at an objectively defined absolutely correct answer, not a correct answer through consensus. Individuals given the *ability* EI measure are then asked to identify their answers and are given an ability score based on the number of correct answers achieved. This is in contrast to self-report *trait* EI measures that ask individuals to use a scale (e.g., a scale of 1 to 5) to rate themselves on a number of statements such as "I typically like to work alone." There are no "correct" or consensus answers; instead, an individual's pattern of answers is scored, and then a profile is usually obtained. The answers are entirely subjective ratings given by the individual him or herself, and thus may not represent the way others see him/her.

The different ways in which these EI models are assessed have direct bearing on the other types of constructs with which they are correlated and the types of EI that are being measured. For example, the MSCEIT, which assesses *ability* EI, appears to be distinct from *trait* EI both conceptually and empirically. The MSCEIT is only minimally correlated with *trait* measures of EI such as the EQ-i and ECI (Mayer, Salovey, & Caruso, 2004), and actually shows higher correlations with traditional measures of intelligence (Conte, 2005), academic success as measured by GPA (Mayer, et al., 2004), coping styles, and emotion regulation (Bastian, Burns, & Nettelbeck, 2005; Brackett, et al., 2004). The MSCEIT is also only minimally

correlated with measures of personality (e.g., Brackett, Mayer, & Warner, 2004; Caruso, Mayer, & Salovey, 2002; Conte, 2005).

On the other hand, measures of *trait* EI such as the EQ-i and ECI appear to overlap heavily with the constructs of personality and coping style. Moreover, despite claims of these types of EI measures being associated with improved outcomes, the EQ-i was shown to be a poor predictor of success as measured by GPA in a study of 160 Canadian college students (Conte, 2005). Although some researchers suggest that higher scores on the ECI are associated with greater effectiveness in the workplace (Emmerling & Goleman, 2003), other researchers suggest that ECI overlaps too much with measures of personality and motivation to be a useful and distinct construct (Conte, 2005; Petrides, Frederickson, & Furnham, 2004; Van der Zee, Thijs, & Schakel, 2002). This has led several critics of the EI concept to suggest that EI contributes little to our knowledge beyond what decades of research on the concepts of cognitive intelligence (discussed in a separate section in this literature review), personality, and coping has already shown (e.g., McCrae, 2000).

Supporters of EI argue that EI is still an important, independent construct that adds explanatory information about individuals' functioning which is distinct from these older more well-established and researched constructs (e.g., Emmerling & Goleman, 2003; Mayer & Salovey, 1997; Petrides & Furnham, 2002, 2003). Thus, before discussing the ways in which EI is similar or distinct from the concepts of personality, emotion regulation, and coping, a review of these concepts is provided below. Findings with college student participants are discussed whenever possible.

Personality

Personality and personality traits are generally considered, "relatively enduring styles of thinking, feeling, and acting (McCrae & Costa, 1997, p.509)." These enduring styles are thought to consistently and reliably influence and inform individuals' decisions, actions, and behaviors. For example, a pessimistic person will typically notice the small negative qualities and occurrences in a situation, remember and discuss these negative qualities, and not perceive or remember positive qualities in the situation. Personality structure is usually the patterned grouping of these traits into larger, cohesive factors that represent the basic dimensions of personality (McCrae, 2000). These traits and dimensions have been examined cross-culturally and have shown good reliability and validity across seven cultures and languages, although the role and meaning of the personality dimensions may differ across cultures (McCrae & Costa, 1997). By *personality dimensions*, psychologists mean the pattern among these traits, usually summarized

in terms of a relatively small number of factors that represent the basic factors of personality.

One of the most widely cited and studied theories of personality is Costa and McCrae's Five Factor Model of personality (FFM), or the "Big Five" measured by the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992). The FFM construct has five traits that have been studied extensively over the years: Agreeableness, Openness, Extraversion, Neuroticism, and Conscientiousness. Each of these five traits has been found to correlate highly with *trait* EI and to more robustly explain and predict individual behaviors and outcomes than does trait EI (e.g., McCrae, 2000).

The NEO-PI-R is the most widely used questionnaire for assessing the FFM of personality. It is a 240-item self-report measure that has demonstrated good internal consistency, test-retest reliability, and validity across several studies, many different samples, and different cultures and languages (e.g., Gosling, Rentfrow, & Swann, 2003; McCrae, 2000; Petrides, Pérez-Gonzalez, & Furnham, 2007). A brief 10-item version of the NEO-PI-R was examined in a sample of 1,813 undergraduate students and was found to have adequate convergent and discriminant validity and test-retest reliability (Gosling et al.), although the researchers caution that if the FFM of personality is the focus of a study, the original longer version should be used and not the brief version.

Personality and Emotional Intelligence

Although results from a recent series of three studies by Petrides et al. (2007) suggest that *trait* EI may be an informative construct above and beyond personality, there were several limitations to their studies. In the first two studies, Petrides, et al. gave a newly developed measure called the Trait Emotional Intelligence Questionnaire (TEIQue) to two samples of participants (*n* = 166 British college students and *n* = 354 unspecified). They found that the TEIQue was associated with measures of rumination, life satisfaction, depression, dysfunctional attitudes, and coping, even after controlling for their version of a FFM personality measure. However, the remaining associations between EI and the other variables were quite low after accounting for the FFM variance, making the meaning of the associations questionable. In their third study, Petrides et al. demonstrated that *trait* EI may be the underlying factor that explains individuals' susceptibility to a wide range of personality disorders. However, they failed to include the NEO-PI-R or a similar measure of FFM in that component of their study. In that third study, Petrides, et al. gave the TEIQue to college students in Spain (*n* = 212), as well as measures of personality disorders, depression, and dispositional (or "trait") mood. EI was

significantly associated with all of the personality disorder variables even after accounting for dispositional mood and depressive symptoms, which are typically highly associated with personality disorders. This study suggests that low EI may be an underlying risk factor for the development of serious mental health problems rather than the result of such mental health problems. However, these results were correlational and taken from a group of college students, so caution must be used when making these interpretations.

Common critiques of the theoretical construct of EI (especially *trait* EI) and the measures (e.g., EQ-i and ECI) used to assess it are that it is not much more than a measure of personality. In particular, it overlaps substantially with the main tenets and constructs of the Five Factor Model (FFM) of personality (e.g., Brackett & Mayer, 2003; Ciarrochi, Chan, & Caputi, 2000; Day, Therrien, & Carroll, 2005; Matthews, Roberts, & Zeidner, 2004; McCrae, 2000), and thus adds little to our knowledge base after controlling for FFM. For example, Day et al. examined *trait* EI using Bar-On's EQ-i, and found that college students who scored high on measures of *trait* EI also tended to have higher scores on Agreeableness, Openness, and Extraversion, and lower scores on Neuroticism, compared with college students who scored lower on measures of *trait* EI. They also found that the association between EI and psychological health was significant, but this relationship was greatly diminished after controlling for the FFM personality traits in college students. *Trait* EI did not add significant information beyond that obtained from the NEO-PI-R. Moreover, after controlling for personality and cognitive (e.g., intelligence) abilities, Bastian et al. (2005) found that the relative contribution of *trait* EI to the reported life satisfaction and life skills of freshmen university students was quite small. Although there is some evidence that *trait* EI provides some information about mood-congruent responses in college students even after controlling for personality variables (e.g., Petrides & Furnham, 2001, 2003), the prevailing finding to date is that the most popular measures of *trait* EI are, "little more than a proxy measure of a composite of Big Five personality constructs, weighted most strongly toward low neuroticism (Matthews et al., 2004, p. 185)." Lastly, *trait* EI, especially as measured with the ECI, also has poor convergent validity between self and observer ratings, similar to what has been found with ratings of personality (Connolly, Kavanagh, & Viswesvaran, 2007).

Mayer and Cobb (2000) argue that the FFM personality model is by no means perfect, and in fact has been shown to have little association with job success in certain occupations (e.g., teachers), leaving an opportunity for EI to provide information in these areas. However, McCrae (2000) in his review of personality and EI, maps out how each of the trait EI concepts overlaps with the FFM, and suggests

that keeping the five traits separated out is a far more sophisticated way of understanding an individual's emotional intelligence as compared to placing all the variance into a single measure of EI.

Moreover, although there is convincing evidence that FFM is a cross-culturally valid theory of personality (McCrae & Costa, 1997), there is no evidence that the same can be said of EI. Proponents of EI – particularly of *trait* EI – cite the inherent cultural bias of current EI measures as a problem because it is difficult to understand the results of an EI measure outside of its cultural context (Huang, Law, & Wong, 2006). This has direct implications for the use of *trait* EI measures (e.g., such as the ECI-U that was administered to Pacific's 2006 incoming freshmen class) because they were developed in a Western culture. Thus, persons in a culture with low norms for expressiveness may not rate items in a manner that is considered "emotionally intelligent" in a culture with norms of high expressiveness (Gohm, 2004; Law, Wong, & Song, 2004, as cited in Huang, Law, & Wong). For example, a finding that Asian students at Pacific score lower on the ECI-U may mean something other than a tendency for those students to have lower EI if this finding is examined within a cultural context.

Finally, as previously stated, *trait* EI is highly correlated with personality. However, there is little research examining personality traits and their relationship to ethical behavior. There is also little work examining EI and ethical behavior, leading some researchers to question whether an individual may possess "good character" while simultaneously being low in EI or may possess an "evil character" while simultaneously scoring high on EI (Mayer & Cobb, 2000). This has particular relevance to the college student population. For example, if Pacific is hoping to increase the ethical behavior of its students, in part, through the teaching of EI, a logical extrapolation would be to assess whether high EI in college students is predictive of ethical and legal behavior (e.g., avoiding cheating, honesty with peers, arrests, dorm citations, etc). However, when attempting to tie measures of EI to behavioral outcomes, some researchers caution that *conformity* is not synonymous with high EI (Mayer et al., 2004). That is, some measures of EI (e.g., the MSCEIT) tend to rate more highly those responses that conform to society's expectations of what is *correct* or *right* – which may not be the most ethical or moral choice, depending on the social climate of the day. Thus, the role of ethics and values within the field of EI is still nascent and could benefit from empirical examination.

Emotion Regulation and Emotional Intelligence

Ability EI is most frequently examined in the context of emotion regulation, with the MSCEIT being described in terms of ability to cope with emotions (Mayer

& Salovey, 1997). According to Mayer and Salovey (1997), emotional intelligence encompasses four interrelated abilities involved in the processing of emotional information: perceiving emotions, using emotions to facilitate thinking, understanding emotions, and regulating one's own emotions and the emotions of others. These abilities are thought to be important for social interaction because emotions serve communicative and social functions, conveying information about people's thoughts and intentions. Of these four abilities, Salovey and colleagues believe that emotion regulation is probably the most important for social interaction because it directly influences emotional expression and behavior. For example, an inability to control angry outbursts negatively affects one's relationships. In one recent study, college students who had higher scores on an ability measure of emotion regulation reported having more positive relationships with others, less conflict and antagonism in their relationship with a close friend, and greater companionship, affection, and support from their parents (Lopes, Salovey, & Straus, 2003). In a separate study of college students, after controlling for the FFM and measures of fluid and verbal intelligence, emotion regulation was still associated with positive ratings from peers (Lopes, Salovey, Côté, & Beers, 2005).

Within the fields of therapy and treatment, there has been a rise in the examination of the role that emotion regulation plays in social relationships. In the therapy and treatment literatures, emotion regulation appears to be an important component of successful treatments for a variety of emotion regulation problems such as borderline personality disorder, couples therapy, and parent-child problems (e.g., Linehan, 2000; Snyder, Simpson, & Hughes, 2006), such that the increase in emotion regulation and positive expression of emotions tends to decrease problematic relationships and reduce relationship discord and distress. Closely related to the concept of emotion regulation is the concept of coping, which is discussed below.

Coping

Decades of research suggest that coping strategies are important determinants of an individual's physical and psychological well being in response to negative or stressful life events (e.g., Lazarus, 2000). Much research has examined individuals' coping styles, coping mechanisms, and the predictors and outcomes of coping (e.g., Kohn, Mertens, & Weisner, 2002; Lazarus, 2000). Coping has been defined as an individual's pattern of response to external negative events that is context dependent (Carver, Scheier, & Weintraub, 1989; Salovey, et al, 2002). Coping styles have been used to explain and predict a multitude of behaviors and outcomes and have been linked to biological systems (e.g., the limbic system) and brain

activity (Lazarus, 2000). Active or problem-focused coping is typically associated with healthier, more positive outcomes; whereas, emotion-focused coping strategies such as distancing, minimization, avoidance, and selective attention are generally considered less functional in many circumstance, and are considered an inferior form of coping (Lazarus, 2000; Lazarus & Folkman, 1984; Moos, 1992).

An additional distinction that is often made in the coping literature is between active and avoidant coping strategies. Active coping strategies are either behavioral or psychological responses designed to change the nature of the stressor itself or how one thinks about it, whereas avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events (Carver, et al., 1989). Generally speaking, active coping strategies, whether behavioral or emotional, are thought to be better ways to deal with stressful events, and avoidant coping strategies appear to be a psychological risk factor or marker for adverse responses to stressful life events (Holahan & Moos, 1987).

Coping style – similar to EI, but with a longer empirical history – has been implicated in a variety of individual outcomes, including health behaviors, managing stress and anxiety, and susceptibility to depression (Lazarus, 2000; Moos, 1992). Moreover, problem-focused coping, frequently called "problem solving" or "good communication skills" in the marriage and relationship literature, has been strongly associated with overall relationship satisfaction and stability (Gottman, Levenson, & Woodlin, 2001; Karney & Bradbury, 1997; Markman, Floyd, Stanley, & Storaasli, 1988) as well as immune system functioning (Kiecolt-Glaser, Fisher, Ogrocki, Stout, Speicher, & Glaser, 1987). In as much as "stress, coping, and emotion depend on the relational meaning that an individual person constructs from the person-environment relationship (Lazarus, 2000, p. 670)," it may be that emotional intelligence mediates choice of coping strategy by helping interpret situational context.

Coping Measures

An overwhelming array of coping measures exist, but in recent years, researchers have typically used one of the following instruments: the Ways of Coping Questionnaire (WCQ: Folkman & Lazarus, 1980) and the COPE (Carver, et al., 1989).

The WCQ is an empirically derived inventory of specific ways in which people might cope with a stressful event. Individuals are asked to designate or respond to a specific stressor (such as neighborhood crime) and indicate the degree

to which they have utilized each particular coping method to deal with it. Although the original measure was intended to be an 8-factor model, a more recent study has identified a 4-factor model that is composed of distancing/avoidance, confrontation/seeking social support, problem-focused coping, and denial (e.g., Bouchard, Sabourin, Lussier, Wright, & Richer, 1997) that helped explain coping in a large sample of couples (n = 506 couples). Other critics of the WCQ suggest several of the items are unclear, or combine several concepts together and that a statistically derived measure of coping such as the WCQ provides far less useful information compared to a coping measure that is theoretically derived (Carver et al., 1989).

Carver et al. (1989) suggested that the WCQ was conceptually loose and did not provide specific enough information about coping largely due to the critiques mentioned above. Thus, they developed a theoretically derived measure of coping called the COPE (this is not an acronym). In contrast to the WCQ, which measures coping in a specific situation, the COPE measures both general coping as well as situation-specific coping. The COPE was examined in several samples of college students (n's ranging from 89 to 1030) and was found to have good test re-test reliability and internal consistency as well as discriminant and convergent validity (Carver et al.) for both the dispositional (i.e., trait) as well as situational (i.e., state) measures of coping. It also appears that this measure is available free of charge from Charles Carver (Carver et al.).

Coping and Trait Emotional Intelligence

According to Salovey et al. (1993), coping strategies are associated with emotion-management, and are thus important components of emotional intelligence. Research examining EI suggests that individuals who report low EI tend to use emotion-focused and avoidance coping styles (Emmons & Colby, 1995 as cited in Fitness & Curtis, 2005), and that individuals who report high EI may use adaptive coping strategies to alleviate distress (McFarland & Buehler, 1997, as cited in Fitness & Curtis, 2005).

Higher emotional intelligence has been linked to better coping both in self-report and physiological measures (e.g., Salovey, Stroud, Woolery, & Epel, 2002). For example, Salovey et al. found that undergraduates' attention to mood, as reported on the Trait Meta Mood Scale (TMMS), was associated with lowered social anxiety, less passive and more active coping, as well as lowered physiological arousal as measured by cortisol release following the presentation of stressor variables. However it is difficult to parse out whether EI leads to better coping or whether those with better coping report higher EI. Saklofske, Austin, Galloway, and Davidson (2007) found that emotional intelligence, as measured by the Schutte et al.

(1998) EI scale, was associated with positive coping, and that EI and coping factored *together* and moderated the association between personality and health behaviors (i.e., exercise and healthy eating) among a large (*n*=362 sample of Canadian college students. This again makes it unclear which is the moderating variable; does higher EI lend itself to better coping or does better coping lead to higher EI. On the other hand, results from a more recent study by Petrides, et al. (2007) conducted with individuals from a British University (*n* = 166) suggest that EI may in fact explain differences in coping styles, life satisfaction, and a tendency to "ruminate" over negative thoughts even after accounting for personality traits as measured by the NEO-PI-R. They suggest that low EI may be an underlying risk factor for poor coping skills, although these results were correlational in nature and must be interpreted with caution.

Romanelli, Cain, and Smith (2006) reviewed a study conducted by Pau et al. in which the EI of dental students and the effect of stress were examined. Students with high EI scores were found to have more adaptive coping strategies and better time management skills; whereas students who had low EI scores also reported engaging in unhealthy behaviors such as smoking, procrastinating, and withdrawing socially. Meyer and Fletcher (2007) reviewed studies that reported similar findings among college student athletes. Unfortunately, each of these studies was limited by a number of factors, including sample size and make-up, use of self-report measures or qualitative analysis.

Personality, Coping, and Emotional Intelligence

Personality, coping, and EI seem to be conceptually intertwined when examining ways in which individuals manage stress. For example, Extraversion is associated with forms of coping that involve humor, talking about feelings, and seeking support; Agreeableness is associated with stoic and compliant attitudes in the face of stress (Costa, n.d.).

An elegant study by Matthews et al. (2006) used the MSCEIT as a measure of *ability* EI in a study with 200 U.S. undergraduate psychology students to examine worry, coping, and *ability* EI when presented with a stress task. They found that, even after controlling for the FFM as measured by a short version of the NEO-FFI (a shorter version of the original NEO-PI-R), students with high EI reported lower worry and distress prior to a stress task. EI was not related to pre-task worry or distress for students who reported low EI, although EI was related to increased worry and avoidance coping after the task was completed. However, EI was not associated with worry, distress, or coping strategies during the stress task, and only FFM personality traits predicted performance on the working memory task. This

suggests that individuals with higher *ability* EI are no more likely to remain calm or become less distressed while completing stressful tasks than those with lower *ability* EI. They may begin with less distress and worry, but this does not protect them from experiencing distress and worry once they begin a difficult task. It is possible that high *ability* EI may cause them to start a difficult task with overconfidence, which then leads to distress once the task is started. This does not support the idea that measuring *ability* EI will provide additional information about how an individual will perform under stress (e.g., Bar-On, 2000; Matthews et al., 2006) beyond that which is provided by information about coping style and personality traits. Moreover, as discussed in an earlier section, *trait* EI often provides little additional information beyond that which is provided by measures of personality.

Matthews et al. (2006) point out that most measures of EI tend to be solitary self-report or ability measures given to individuals and that most outcome variables assessed - particularly among college students - are also individual self-reports (e.g., coping, personality, distress) or outcomes of individual behaviors (smoking, drinking, exercise, GPA, SAT scores). They point out the irony in this methodology which focuses on individuals, given that emotional intelligence is by definition a skill or trait that is best expressed in the company of others. They recommend that researchers examine teamwork and communication in addition to the continued research on individual performance measures.

Conclusions

Emotional intelligence is not a single construct, but rather several constructs that measure a person's different individual traits or abilities. The type of EI assessed is currently dependent on the method of measurement used and is complicated by the findings that *ability* EI and *trait* EI are not correlated with each other. Measures of *trait* EI appear to overlap greatly with long-standing, well-researched measures of personality, and so its utility and additional explanatory value is currently questionable. *Ability* EI appears to overlap somewhat with long-standing measures of coping strategies and emotion regulation; although some research suggests it may provide additional information above and beyond what can be learned through personality and coping measures.

Without additional empirical evidence, when attempting to measure the construct of EI and its correlates and associated outcome variables (e.g., health behaviors, school performance) it seems prudent to use already well-researched, psychometrically sound and inexpensive or free measures of personality, coping, and emotional intelligence (e.g., COPE, TEIQue, short version of the NEO-PI-R). There appears to be no benefit at the present time for using the more expensive

measures of EI. Moreover, the bulk of the current EI research tends to examine cross-sectional relationships between EI and other variables, but with few exceptions (e.g., Chang, 2007), little is known about whether EI can be improved or taught to college students, and whether the teaching of EI will make a meaningful difference in other important aspects of life (e.g., health behaviors, school performance). This is an important area for future research. EI concepts will have much more promise with college populations if it can be shown that the concepts can be learned, and that learning these concepts improves desirable outcomes (e.g., academic, personal, moral/ethical).

Recommendations

Based on the reviewed information, three recommendations are made.

First. The research reviewed in this section suggests that personality traits are fairly stable. Although individuals may use a somewhat consistent style of coping skills, the reviewed research suggests that coping skills themselves are teachable. If EI or certain components of EI are teachable (i.e., are similar to coping strategies in this regard), the implications for our students may be far-reaching. Research linking higher *trait* EI with greater success in the work arena (e.g., Goleman, 2006) is not particularly empirical or relevant to Pacific's students; however, empirical (albeit correlational) research has linked both *trait* and *ability* EI to important behavioral outcomes such as individuals' health and personal relationships. Individuals with poor emotion regulation skills (e.g., those diagnosed with borderline personality disorder), couples with poor communication and empathy, and families with high expressed emotion (i.e., negative emotion) have all been shown to benefit from some type of emotion regulation or emotion-focused therapy (e.g., Linehan, 2000; Schwartz & Johnson, 2000). Whether it turns out that EI can be introduced as a primary prevention strategy (e.g., embedded in a number of required courses and events across the university), or whether it is more beneficial as a treatment or intervention modality (e.g., for students already identified as having low EI and concomitant academic, behavior, and or social problems) remains to be seen.

Second. Romanelli et al's (2006) review of the literature suggests that *trait* EI as assessed in college students may be associated with cognitive-based performance above and beyond general intelligence, although personality variables were not included in this model. Moreover, and perhaps more relevant to University of the Pacific, is Carrothers, Gregory, and Gallagher's (2000) study that assessed EI among medical school applicants and found that applicants who had graduated from universities with the strongest requirements in terms of arts and humanities had the highest overall emotional intelligence scores and had the lowest variability in EI

scores compared to other institutions. Although this is a correlational finding and may be a reflection of self-selection in students' choice of universities rather than university curriculum affecting student EI, it is well worth noting and assessing further, especially given the College of the Pacific's commitment to a liberal arts education and the University's commitment to a strong GE program. Mayer and Cobb (2000) assert their belief that "emotional intelligence may well be fostered by courses in the liberal arts and creative arts (p. 179)." Humphrey, Curran, Morris, Farrell, and Woods (2007) suggest that if EI is to be taught, a central goal of social and emotional learning must be to "change the individuals' perception of reward from one of self-serving and self-seeking gratification to one where reward is gained through understanding the emotional needs of other people as well as their own (pp. 246-247)." Thus, one way that Pacific may increase the overall EI of its students without embarking on implementing new programs is to strengthen and expand is its already strong liberal arts educational requirements.

Third. Zeidner, Roberts, and Matthews (2002) make specific suggestions for schools attempting to teach EI in their curriculum, which include the following: base EI intervention programs on a solid conceptual framework (e.g., choose a trait or ability framework), carefully specify program goals and behavioral outcomes, identify the educational, sociocultural, and developmental context for program implementation (e.g., appropriate to the developmental levels and culture of college students), fully integrate the EI program into the school educational and instructional curriculum, provide out-of-classroom opportunities to practice EI skills, ensure professional development of program personnel, and use robust experimental psychometrically sound designs for assessing program effectiveness. It is recommended that prior to implementing EI programs at Pacific that these suggestions are operationalized as clear, measurable goals rather than aspirational goals. A solid grounding in experimental methods, research design, and program evaluation will assist in achieving this, in addition to a number of strong baseline measurements.

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Emotional Intelligence and Academic Success

Stacy Rilea

Historically, academic success has been investigated with relation to cognitive processes (including intelligence) and personality factors. It was believed that successful cognitive processing could not occur at the same time as emotional processing. More specifically, rational and logical thinking could not occur when emotional information was also being processed (Humphrey, Curran, Morris, Farrell, and Woods, 2007). Thus, employees (or students) would be unable to engage in effective decision making processes if their emotional processes entered into the equation. In contrast, the current trend has been to focus on how emotions, in particular emotional intelligence (EI), may enhance decision making and academic success. Humphrey et al. suggested that cognitive and emotional processing cannot be separated, and that emotional processing is an important component of rational thought, as long as the emotions are not in excess.

The following section will evaluate the extent to which three factors influence academic success: cognitive processes, personality factors, and EI. Specifically, a review of the existing research examining cognitive ability and personality factors and how they relate to academic success is presented here, as well as a review of the research examining the relationship between EI and academic success. An examination of the interaction of these three factors will also be evaluated. Finally, recommendations for the application of this information in an academic setting will be addressed.

Measuring Emotional Intelligence

One of the controversial issues associated with emotional intelligence is the question of whether there are valid and reliable measures. Additionally, it is unclear whether the available assessments are actually tapping into emotional intelligence as a separate construct, given the overlap between EI measures and personality measures (Zeidner, Roberts, & Matthews, 2002). Petrides and Furnham (2000) created two distinct categories of emotional intelligence measures to help strengthen the validity of the measures and to help operationalize a definition of emotional intelligence. Specifically, they suggested that *trait* EI evaluates one's self-perceptions of his/her ability to correctly recognize, process, and use emotional information. Measures evaluating trait EI are generally self-report measures, which are vulnerable to a wide range of factors that limit their ability to fully assess emotional intelligence. For example, individuals may feel pressure to answer in a socially

desirable way, or they may try to give a good impression. Additionally, individuals may rely on a response set when answering the questions. Another problem with self-report measures of emotional intelligence is that one component of emotional intelligence is self-awareness; therefore, individuals administered trait EI measures would be required to have good self-awareness in order to accurately evaluate their own abilities to process emotional information, and many people have poor self-awareness.

Ability EI refers to one's actual ability to correctly recognize, process, and use emotional information. Measures evaluating ability EI are made up of questionnaires that assess actual performance, where there are correct and incorrect responses. One of the problems faced by researchers using ability EI measures is developing objective criteria for establishing correct and incorrect responses. To accommodate this, researchers generally have to rely on different methods for scoring, such as consensus scoring (i.e., there is a consensus among multiple scorers) or expert scoring (i.e., an expert in the field of emotions is required to score the test). Petrides, Frederickson, and Furnham (2004) concluded that "neither of the two EI constructs (trait EI and ability EI) has effects that are anywhere near as strong or pervasive as some theoretical accounts would suggest" (p. 289). Given the limitations associated with the assessments of emotional intelligence, any research measuring emotional intelligence should be interpreted with caution.

Predicting Academic Success

A clear understanding of the factors contributing to academic success has extensive possible applications for developing assistance programs for students who are facing academic failure. As previously mentioned, much of this research has focused on cognitive ability and personality factors. Recently, the predictive validity of emotional intelligence for academic success has received a great deal of attention. Each of these factors is discussed below.

Cognitive ability. Much of the research on academic success has focused on the influence of cognitive factors. Cognition is not a unitary construct; it refers to a wide range of mental processes that allow us to interpret information in our environment. However, these processes are often interdependent, and include perception, attention, memory, learning, language, problem solving, and decision making. Given the space limitations in this document, it is impossible to review all of the research within each of these types of cognitive processes in relation to academic success. Thus, a general overview will focus on the most frequently used assessments of cognitive ability and the processes that have been found to be highly related to academic success (although most aspects of cognition are important for

academic success). These processes include intelligence (Busato, Prins, Elshout, & Hamaker, 2000; Neisser et al., 1996; Ridgell, & Lounsbury, 2004), learning style (Busato, et al, 2000; Hudak & Anderson, 1990), verbal ability (Barchard, 2003; Farsides & Woodfield, 2003), working memory (Aronen, Vuontela, Steenari, Salmi, & Carlson, 2005; Colom, Escorial, Shih, & Privado, 2007; Gathercole, Brown, & Pickering, 2003), and processing speed (Colom, et al., 2007).

When assessing the influence of cognitive ability on academic performance, one of the most common measures used is a standardized intelligence test. Not surprisingly, several researchers have found that intelligence has been found to successfully predict academic success (Busato, et al., 2000; Neisser et al., 1996; Ridgell, & Lounsbury, 2004). Neisser et al. found that intelligence alone could account for 25% of the variance in academic achievement and concluded that intelligence scores were the single best predictor of academic success.

Researchers have also identified learning style as an important predictor of academic success. Hudak and Anderson (1990) found that using an abstract conceptualization learning style led to greater success in statistics and computer science courses, relative to three other learning styles (concrete experience, active experimentation, and reflective observation). Additionally, Busato et al. (2000) found that individuals identified as using an undirected learning style (i.e., the individual has difficulty distinguishing important from unimportant information) had greater difficulty in academic settings.

Other researchers have measured other aspects of cognitive processes (e.g., verbal ability, working memory, and processing speed) to better understand their influence on academic performance. Barchard (2003) found that verbal ability alone accounted for 9.2% of the variance in predicting academic success. Colom et al. (2007) conducted a wide battery of cognitive measures and found that academic success was related to short-term memory, working memory, processing speed, and attention. In spite of the wide array of operational definitions of cognitive ability, it is clear (and not surprising) that cognitive ability is a critical component to academic success.

Personality factors. While Neisser suggests that traditional intelligence scores are the best predictor of academic success, Duckworth and Seligman (2005) found that self-discipline was a better predictor than intelligence (see also Wolfe & Johnson, 1995, for similar results). Many researchers have found that personality factors play a significant role in predicting academic success (Colom et al., 2007; Van Der Zee, Thijs, & Schakel, 2002). Most of personality research, including how it relates to academic performance, has focused on the Big Five Personality Factors

(Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness). Of those five factors, research has found that two contribute to predicting academic success: Emotional Stability (opposite of Neuroticism) and Conscientiousness. Lauer and Evans (1930) were among the first researchers to suggest that Emotional Stability may be related to academic success. The factor of Neuroticism refers to an individual's tendency to experience negative emotions. Individuals who score high on measures of neuroticism tend to be easily upset and frequently experience negative emotions (e.g., anger, depression, anxiety). Scoring high on measures of neuroticism also makes it more difficult for these individuals to think clearly and to engage in effective decision-making. Individuals at the other end of the spectrum demonstrate high levels of Emotional Stability. Specifically, these individuals tend to be less emotionally reactive, more calm, and they report lower levels of stress.

As suggested by Lauer and Evans, individuals who are emotionally stable are more likely to experience academic success (Lounsbury, Sundstrom, Loveland, & Gibson, 2002; Richter, & Onas, 1971; Ridgell & Lounsbury, 2004). For example, Ridgell and Lounsbury (2004) found that emotional stability accounted for 29% of the variance in college freshmen GPA. Chamorro-Premuzic and Furnham (2003) also observed a positive correlation between academic success and Emotional Stability. To further support these findings, Sanchez, Rejano, and Rodriguez (2001) assessed personality factors in individuals who had dropped out of college in either their first or second year. All participants were also administered the Wechsler Adult Intelligence Scale (WAIS). They found that intelligence level did not explain their inability to complete college; average intelligence score in these individuals was 122, well above average. Instead, dropping out of college was related to personality factors. In particular, the participants in this study scored high on levels of Neuroticism. So not only does Emotional Stability enhance academic success, Neuroticism can hinder academic success.

The second personality factor that appears to be important for academic success is Conscientiousness (Bratko, Chamorro-Premuzic, & Saks, 2006; Chamorro-Premuzic & Furnham, 2003; Heaven, Ciarrochi, & Vialle, 2007; Peterson, Casillas, & Robbins, 2006). The factor of Conscientiousness refers to an individual's ability to regulate impulses. Individuals who score high on measures of Conscientiousness regularly engage in careful planning and tend to be persistent. Others often describe these individuals as being reliable and intelligent. The negative side of conscientious individuals is that they are more likely to be perfectionists and/or workaholics. Given these characteristics, it is not surprising that Conscientiousness is related to academic success.

Wagerman and Funder (2007) found that Conscientiousness was able to successfully predict GPA in college seniors above and beyond the more traditional measures associated with academic achievement (e.g., high school GPA and SAT scores). Specifically, Conscientiousness accounted for 37% of the variance in GPA for college seniors. Finally, Colom et al. found that sensation seeking and impulsivity (low Conscientiousness) were negatively correlated with academic performance. Thus, personality factors, specifically Emotional Stability and Conscientiousness, make a significant contribution to an individual's success in an academic environment.

Overall, this research suggests that while cognitive factors are important for academic success, personality factors, specifically Emotional Stability and Conscientiousness, are also important. As discussed previously, Sanchez et al. (2001) observed that intelligence alone was not enough for individuals to experience academic success. The participants in their study had higher than average intelligence, yet still dropped out of college. Sanchez et al. concluded that it was the high level of Neuroticism that prevented them from completing their college career.

Emotional Intelligence. Goleman (1995) suggested that emotional intelligence can predict academic success better than traditional measures of intelligence. However, Zeidner, et al., (2002) correctly pointed out that there has been insufficient research conducted to fully understand the impact that emotional intelligence may (or may not) have on academic success. Research up to this point has provided conflicting evidence regarding the relation between emotional intelligence and academic success, which is often measured by GPA. The conflicting evidence may be, in part, a result of the great variability in emotional intelligence measures available. Specifically, research using the Assessing Emotions Scale (AES) found small correlations between emotional intelligence and GPA, ranging from correlations of 0.20 to 0.32. Research using the Mayer, Slovey and Caruso Emotional Intelligence Test (MSCEIT) has not observed any correlations between emotional intelligence and GPA (Bastian, Burns, & Nettelbeck, 2005; O'Connor & Little, 2003).

Whereas the results from some emotional intelligence measures have been inconsistent, O'Connor and Little (2003) and Parker, Summerfeldt, Hogan, and Majeski (2004) both observed associations between overall EQ-i scores and GPA. Specifically, Parker et al. (2004) found significant correlations between three subscales of the EQ-i (stress management, adaptability, and intrapersonal abilities) and GPA at the end of the first year of college. However, overall emotional intelligence scores, as measured by the EQ-i, did not correlate to GPA. Additionally, not all researchers have observed correlations between academic performance and

scores on the EQ-i. Newsome, Day, and Catano (2000) used the EQ-i as a measure of emotional intelligence and found no correlation between academic performance and emotional intelligence, but did find correlations between emotional intelligence and personality which appeared to be overlapping constructs.

Petrides et al. (2004) examined the role of trait EI on academic performance (as measured by GPA) in individuals with low IQ relative to individuals with high IQ. The Verbal Reasoning Test (VRT) was used as a measure of cognitive ability. To measure EI, they selected questions from multiple existing measures of emotional intelligence to fit their operational definition, conducted a pilot test of their measure on 20 individuals, and found an internal consistency of the overall scale scores of 0.76. Results suggested that trait EI was related to academic performance, but only in individuals with low IQ scores. Specifically, high trait EI was more important for academic success in individuals with low IQ, whereas individuals with high IQ did not benefit academically as a result of high trait EI. Woitaszewski and Aalsma (2004) observed similar findings when assessing emotional intelligence and academic success in gifted adolescents. In this population, emotional intelligence did not predict academic success. More research is needed before the influence of emotional intelligence on academic performance can be fully assessed. However, these preliminary studies suggest that this area is worth pursuing and may be important, particularly for individuals who have lower intelligence or may be considered "at risk" in other ways.

Interactions Between Cognition, Personality, and Emotional Intelligence. Given that cognitive processes, personality, and emotional intelligence do not function independently, a better assessment for predicting academic success may be to look at the combination of these three factors. Additionally, given the difficulty with defining EI, and with the likely overlap between EI and cognitive/personality factors, it seems appropriate to assess whether measures of emotional intelligence predict academic success above and beyond cognitive ability and personality. Barchard (2003) examined the extent to which EI predicted academic success using GPA. Participants completed 31 separate measures of EI; six of the measures were found to correlate to academic success. However, when cognitive abilities and personality characteristics were statistically controlled for, none of the six measures of EI predicted academic success. She suggested that measures of cognitive ability and personality characteristics provided the best predictors of academic success relative to emotional intelligence. Other researchers have also observed limited predictive value for measures of emotional intelligence when personality and/or cognitive factors were controlled. Brackett and Mayer (2003) found no correlation on any of three measures of emotional intelligence (AES, EQ-I, MSCEIT) and GPA

when personality and verbal Scholastic Aptitude Test (SAT) scores (which was used as a measure of cognitive ability) were statistically controlled.

Some research has observed a relationship between emotional intelligence and academic success, above and beyond measures of cognitive ability and personality. However, EI's ability to predict academic success is generally weaker than other predictors, such as cognitive ability and personality. For example, Van Der Zee et al. (2002) found that personality was a better predictor of academic success relative to emotional intelligence. However, they did observe that emotional intelligence was able to account for a small portion of the variance. Along a similar vein, Bastian et al. (2005) examined the influence of emotional intelligence, cognitive ability, and personality factors on life skills. The findings were similar to other research; when cognitive and personality factors were statistically controlled for, emotional intelligence was only able to account for a small part of the variance.

The findings across these studies suggest that measures of emotional intelligence may not provide a significant level of predictive validity for academic success when cognitive and personality factors are controlled. It is unclear at this time whether emotional intelligence and academic success are not related, or if the lack of predictive validity is the result of measures of emotional intelligence that do not adequately assess the construct.

Emotional Intelligence and Academic Transitions

Although one's ability to successfully transition and adapt to new situations generally is not related to cognitive ability, ability to transition has important implications for academic success. Most students who do not complete college withdraw from the university within their first two years (Parker, Hogan, Eastabrook, Oke, & Wood, 2006). Entering college is a significant transition from high school. These changes require students to face the challenges of creating new social support systems, modify existing support systems with family and friends, develop new study skills, and function independently as adults. Austin, Evans, Goldwater, and Potter (2005) suggested that the ability to successfully adjust to these changes may be related to emotional intelligence. To date, two empirical studies have examined the ability to successfully transition from high school to college and whether this ability is related to emotional intelligence.

Parker, et al. (2006) asked incoming freshmen to complete the EQ-i during the first week of classes (intelligence and personality were not assessed). At the beginning of their second year, participants were identified as "those who remained" and "those who withdrew" from the university. Participants who had

withdrawn from the university were matched to remaining participants on age, gender and ethnicity. They found that participants who returned their sophomore year had overall higher emotional intelligence scores. Participants who returned also showed higher scores on the interpersonal, intrapersonal, adaptability, and stress management subscales of the EQ-i.

Austin et al. (2005) examined the role of emotional intelligence and academic success in first year medical students. It is important to note that in the United Kingdom, where the study was conducted, medicine is studied as an undergraduate degree, so the participants were all students transitioning from high school to college. Emotional intelligence scores were positively correlated to performance on the Health and Society exam during the first term, but not during subsequent terms. However, emotional intelligence was not correlated to performance on any of the Biomedical Sciences exams. These findings suggest that there may be some limited advantage for individuals with high emotional intelligence early in the program, but that advantage may quickly dissipate.

Thus, while these two studies do provide some limited evidence that emotional intelligence may be related to an individual's ability to transition from high school to college, additional research is needed. Specifically, the findings from Austin et al. (2005) provide weak evidence for this association, although it is unclear whether test performance is a valid measure of successful transition. Additionally, it is unclear why emotional intelligence would correlate to test performance in one course, yet not another. However, Parker et al.'s (2006) research does provide some initial evidence suggesting a relationship between successful transition into college and emotional intelligence. However, as previously mentioned, there is a great deal of overlap between emotional intelligence measures and personality characteristics and cognitive ability. Thus, another possible explanation to Parker et al.'s findings may be that personality characteristics and/or cognitive ability may be predicting a successful transition from high school to college, and not emotional intelligence.

Improving Emotional Intelligence

One of the potential benefits of developing a better understanding of the role of emotional intelligence in academic success is to develop programs to enhance an individual's EI. However, the term intelligence suggests that it is a stable and fixed trait (Humphrey et al.,2007). The stability of emotional intelligence is further supported by the overlap between EI and personality traits (Bastian et al., 2005), which are relatively stable throughout life. Thus, it is unclear whether emotional intelligence skills can be modified.

In spite of this potentially significant limitation to the effectiveness of emotional intelligence interventions, researchers have developed and implemented such programs. Most programs have focused on children's emotional learning through school-based programs. Mayer and Salovey (1997; as cited in Brackett & Mayer, 2003) suggested that emotional learning can occur through classroom instruction, extra-curricular activities, a supportive school climate, and the involvement of students, teachers, and parents. Goleman (1995) argued that emotional intelligence interventions not only improve a child's emotional intelligence, but also improve his/her academic performance. Although the logic makes this statement plausable, there is no empirical research to support this claim.

The various programs designed to modify emotional intelligence vary greatly. For example, the Oakland Child Development Project addresses very few aspects of emotional intelligence, whereas the Promoting Alternative Thinking Strategies (PATHS) program covers a wide range of EI components (Zeidner, et al., 2002). Most of these programs are not designed with the intent of improving emotional intelligence. For many, the focus is more on modifying problem behaviors, developing problem solving skills in social situations, good citizenship, and other issues that frequently emerge in primary, middle, and high school settings. Finally, very little research has been conducted assessing the long-term outcome of these programs. Of the program assessments that have been conducted, few use measures of EI to assess outcome success. Zeidner et al. concluded that "despite current theorizing about EI programs, we really do not know that much about how they work or, indeed, whether they work at all." (p.229). Finally, no studies were found that have examined the effectiveness of an intervention program in a college population. It is likely that such a program would have to be developed, as existing programs designed for children would not be appropriate for college students.

Recommendations

One of the biggest obstacles with using measures of emotional intelligence to predict academic success is the question of the reliability and validity of these measures. As the research in this area continues to progress and stronger measures of emotional intelligence are produced, there is potential to better understand and utilize the relationship between emotional intelligence and academic success. In addition, current measures of emotional intelligence appear to tap into other factors such as personality and cognition. Thus, the existing measures do not accurately measure "pure" emotional intelligence, thus limiting our understanding of the relationship between emotional intelligence and academic success.

Additional research may determine that emotional intelligence can be useful in academic success within certain contexts. Although limited, there is some research to suggest that individuals considered "at risk" may benefit from programs designed to enhance EI (Petrides, et al., 2004). Another area where emotional intelligence may enhance academic success is related to academic transition. Research has found that individuals with lower EI were more likely to drop out by the end of their freshmen year (Parker, et al., 2006). Based on the existing research at this time, programs designed to enhance EI may be successful in increasing academic success when directed to incoming freshmen, as well as other students who are identified as being at risk, but may not provide any additional benefits to improving academic success for the average college student. These conclusions should be considered with caution, given the minimal research conducted on at risk students and students in transition. Additional research is necessary to fully understand the potential benefits for these students.

Although there is potential for successful implementation of these programs to increase the likelihood of academic success in certain populations, there are serious limitations to the existing programs. First and foremost, most programs focus on emotional learning in children and would not be applicable to a college population. Thus, a program would have to be designed specifically for a college population. Prior to wide-scale implementation, it would be imperative to evaluate the effectiveness of such a program. Both of these steps would require considerable time and resources.

A second critical consideration is the ability to accurately operationally define emotional intelligence and find an existing EI measure (or develop a new EI measure) that is valid, reliable, and accurately reflects the construct of emotional intelligence. As previously mentioned, there are significant limitations to the existing measures of emotional intelligence (see Petrides, et al., 2004). Third, it would be important that the program focus specifically on constructs related to emotional intelligence, and not other factors such as citizenship and improving social interactions.

Other issues of importance that would need to be considered (as identified by Zeidner et al., 2002) include the need to carefully specify the program goals and outcomes, ensure professional development of the program personnel, use experimentally sound designs for assessing program effectiveness, and integrating the EI program into the school curriculum. This last suggestion, however, contradicts research which suggests that EI interventions may only be useful to a small subset of the college population; thus requiring many students to expend time

and energy on a program that will not likely produce any personal benefits. Finally, it is important to note that there has been little research assessing the validity and reliability of EI measures cross-culturally. Given the diversity of students at University of the Pacific, it is possible that EI scores may not accurately reflect the construct in many students from different ethnic and cultural backgrounds.

In conclusion, there is some potential for the relationship between emotional intelligence and academic success to provide new methods for increasing the likelihood that students will be able to successfully navigate four years of college. However, while emotional intelligence may contribute to academic success, the research in this area is still in its infancy, making it difficult to draw any strong conclusions. There is substantial evidence to suggest that programs to improve emotional intelligence programs are being developed prematurely. First, researchers have not yet agreed on an accurate or comprehensive definition of emotional intelligence. Additionally, many measures of EI lack reliability and validity. Third, existing research examining the relationship between emotional intelligence and academic success remains unclear. Frequently researchers find that emotional intelligence does not add to our ability to predict academic success beyond cognitive and personality factors. There are two possible explanations for this finding: 1) emotional intelligence is not related to academic success, or 2) emotional intelligence is related to academic success, but the existing measures of EI do not adequately assess the construct, but instead measure characteristics related to personality and cognitive factors. Given these problems, it is premature to develop and implement programs to enhance emotional intelligence until there is a better understanding of what emotional intelligence is, how to measure it, and how it is related to academic success.

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<u>Emotional Intelligence and Moral/Ethical/Values Development</u>

Roseann Hannon

One area of general interest in the study of emotional intelligence (EI) is whether EI is related to moral and ethical issues. How EI informs, or is informed by, an individual's values and moral/ethical positions is implied in a significant part of the EI literature. The three major models of EI differ in their attention to moral/ethical issues (Mayer, Salovey, and Caruso, 2000). Mayer and Salovey's 1997 model of EI contains no direct reference to values that would typically be seen as moral/ethical. This model focuses on the set of abilities that allow us to understand our own and others' emotions (*ability* EI). In contrast, *trait* EI models contain direct reference to moral/ethical values. Bar-On's 1997 model describes *social responsibility* and *empathy* as specific interpersonal skills. Similarly, Goleman's 1995 model includes *empathic awareness* and *attunement to what others need or want* as examples of the major skill area of recognizing emotions in others. Given these varying EI models, the study of the relationship of EI to moral/ethical behavior and to values has been inconsistent. Very little empirical research has been published to date. Even so, moral/ethics/values dimensions are often described as part of the basis for educational programs involving EI, and well-designed empirical research in this area is very much needed.

As a background for individuals interested in doing research on EI and moral/ethical values, this chapter describes the following:

1. Definitional issues regarding the terms *moral, ethical,* and *values.*
2. Instruments used to measure moral/ethical values.
3. Morals/ethics/values and EI concepts in educational programs.
    a. K-12 and undergraduate programs.
    b. business and management programs.
    c. health professions programs.
4. Interventions unrelated to EI that have been shown to increase moral/ethical judgment.
5. Conclusions and recommendations for future research.

Definitions of Moral/Ethical/Values

Interestingly, definitions of moral/ethical/values were seldom presented in the literature reviewed. A common understanding of their meaning appeared to be assumed, and the terms were often used interchangeably. The terms moral/ethical/

values, in fact, have a fairly broad variety of meanings (*Dictionary.com*, 2007), and future writing and research in this area would benefit from clear definitions of the intended meaning of the terms used. The broad variety of meanings can be seen in the following definitions:

Moral. The term moral is largely used as an adjective, and has multiple meanings:

1. of, pertaining to, or concerned with the principles or rules of right conduct or the distinction between right and wrong; ethical: *moral attitudes.*
2. expressing or conveying truths or counsel as to right conduct, as a speaker or a literary work; moralizing: *a moral novel.*
3. founded on the fundamental principles of right conduct rather than on legalities, enactment, or custom: *moral obligations.*
4. capable of conforming to the rules of right conduct: *a moral being.*
5. conforming to the rules of right conduct (opposed to IMMORAL): *a moral man.*
6. virtuous in sexual matters; chaste.
7. of, pertaining to, or acting on the mind, feelings, will, or character: *moral support.*
8. resting upon convincing grounds of probability; virtual: *a moral certainty.*

Synonyms for moral include *upright, honest, straightforward, open, virtuous, and honorable.*

When used as nouns, the terms *morals* and *ethics,* "refer to rules and standards of conduct and practice. MORALS refers to generally accepted customs of conduct and right living in a society, and to the individual's practice in relation to these: *the morals of our civilization.* ETHICS now implies high standards of honest and honorable dealing, and of methods used, esp. in the professions or in business: *ethics of the medical profession*" (*Dictionary.com,* 2007).

Ethical. Ethical is used as an adjective with meanings that follow similar to the distinction between morals (1) and ethics (2) above.

1. pertaining to or dealing with morals or the principles of morality; pertaining to right and wrong in conduct.
2. being in accordance with the rules or standards for right conduct or practice, esp. the standards of a profession: *It was not considered ethical for physicians to advertise.*

Values. Unlike moral and ethical (and morals and ethics) which imply positive and desirable characteristics, the term values may be positive or negative:

the ideals, customs, institutions, etc., of a society toward which the
people of the group have an affective regard. These values may be
positive, as cleanliness, freedom, or education, or negative, as
cruelty, crime, or blasphemy (*Dictionary.com,* 2007).

Positive values terms often overlap with those that might be used to describe
moral/ethical behavior. In the literature reviewed on emotional intelligence, the
term values generally implied positive ideals and goals, though this was often not
directly stated.

Theories on the Development of Moral/Ethical Values

Most measures of moral/ethical values are based on the doctoral dissertation
work of Lawrence Kohlberg (1958) who developed a theory of moral reasoning and
development with six identifiable stages (Kohlberg, 1973). His work began with the
study of children's reactions to moral dilemmas and expanded to older individuals.
Kohlberg believed that the process of moral development was principally based on
the concept of justice, and that moral development continued throughout the
lifespan. His six stages of moral development are grouped into three levels
(*Wikipedia*, 2007), as follows:

Level 1   (Pre-Conventional) – morality of an action is judged by its direct
  consequences – common level of reasoning in children, can also
  occur in adults
  Stage 1. Obedience and punishment orientation – direct
    consequences for oneself
  Stage 2. Self-interest orientation - limited interest in others' needs,
    but only to further one's own interests (*What's in it for me?*)

Level 2   (Conventional) – morality is judged by comparing actions with
  societal views and expectations – typical reasoning for adolescents
  and adults
  Stage 3. Interpersonal accord and conformity – one is sensitive to
    appoval/disapproval from others and tries to live up to
    society's expectations (*The good boy/good girl attitude*)
  Stage 4. Authority and social-order maintaining orientation – it is
    important to obey laws and social conventions because of
    their importance in maintaining a functioning society (*Law
    and order morality*)

Level 3   (Post-Conventional) – principled level, realization that individuals are separate entities from society

    Stage 5. Social contract orientation – laws are regarded as social contracts, not rigid dictums, and should be changed when necessary to meet the greatest good for the greatest number of people

    Stage 6. Universal ethical principles – moral reasoning is based on abstract reasoning using universal ethical principles (*Principled conscience*) – Kohlberg found few people in his research who consistently used Stage 6 reasoning

Kohlberg's theory has been criticized for emphasizing justice and excluding other values. Carol Gilligan, for example, argued that because Kohlberg's theory was based initially on research with only male participants, it was inadequate in describing moral judgments in females. She developed a different theory based on the ethics of caring. Despite various critiques, Kohlberg's was the seminal work on moral development, and it continues to have a critical influence on most measures of moral/ethical development.

Measures of Moral/Ethical Values

Moral Judgment Interview (MJI, Kohlberg, 1958). This measure was used first by Kohlberg in his 1958 dissertation research, and requires an approximately 45-minute interview about moral dilemmas. The dilemmas are short stories presenting situations in which a person has to make a moral decision. Participants are asked a systematic set of open-ended questions about the right course of action for the dilemma, and justifications for why given actions would be right or wrong. The form and structure (not the content) of responses are scored, and an overall score is determined.

According to Gibbs, Widaman, and Colby (1982), data from Kohlberg's 20-year longitudinal study show that the Standard-Issue Scoring method for the MJI has high test-retest, parallel form, and interrater reliability. However, the MJI requires trained interviewers plus the transcription of the interview tapes (to avoid errors in on-the-spot recording of responses), and these are time-consuming and costly procedures.

Defining Issues Test (*DIT*, Rest, *1979, as cited by Illingworth, 2005).* The DIT was originally created as a paper-and-pencil, quantitatively-scored alternative to the *Moral Judgment Interview.* The DIT presents six moral dilemmas which are rated using Likert-scale items, and scored in terms of three schemas of moral reasoning

based on Kohlberg's stages: Personal Interest Schema, Maintaining Norms Schema, and Postconventional Schema. The DIT was devised to assess the transition of moral development from adolescence to adulthood. The most common scoring method is based on the *P* score, which is the percentage of postconventional reasoning preferred by the participant.

The University of Minnesota established the Center for the Study of Ethical Development (http://www.centerforthestudyofethicaldevelopment.net) in 1982 as a center for research on the DIT, and the Center has continued actively to the present. It provides the DIT, and several other measures of moral/ethical behavior, as well as analyses of these measures.

According to Rest, Navarez, Thoma, and Bebeau (1999), the DIT has established validity according to several criteria: DIT scores differ across age and education groups (e.g., longitudinal gains occur from college freshmen to seniors), are significantly positively correlated with cognitive capacity measures of moral comprehension (*r* = .60's), improve significantly and show moderate gains with moral education interventions, are significantly correlated with many prosocial behaviors and desired professional decision making, and are significantly linked to political attitudes and choices. Both internal consistency and test-retest reliability range from the upper .70's to low .80's.

Defining Issues Test-2 (DIT-2, Rest, Navarez, Thomas, & Bebeau, 1999). The DIT-2 contains updated moral dilemmas, as compared with DIT, and the DIT-2 is shorter (five dilemmas, compared with six on the DIT). The DIT-2 also has clearer instructions and improved validity criteria. A new scoring technique is used, the N2 score (though the P score can also be calculated). The N2 score uses the percentage of postconventional reasoning preferred by the participant plus the rejection by the participant of less sophisticated moral schemas. A sample of 200 participants was used to assess the DIT-2, and results confirmed its validity and reliability as being comparable to the DIT. DIT-2 scores increased with age and education, and correlated in predicted ways with views on public policy issues. Internal consistency for the DIT-2 was .81 (Cronbach's alpha). The DIT-2 was significantly positively correlated with the DIT. Fewer participants were deleted for unreliable responses using DIT-2 criteria than using DIT criteria, with the DIT-2 results in this regard considered to be more accurate. Overall, the DIT-2, using the N2 scoring system, was judged to be more valid and, overall, the DIT-2 also has several practical advantages over the DIT.

The DIT-2 has recently been administered in an online version by Xu, Iran-Nejad, and Thoma (2007). Based on 109 respondents who took both online and

paper-and-pencil versions, they determined that the online version was comparable to the paper-and-pencil version of the DIT-2 in reliability and discriminant validity, as well as internal consistency. There were some variations in item difficulties and patterns of item responses between the two versions. Participants were equally satisfied with the two modes of administration.

Sociomoral Reflection Measure (SRM, Gibbs, Widaman, & Colby, 1982). This test is also based on Kohlberg's theory, and measures stages of moral reasoning. It is a written test designed for group administration, self-taught assessment training, and for relatively quick assessment. It is similar to the MJI in assessing reflective moral judgment and the justification participants used to support the judgments made. About 45 minutes are required for completion. Items include both multiple choice and open-ended responses, with the latter scored by several raters. Interrater reliability exceeds 90% for global agreement. Test-retest and parallel forms reliabilities ranged from .67 to .90, with most above .70. Internal consistency was at acceptable levels. Validity was demonstrated by a correlation of .85 between the SRM with the MJI. The SRM correlated as predicted with age, education, and socieconomic status. As expected, SRM scores improved following a civic education project, a delinquency intervention, and a comparison of delinquents and nondelinquents, suggesting that this measure is sensitive to experimental interventions and to existing group differences.

Tests for Assessment of Applied or Professional Ethics. According to Illingworth (2005), concepts regarding ethics are currently seen as a critical part of one's ability to function in applied and professional settings. This is particularly obvious in the health sciences, but is also true in business settings, within humanities-oriented programs, etc. Several tests have been developed for use in specific professional settings. For dentistry, the *Dental Ethical Sensitivity Test* and *the Dental Ethical Reasoning and Judgment Test* are used. In nursing, the *Ethical Reasoning Tool* is available. In medicine, the *Ethics and Health Care Survey Instrument* may be used. Special measures have also been developed for business settings, for example, the *Multidimensional Ethics Scale.* For students in science, the *Test for Ethical Sensitivity in Science* is available.

Very little research has been done which combines measures of EI and measures of moral/ethical judgments in the same study, so there is little evidence of how they relate. Future research is needed in this area.

Morals/Ethics/Values and EI Concepts in Educational Programs

Much of the literature on morals/ethics/values and EI in educational settings is philosophical and/or descriptive, with little empirical research to bolster the ideas advanced. These philosophical ideas and program descriptions are presented in some detail in this chapter to outline the type of thinking and concerns that have stimulated the development of programs emphasizing moral/ethics/values, and the importance of designing and studying the effectiveness of such programs. When available, the findings from empirical studies are described.

K-12 and Undergraduate Programs. Pizarro and Salovey (2002) describe the implementation of standardized programs nationwide in the U.S. to increase moral and values education in K-12 classrooms. They highlight increasing concern in recent years that the "formation of moral character" can go wrong and fail. At the same time, interest in EI concepts has increased, accompanied by the idea that EI skills are needed for social adjustment and happiness. Pizarro and Salovey therefore endeavor to describe the role that various emotions play in the moral development and education of children, and in the moral decision-making of adults. They point out that the relationship between EI and moral development may be positive or negative:

> Many theorists, researchers, and journalists eagerly picked up on emotional intelligence, and framed it as a skill that was of critical importance to be a caring, moral, and otherwise well-adjusted person (e.g., Goleman, 1995) The relationship between emotional intelligence and moral character, however, is not as clear-cut as might first appear. The same emotional skills that make some individuals good, caring people can also be used to achieve more nefarious goals. Criminals who are masters at deception or con artists who are trained to manipulate others may in some ways be among those highest in at least some of these emotional skills (Salovey & Mayer, 1990). Any discussion of how emotions and emotional skills relate to moral development and behavior must take this into account (p. 249).

According to Pizarro and Salovey, ideas about moral development based on the theories of Piaget and Kohlberg have focused largely on how changes in children's cognitive abilities affect the child's understanding of what is moral. Within the last 20 years, however, social and developmental psychologists have also studied the relationship of emotions to moral understanding. Theorists point out that emotions are important to moral development because they are powerful sources of motivation to act, e.g., *empathy* and *guilt* motivate prosocial behaviors that

are generally believed to be moral. In addition, emotions are also important in helping children to internalize the values, morals, and norms of others (parents, teachers, society more broadly). The concept of empathy (the ability to know how others are feeling) is the best studied of morally relevant emotions. The emotional arousal an empathetic person feels when others are suffering is believed to motivate helping behavior toward those in distress, and thus lead to more moral behavior. Guilt, on the other hand, motivates people to seek forgiveness when they have wronged someone and to try to make amends.

Pizarro and Salovey briefly review socio-moral education programs, first pointing out that the view of human nature that underlies such programs is important. For example, if children are seen as intrinsically evil, there will be attempts to control their behavior by breaking their will, by offering rewards for good behavior, and by external punishments for misbehavior, approaches that do not work according to these authors. Moral education must find a way to foster internal motivation to behave in a moral way, and this might be done more effectively by teaching emotional skills, especially regarding moral emotions. They point out that research on education to develop moral emotions is generally lacking. For example, nationwide there are many programs focused on conflict resolution, emotional learning, and social development in children, but little controlled research on their effectiveness. Some early findings have suggested that these kinds of programs have contributed to a reduction in school violence and feelings of hopelessness among students. While Pizarro and Salovey emphasize that such educational programs should ideally be presented to younger students, they believe that older children and adults can also benefit.

Mayer and Cobb (2000) discussed educational policy on emotional intelligence and concluded that current educational policy is based more on mass-media science journalism than on actual educational and psychological research. Of relevance to the topic of values and ethics, they stated that Goleman's 1995 book, *Emotional Intelligence,* claimed that scientists had discovered a link between high emotional intelligence and prosocial behavior, though there is little data to assess this assertion. They also indicated that Mayer and Salovey's 1990 articles described emotionally intelligent individuals as well-adjusted, genuine, warm, persistent, and optimistic. Mayer and Cobb pointed out that educators since the Ancient Greeks have been interested in developing more positive character in their students, though positive character has been broadly and variously described.

Two movements that developed in this regard in the U.S. were the character education movement in the late 1920s and the socioemotional learning movement

more recently. Character education focused on heightening a sense of belonging to and responsibility for others by promoting values such as fairness and honesty. The goal was for this kind of education to lead to proper or virtuous behavior. Socioemotional learning focused in part on values-related skills such as caring (helpfulness and love), respect (courtesy, honor, and tolerance), responsibility (honesty, justice, loyalty, and service), and spiritual values (peacefulness, reflectiveness, reverence, and thankfulness). Both movements assume that personality characteristics, including those related to ethical behavior, can be improved through education and learning. Mayer and Cobb stated, however, that, "the collection of character attributes now labeled as emotional intelligence was no longer one definable entity, and indeed, could consist of entities that were entirely independent of one another and that could even come into conflict at times (e.g., persistence vs. sensitivity)" (p. 170).

Mayer and Cobb indicated that empirical research on the relationship between emotional intelligence and socioemotional learning had just begun and was not yet widely accepted due to disagreement about definitions and measures of the concepts involved. The only data presented to support a positive relationship between EI and ethical/moral characteristics was that the Multifactor Emotional Intelligence Scale had been found to be correlated with self-reported empathy (r = .33). Mayer and Cobb questioned the assumption of a positive effect of emotional intelligence on character, "Thus, emotional intelligence, conceived of as an ability, does not necessarily lead to good character; neither is good character dependent upon emotional intelligence. The degree to which the two *are* related is an interesting question which will be answered by future research" (p. 177).

Scott, in the literature review for her dissertation completed in 2004, found no empirical research on the relationship between EI and ethical decision making. The purpose of her dissertation was to study this relationship in community college students, to examine whether the relationship was affected by demographic variables (age, gender, level of education), and to determine whether liberal arts majors differed from career and technical majors in levels of emotional maturity. Her participants were selected from a rural community college in the Southeastern U.S., and included 30 liberal arts students (mean age = 24.3), 30 career and technical students (mean age = 22.3), and 60 staff, faculty, or administrative personnel (mean age = 45.1) at the same community college. EI was measured using the General Emotional Intelligence Scale (GEIS, Mehrabian, 2000), a self-rating measure of trait EI. Ethical decision making was measured using the Defining Issues-Test 2 (DIT-2). The correlation between the EI measure and DIT-2 scores was statistically significant, but weak (r = .19). This relationship disappeared entirely when

demographic variables were also taken into account, at which point education level was the only significant predictor of DIT-2 scores. No significant differences in EI between liberal arts majors and career and technical majors were found. Despite finding that taking demographic variables into account eliminated the apparent relationship between EI and DIT-2 scores, Scott treated her results as if they showed that the relationship between EI and ethical decision making was significant and important.

Scott's study had several limitations, and sheds little light on the relationship between EI and ethical decision making. As she indicated herself, the sample was representative of only one rural community college in the mid-south. In addition, the number of participants was too small for reliable use of correlation and regression analyses. Results with different samples of similar size would be expected to vary widely from a statistical perspective. Researchers who want to use these kinds of analyses should ideally have access to at least 200-300 participants. The EI measure used by Scott is a self-report measure, and has the same limitations inherent in all self-report measures of EI. Given these limitations in Scott's study and the fact that almost no similar studies have been done, much more research is needed to begin to understand the possible relationship between EI and ethical decision making.

The relationship between EI, moral judgment, and leadership in academically gifted students in grades 10-12 was studied by Lee and Olszewski-Kubilius (2006). They stated that most conceptions of giftedness assume that it involves the interplay of intellectual ability and nonintellectual characteristics. Emotional giftedness or intelligence and leadership have been suggested as separate forms of giftedness. EI and personality characteristics have been linked to moral development by Gardner (1999), who related morality to personality, individuality, will, and character (see also Piechowski, 1979). Lee and Olszewski-Kubilius cited several studies showing that gifted students' superior intellectual ability is related to advanced moral reasoning skills, sometimes at the level of college students or adults.

Lee and Olszewski-Kubilius' study had 234 participants (50.9% males, 49.1% female) who were gifted students in grades 10-12 and were enrolled in 3-week summer courses on university campuses. EI was measured with the BarOn Emotional Quotient Inventory: Youth Version, Short Form (BarOn EQ-i: YV[S]) which has five subscales. Moral judgment was measured with the Defining Issues Test-2 (DIT-2); and leadership with the Roets Rating Scale for Leadership (RRSL). Gifted students' scores were compared with students in the same grades (10-12) in the normative samples for each test. For the EI measure, gifted males' scores did not

differ significantly from the normative sample, and gifted females' scores were significantly *lower* than the normative sample. These findings contrasted with previous studies which found indications of higher emotional control for gifted students. Compared with normative data on the DIT-2, gifted children scored at a higher level of moral judgment (postconventional), suggesting that gifted students, "were more likely to rely on unanimous procedures, due process, defending basic human rights, and intuitively appealing ideas in making moral judgments" (p. 55). Correlations between academic measures of giftedness (SAT scores), the BarOn EQ-i: YV(S), the DIT-2, and RRSL were small and not statistically significant (except for two correlations between RRSL and SAT measures). In examining the subscales of the BarOn EQ-i: YV(S) with the DIT-2, only one small statistically significant correlation was found, suggesting that EI is not related to moral judgments, as assessed by these measures. Lee and Olszewski-Kubilius acknowledge limitations in their study, including lack of a more adequate comparison group for the gifted students (e.g., gifted students were more affluent than the normative sample, ethnic distribution differed for the gifted versus the normative groups).

Adding a moral/ethics/values component to education is part of a broader movement toward holistic education for college students. Many holistic educational programs include these dimensions, but do not highlight or study them separately, and such separation would be very useful in future research. In *Putting Students First: How Colleges Develop Students Purposefully*, for example, Braskamp, Trautvetter, and Ward (2006) describe efforts to help college students create a purposeful and meaningful life during college and afterwards.   The efforts of 10 institutions to develop students holistically are included (Bethune-Cookman College, Creighton University, Hamline University, Hope College, Pacific Lutheran University, College of Wooster, Union University, University of Dayton, Villanova University, and Whitworth College). These institutions have a broad view of students that encompasses their intellectual, moral, psychological, and faith development. Although Braskamp et al. do not use the concept of EI in describing these institutional programs, the goals overlap considerably (e.g., challenging students to develop a life of purpose, know themselves, and engage the world). The relevance, power, and shortcomings of religious commitments and perspectives are also probed. Related to emotional intelligence, the dimensions identified as important in student development include social, civic and political, moral and ethical responsibility; personal values and character; and self-awareness, self-authorship, and identity. The importance of faculty, staff, and administration who are devoted to students' holistic development is emphasized by Braskamp et al., and this would clearly apply to EI programs as well.

Business and Management Education

Richard E. Boyatzis (at Case Western Reserve University) and his colleagues are among the foremost proponents of the importance of EI concepts in business and management education. These programs focus heavily on values clarification and development. Boyatzis (1994) described a decision in the late 1980s by the faculty of the Weatherhead School of Management at Case Western to change their MBA program to become, "an outcome-oriented, competency-based, and value-added program (p. 304)." This change was stimulated by critiques of MBA programs which suggested that the transmission of academic knowledge alone was not sufficient to result in superior performance in management. A required course called *Managerial Assessment and Development* was created which included being aware of one's own values and the values of others. The overall theme of the course was "Creating economic, intellectual, and human value (p. 311)." The guiding principle of the course was self-directed change in which students describe their self-image or real image regarding particular characteristics, their ideal image, and the discrepancy between the real and the ideal. The discrepancy was converted into a goal, the goal was translated into a learning plan, action and feedback about progress occurred, as well as ongoing assessment of real and ideal states (an Appendix at the end of Boyatzis' article contains a detailed schedule for the course).

During initial assessment in the course, strengths and weaknesses in the desired model of management in the Weatherhead program were determined. Included among these were five value themes: a) creating economic, intellectual, and human value; b) managing in a complex, diverse, and interdependent world; c) innovating in the use of information and technology; d) developing the manager as team leader and team member; and e) stimulating professionalism, integrity, and social responsibility. Students examined their value orientations through the *Personal Orientation Questionnaire*, developed a personal vision statement, and assessed the relative importance of a set of specific values through a survey. Students were encouraged to increase their own capability and to help others do likewise, as well as focus on professionalism, integrity, and social responsibility.

Full-time students rated the course positively, assigning a *4* or *5* on a 5-point scale from *dissatisfied* to *satisfied* (44% in Fall 1990, 75% in Spring 1991, and 100% in Summer 1991), and part-time student ratings were comparably positive. Other changes which are described as results of the course (though appropriate experimental controls for drawing this conclusion are absent) included increased student activism, involvement in faculty deliberations, and the initiation and development of a Student's Honor Code. Faculty were also supportive of the

course, even though "preparations for full implementation were a logistical nightmare." There was agreement that the course must be a full semester in length to give students adequate time to absorb and integrate the information, that the course must be required of all students, and that it must be a graded course because pass/fail courses are often seen by students as less important than graded courses. A major component of the course was the formation of *Executive Action Teams* composed of students in the course so that students would feel connected with each other and with the school. Data suggested that students in these teams met several times outside of class during the semester.

Boyatzis, Stubbs, and Taylor (2002) presented results for several cohorts of MBA students taking a required course, *Leadership Assessment and Development* (which was described above as the *Managerial Assessment in Development* course in Boyatzis, 1994). Combined results were described for cohorts graduating from 1988-1996 and 2000-2001. The revised MBA program, which required the *Leadership Assessment and Development* course (or its equivalent), went into effect for entering students in 1990. Competency-based assessment of EI skills was used, and showed more significant improvements in these competencies after the course was required (1990-1995, 1998-2001 cohorts) than before (1987-1989 cohorts). The most recent cohorts showed the largest number of significant improvements. In terms of values and ethics, none of the specific EI skills directly addressed these topics, though some skills appear to be related to ethics (e.g., Relationship skills, Helping skills). As in Boyatzis (1994), values and moral traits are emphasized, "Beyond knowledge and competencies, the additional ingredient necessary to outstanding performance appears to be the desire to use one's talent. This seems to be driven by a person's values, philosophy, sense of calling or mission, and unconscious motives and traits" (p. 150).

Personal values and philosophy are also important in the EI programs for advanced professionals which are described by Ballou, Bowers, Boyatzis, and Kolb (1999). Participants "explore their values, philosophy, and personal vision and establish a desired career and personal direction for the next era of their lives (i.e., 7- to 10-year period) in the context of a long-range, work-life scenario" (p. 341).

Although values, ethics, and philosophy are emphasized as a critical starting point in EI work in management by Boyatzis and his colleagues, there is little or no discussion of how management students and professionals may have developed their values, how to evaluate the appropriateness of their values, or how to change values if they are inappropriate. This is, of course, a difficult area to measure and a controversial area for intervention. In addition, there appears to be no discussion of

the possible relationship between values and EI skill, for example, are positive values and higher measured levels of EI correlated in any way? Can you predict one from the other? Do interventions that increase EI also improve values, or vice versa? These are important areas for future research.

Mussig (2003) also emphasized the importance of values in leadership, saying that leadership must be values-driven and that values are increasingly being championed in the management literature. He linked the concepts of EI and spiritual intelligence, with the latter focusing on meaning and value in life. Preferred characteristics of leaders were discussed, with honesty (defined as a leader being truthful and ethical) a key requirement that is associated with moral/ethical behavior. Except for presenting two case studies of values-driven leaders, methods for increasing this type of leadership were not discussed.

Health Professions Programs

Another educational area with an interest in EI and moral/ethical behavior is the health professions. According to Romanelli, Cain, and Smith (2006), there is a growing consensus among faculty in some schools and colleges of pharmacy that, "current pharmacy students often lack empathy and a commitment to pharmacy's professional standards" (p. 1). Today's health care students may be more concerned with the technical aspects of their professions and more emotionally immature than in the past, a particular concern because empathy, social maturity, self-awareness and the promotion of trust may be essential for good patient care. Therefore, some health professions have started programs to measure and/or modify EI, although only a small amount of research has been completed so far (the authors found only six relevant studies in health profession settings), none of it in pharmacy at the time this article was written. The authors conclude that it is not yet clear whether EI is a good predictor of the skills required for good patient care, but is worth further study. They caution, however, that a clear definition of EI, along with reliable and valid measures, must be established before attempting to use EI to identify students who will become good pharmacy practitioners. Lewis, Reese, Hudson, and Bleakley (2005) express similar concerns about uncritical acceptance of EI concepts in medical education settings, and encourage further educational research.

One of the few published studies of EI as a possible factor underlying ethical behavior in medical students was conducted by Munro, Bore, and Powis (2005). They were particularly interested in empathy and narcissism, and developed the Narcissism-Aloofness-Confidence-Empathy (NACE) scale. They established good internal consistency for the four subscales (described by the title of the instrument). They administered the NACE, the 16 Personality Factors Questionnaire, the Five

Factor Theory 20-item subscales, and the Schutte Emotional Intelligence Scale to 235 medical students in New Zealand. Of relevance to EI, they found moderate positive correlations of NACE Empathy with the EI measure, but also with some subscales of the personality measures. They concluded that further research is needed, and that confirming the relationships between ethical characteristics (such as empathy) and other measures (e.g., personality, EI) is made difficult by the lack of instruments that definitively measure the constructs of interest.

Interventions Unrelated to EI That Have Been Shown to Increase Moral/Ethical Judgment

Unrelated to the concept of EI, a variety of studies have been conducted to discover what kinds of interventions results in increased moral/ethical reasoning skills. Some examples are presented below to assist those interested in pursuing research in this area. One area of investigation has been the effects of service-learning. Lies (2006) studied the effects of an 8-week summer service-learning program on the moral reasoning of college students. A pretest-posttest design was used, and those who participated in service-learning were compared with a group who did not. The Defining Issues Test-2 was used to measure moral judgment, and other measures were used to assess moral identity and religiosity. The service-learning group showed statistically significant increases in moral judgment from pre- to posttesting, while the comparison group did not. The measures of moral reasoning and moral identity were reliable predictors of participation in service-learning (i.e., differentiated the two groups of participants), while religiosity was not.

The high degree of interest in service-learning led Bringle, Phillips, and Hudson (2004) to publish, *The Measure of Service Learning: Research Scales to Assess Student Experiences.* This book contains an extensive compilation of scales to assess the effects of service-learning, including measures of attitudes, moral development, and critical thinking. It also includes a primer on measurement theory, and would be very useful to researchers who want to evaluate the effects that service-learning experiences have on students.

Another area of interest in moral/ethic education relates to decisions about scientific material. Clarkeburn (2002) developed the Test for Ethical Sensitivity (TESS), a pencil-and-paper measure for young adults. The TESS was used to evaluate the impact of a short ethics discussion course for university science students who were compared to a group of students who did not have the ethics course. Results showed that a short ethics course can have a significant impact on students' ability to recognize ethical problems. Related research on students' ability to understand moral/ethical dilemmas

involving scientific material has been done with students studying genetic engineering (Sadler & Zeidler, 200, 2005).

Most educational programs for physicians and other health care professionals mandate instruction in professional ethics, but the type and amount of ethics education is variable (Dieruf, 2004). In addition, "The outcomes of teaching ethics also are unclear, because it still is unknown if this education makes a difference in professional values and clinical behaviors" (Dieruff, 2004, p. 24). Dieruff was interested in changes in moral reasoning of physical therapy (PT) and occupational therapy (OT) students over the course of their 2-year educational programs. She completed a pretest/posttest study by administering the Defining Issues Test at the beginning and end of students' PT and OT studies, and found no significant change in scores. She concluded that the educational programs had not facilitated moral development in these students. Hedl, Glazer, and Chan (2005), however, concluded that teaching professional ethics and codes is not equivalent to teaching for moral development and moral reasoning. The recommended that health care professions programs need to develop a curriculum that directly addresses moral development and reasoning, and presented evidence that this is effective based on some of their own previous work with students in allied health professions (Glazer-Waldmen, Hedl, & Chan, 1990).

General research on interventions to improve moral development and reasoning is better developed than EI research on this topic, but also needs considerably more work. While there are studies showing improved moral reasoning and judgment scores following various interventions, there is little to tie these findings to performance in the settings in which they are to be applied. More research is also needed to delineate the most effective ways to teach this material.

Conclusions and Recommendations for Future Research

Based on the literature review, the importance in education of moral/ethical development and the structure of personal and interpersonal values is clear. Given contemporary problems in society at large, in educational settings, and in many professional settings, the search for ways to teach and encourage better moral and ethical values is extremely important. Some authors indicated that this concern is all the more critical given a sense that somehow good values are not being acquired naturally as well as they once seemed to be. Given the pressing nature of concerns about morals and values, however, it also very important not to jump toward hasty and empirically unsupported conclusions about how to improve the situation. Good research on the relationship of EI to morals/ethics/values, therefore, is very timely and much needed.

Researchers conducting studies in this area should first of all carefully define the constructs they are using, both regarding both EI and moral/ethical/values concepts. Both sets of concepts involve broad and complex ideas with multiple possible meanings, so particular care needs to be exercised in these studies since their outcomes may be very different depending on how the concepts are defined. Once a researcher has defined these concepts for the purpose of a given study, she/he should next seek the best possible measures for EI and morals/ethics/values that are consistent with their definitions (e.g., selecting an ability versus a trait measure for the EI construct they wish to examine, selecting the most appropriate morals/ethics/values measure).

In terms of research design, two types of study are particularly needed. The relationship between EI and moral/ethical development has been barely studied empirically, and it is critical to determine whether any relationships exist at all, and if so, the nature of the relationships. This work will be based on correlation/regression studies, and accurate relationship determination will require reasonably large sample sizes. Pacific is in an ideal position to further this kind of research because of its broad institutional commitment to the study of EI. Large sample sizes can therefore be used in some of the studies conducted. If such studies show a positive relationship between EI and morals/ethics/values, further research in this area will be warranted. If not, attempts to change morals/values/ethics should be based on concepts other than EI.

The other major type of needed research is to apply interventions designed to increase EI, and to study whether this results in changes in morals/ethics/values (or the reverse could be studied, i.e., do interventions to improve moral/ethical development and study whether this results in improvements in EI). The critical thing in this type of research will be to have control participants who have not received the interventions for comparison with the participants who have. Pre-post measures of a single group of subjects represent weak research design since it's impossible to tell what caused any changes between pre and post measurement. This is particularly problematic when dealing with college students who are changing rapidly on many dimensions due to their natural maturation as young adults, as well as exposure to college. By ideally using pre-post designs combined with control group comparisons, Pacific will be able to determine which interventions are most effective in achieving desired improvements in moral/ethical development and values.

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Emotional Intelligence and Leadership

Gary N. Howells

Leadership appears to be the "flagship" topic for emotional intelligence (EI). It is not certain whether this is because of an early recognition that leadership is one of the most useful applications for EI or because the business community immediately grabbed onto this area and began pumping money into its development. Leadership has traditionally been one of the topics included within the general field of social psychology, however, the articles in this EI literature review are primarily authored by business researchers, especially those in the area of organizations.

In addition to the application of EI leadership research to business and to training MBA students, there is now interest in how to facilitate a more EI friendly environment on college campuses. The recent appointment of Dr. Drew Faust as the first female president of Harvard University appears to be a move in this direction at one of the nation's most prestigious universities. Recently, at the University of the Pacific, the commencement speaker, John Chambers, CEO of Cisco, touted the qualities of the emotionally intelligent leader. The idea of improving the EI abilities of undergraduates may be viewed as a way of better preparing undergraduates for their future lives, as well as improving the campus environment. While the following literature review does not focus specifically on this issue, both the issues of whether EI abilities or competencies are related to more effective leadership and whether people can be trained to improve their EI abilities are directly relevant to how and whether it makes sense to focus some campus resources on an EI agenda. Even more directly, this literature review provides a starting point for researchers wanting to continue to explore the relationship between EI and leadership.

I begin this review by acknowledging that there are three basic thrusts of EI (Emmerling & Goleman, 2003) and by examining the areas of EI that make a substantive contribution to leadership research beyond what the basic literature of social psychology and personality have to offer (c.f. Riggio, Murphy & Pirozzolo, 2002). Wherever possible, I have tried to avoid the use of what I will refer to as "EI promotion publications," the books written for the lay audience and the opinion pieces that usually lack references, such as the *Harvard Business Review*, as well as unpublished Internet articles.

Three Basic EI Approaches to Leadership

For the leadership area, it is helpful for the reader to have an understanding that EI is a lot like attribution theory in social psychology. There are different approaches within a broad framework. This is relevant to leadership as each approach defines EI somewhat differently and researchers within each approach may, therefore, use different instruments to quantify the presence of EI. The first of the three directions of EI is Bar-On's (1997) theoretical direction, described by Emmerling and Goleman as a trait-based approach examining the characteristics of EI in terms that often overlap with traditional personality measures, such as the Big Five (openness, agreeableness, conscientiousness, extraversion, and neuroticism). Bar-On's Emotional Quotient or "EQ" is a combination of self-identified social and emotional traits and abilities, like good communications and the ability to change when situations require it. In simplistic terms, an approach using Bar-On's EI-related traits can be examined and correlated with managers and leaders who are considered effective. This approach parallels the "great person" approach to leadership in social psychology, where an instrument such as the NEO-PI (Costa & McCrae, 1992) would be administered to (presumably successful) individuals in high leadership positions. One consistent criticism of Bar-On's approach is that it does very little beyond what can already be assessed from Big Five personality measures. However, at least one study (Van Der Zee, Melanie, & Schaekel, 2002) claims to demonstrate that EI traits are different from traditionally measured personality traits.

Bar-On's basic approach, like the "great person" research, has limited usefulness because it primarily offers the possibility that a measure might aid <u>in the selection of</u> individuals with traits (or traits they themselves believe they have) enabling them to be successful in leadership positions. A basic flaw in this approach is that successful leaders (or those perceived to be successful), in one area, do not necessarily lead successfully in other areas (e.g., U.S. Grant or Rudy Giuliani). How productive this line of research will ultimately become is dependent on the extent to which desirable leadership traits can be modified. The theory does not view EI as a cognitive ability. The major impact that Bar-On has had in leadership research will become obvious as I review the literature. Bar-On's instrument has been the instrument of choice for measuring the presence of EI traits or characteristics in leaders, both as a self-report measure and as a measure given to supervisors or subordinates to complete on the leaders targeted for study.

The second theory, posited by Mayer and Salovey (1997), takes into account cognitive functioning and identifies how EI addresses different cognitive functions

than those traditionally measured by IQ. Mayer and Salovey (1997) took an important step forward in EI when they redefined their concept of EI to focus strictly on cognitive abilities. These ability areas include the ability to perceive emotions; the ability to generate, use and feel emotions in order to communicate more effectively; the ability to understand emotional information; and the ability to be open to feelings and to use them to promote self understanding and growth. The EI measures are based on assessing how well people perform various tasks and solve some emotional problems.

Proposing that IQ, alone, cannot cover the breadth of a person's abilities is not a new idea. Howard Gardner (1982) addressed the limitations of the intelligence quotient with regard to many abilities, including creativity. It is quite reasonable to assume that cognitive skills associated with EI (which impact on relationship building, recognizing emotions, etc.) may not be assessed by administering Block Design or Arithmetic subtests. Many highly responsible positions require a sufficient amount of intelligence in order to perform the technical tasks of the job, and this may be a major reason why IQ has not distinguished individuals who are better leaders, i.e., IQ is a "threshold" requirement—virtually all leaders are bright. It can then be argued that, if IQ is held constant, EI abilities will be helpful in distinguishing leaders that are more effective.

One problem that has always plagued the traditional IQ area is that test designers have sought a way to measure pure or raw cognitive ability. If this were possible, pure intelligence would be an ability uncorrelated with a person's previous education or experience—the search for the elusive general factor in intelligence, often referred to as g. Mayer and Salovey (1997) argued that the cognitive abilities of EI are distinct from both g and personality. However, Schulte, Ree, and Carretta (2004) report that Mayer and Salovey's measure, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), is in fact correlated with both Big Five personality traits and with a measure of g. It is important to note that the Schulte et al. study does not repudiate EI as a cognitive ability, but it may limit the claim that EI is a distinct ability.

In my review of the leadership area, the MSCEIT and its predecessor, the Multifactor Emotional Intelligence Scale (MEIS), have seldom been used. I am not sure if this is because the cognitive abilities being measured by the MSCEIT do not correspond to characteristics of EI that are theoretically described for an effective leader (c.f. Goleman, 1998a), because the empirical results using the MSCEIT have not consistently supported EI predictions, or because the instrument is too expensive or too unwieldy.

The third position, representing the mostly conceptual work of Goleman (1998a, 2001) and some of the empirical work of Boyatzis (dating back to 1982), identifies emotional "competencies" that may be associated with effective leadership. By definition, competencies are skills that are capable of being learned through training. There is a plethora of descriptions of what a relationally and emotionally competent leader should know in order to be effective. Most overlap heavily with one another. In one of the first delineations, Goleman (1998a. p. 183) listed four characteristics of emotionally intelligent leaders:

1. Articulate and arouse enthusiasm for a shared vision and mission.

2. Step forward to lead as needed, regardless of position.

3. Guide the performance of others while holding them accountable.

4. Lead by example.

The description of the competencies has been refined over time. A recent version of the competencies can be grouped into four categories: Self-Awareness, Social-Awareness, Self-Management, and Social Skills. Goleman and Boyatzis developed the Emotional Competence Inventory (ECI), and the Emotional and Social Competence Inventory (ESCI), surveys by which the targeted leaders, their supervisors, and their peers can rate the targeted leaders on behavioral indictors of the above competencies. The authors emphasize that the ESCI should not be used as a basis for providing more compensation or even in personnel selection; the ESCI should be considered as a "development tool." Conceptually, at least, the competency approach offers the most promise for preparing people to be effective leaders or, at the least, making good leaders into better leaders. However, realizing this "promise" may represent the biggest challenge for EI in the leadership area.

First, it is necessary to empirically define which competencies are, in fact, crucial to developing effective leaders—not just to generate a list of competencies that have face validity. The family of instruments (ECI, ESCI, etc.), available from the Hay Group claims to "cover the full spectrum of the emotional competencies that matter most for outstanding and effective performance" (http://www.eiconsortium.org/measures/eci_360.htm). Unfortunately, the studies using the ECI/ESCI or, even the EQ-i, have not consistently narrowed down or confirmed which EI competencies or traits are *the* ones related to effective leadership. The second task for EI is to translate this empirically determined list into a training model that actually insures that these competences are learned. Third, which is too much to ask for at this time, is to assess whether the competencies that

have been taught to aspiring young leaders are actually the ones that are needed or useful in the real world.

Goleman suggested that the leader sets the emotional tone for the organization by transmitting emotional energy to the group and that leaders set the course for their organizations. Such leaders balance a warm, people-oriented approach with being purposeful and businesslike. He emphasizes that the leader's emotions must be convincing and must come from the heart rather than being a manipulation. The downside is that a leader setting a negative emotional tone is predicted to sap the emotional energy of his or her organization. The good leader establishes an atmosphere of openness and interest in members of the organization; the mediocre leader is invisible.

Goleman goes on to say that the effective leader must be tough, but not be a tyrant. The good leader clearly calls attention to unacceptable behavior and makes clear the expectations. The autocrat may accomplish goals out of fear rather than respect, but the tyrannical leader will fail in a crisis because that is a time requiring sacrifice and loyalty, and members will not be inspired to work harder for their brutish leader.

The third EI approach, when it comes to leadership, might be seen as a victim of its *promise*. Goleman (1995, 1998a) presented EI to the world and the world loved it. Through those books and a series of *Harvard Business Review* articles, he described the ideal effective leader. Corporate America accepted the concept and could not get enough. In short, thanks to Goleman, CEOs now could list the qualities of the perfect managerial applicants. But MBA programs were not producing this mythical character. A vast majority of the leadership articles that I have reviewed below has been searching for this rainbow. Since Bernard Bass came up with a user friendly measure for identifying the transformational leader, the Multifactor Leadership Questionnaire (MLQ), EI researchers have been trying to demonstrate the "fit" of EI leader traits, abilities, or competencies to the transformational leader. As we will see, this approach has been most successful in studies where the targeted leaders have been able to describe themselves as transformational, as having EI qualities, and then rating their own leadership performance.

Setting the Stage for the Review of EI and Leadership Literature

As we begin to review EI research on leadership, there are several questions that must be addressed: First, does EI offer something new to the field of leadership research that will likely lead to the selection and training of better leaders? Second, is the "EI leader" actually a new category of leader, like the task-oriented or transformational leader, or are the EI characteristics a function of careful selection and renaming of previously identified leadership traits? Third, is there an effective means of identifying individuals who possess strong EI leadership characteristics or are these traits expressed as generalities? Fourth, have the studies providing affirmative answers to Questions 1 through 3 been carried out with sound methodology that assures the accuracy of their conclusions?

George's (2000) Comprehensive Review of EI and Leadership. One of the advantages of a large area of focus, like leadership, is that some comprehensive reviews have already been completed. George (2000) begins her review with the premise that emotions may play a central role in the leadership process and that emotional intelligence, therefore, contributes to organizational effectiveness. Her review focuses on finding support for this premise, and on discovering to what extent feelings play a central role. George notes that the prevailing stereotype for an effective executive is one who can coolly set aside feelings and pressures and make sound, rational decisions.

George takes on the task of tying together social psychology, organizational behavior, and even neuropsychology to make the case that emotions *are* central to the human experience and, in turn, *feelings* - not the ability to coldly set aside feelings - are central to effective leadership.

George relies heavily on Mayer and Salovey (1999) for her definition of EI and her description of the aspects of EI. She notes that people vary in their abilities to be aware of their own and other people's emotions and to accurately express their own feelings and those of others (empathy). She acknowledges that the concept of social intelligence preceded that of emotional intelligence but maintains, "emotional intelligence captures more of the essence of the active and purposeful integration of feelings and thoughts for effective functioning than these earlier constructs" (George, 2000, p. 1038).

George's strongest contribution comes in connecting various facets of emotional understanding and emotional management with behaviors that, at least theoretically or conceptually, make the leader more effective. Among her

persuasive arguments are to describe the successful leader as instilling the importance of working toward the corporate goal, instilling excitement in the workers, encouraging flexibility in decision making and establishing and maintaining a meaningful identity or corporate culture. She concludes, "at a minimum, emotions and emotional intelligence are worthy of considering in the leadership domain" (George, 2000, p. 1046), and that, "Clearly, what is needed now is empirical research which tests the ideas proposed in this paper" (p.1046).

Aside from the rare instances of over-enthusiasm, I found George's article to be soundly written and to suggest and propose some very important guidelines for how EI researchers should proceed toward their goal of demonstrating EI's contribution to the literature on leadership. Although George only "suggests" that emotions play a central role in leadership and only "proposes" that EI contributes to effective leadership, her article (with 128 references) has, unfortunately, been accepted by a number of EI researchers as establishing the foundation upon which additional assumptions and predictions about EI can justifiably be built.

Leadership Styles. One of the most common ways of examining leadership effectiveness in EI research has been to quantify the EI characteristics present in different leadership styles. The most frequently considered styles are those of the transformational and transactional leaders. While there have been several definitions of transformational and transactional styles in the leadership literature, researchers in EI have largely relied upon the definitions provided by Bass and Avolio (1990) because they developed the most popular instrument for measuring transformational and transactional leadership: the Multifactor Leadership Questionnaire (MLQ).

Transformational leadership is comprised of "idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration" (Barling, Slater, & Kelloway, 2000, p. 157). *Transactional leadership,* on the other hand, is comprised of contingent reward (also referred to as constructive transactions) and management-by-exception (focusing on the mistakes of workers). Another way of contrasting the two leadership styles is to view the transformational leader as one who inspires work and encourages dramatic change in the individual worker. The transactional leader, on the other hand focuses on the workers' performance and looks directly at what will increase the needed performance by providing rewards tied to performance or pointing out problem performance. The distinction between transformational and transactional styles is often blurred in the workplace because all leaders use both strategies, at times. Not surprisingly, supervisors might be more impressed by the leader who can "inspire" greater effort from subordinates without

the necessity of offering them additional compensation. Supervisors may also give more praise for the transformational style.

A third leadership style, dating at least back to the pioneering social psychology research by Lewin, is *laissez-faire* leadership, which is non-directive and allows workers do their own thing at their own pace. This style has been included in many of the EI research studies because early versions of the MLQ also assessed *laissez-faire* leadership. Newer versions of the MLQ instead have a separate style of "non-transactional leadership," which is still very similar to *laissez-faire* leadership.

In order to better understand the EI research that follows, it is helpful to understand that the MLQ identifies four *positive* features of the *transformational leadership style*: charisma, inspirational motivation, intellectual stimulation, and individualized consideration. In contrast, the MLQ identifies two (or three, depending on the version) features of the *transactional leadership style*, contingent reward and management-by-exception. Other MLQ versions included a "passive management" combined with the transactional style. Generally, contingent reward had been considered to be a *neutral* quality of leadership but management-by-exception and passive management had been identified as *negative*. A problem for researchers is that contingent reward, the neutral component of transactional leadership, often emerges in the analyses of EI research studies as *positively* associated with effective leaders. Researchers have elected to handle this contingent reward component in different ways.

Empirical Studies Examining the Connection between EI and Effective Leadership

In one of the earliest exploratory studies, Barling, Slater, and Kelloway (2000) examined whether EI might predispose leaders to make use of transformational leadership behaviors, however, they reclassified contingent reward as being "more like" a transformational behavior and included it there. The researchers assessed 60 middle level managers using the Multifactor Leadership Questionnaire (MLQ) and Seligman's Attributional Style Questionnaire, along with the Emotional Intelligence Inventory (EQ-i, Bar-On, 1997). Using a multivariate analysis, they found significant univariate results positively connecting idealized influence, inspirational motivation, and individualized consideration (MLQ characteristics of transformational leadership style), as well as contingent reward, to Bar-On's EI measure, but the intellectual stimulation relationship to EI was not found. No significant relationship was found between EI and management-by-exception or *laissez-faire* styles. The authors suggest that future research should examine whether managers can be trained to use transformational leadership techniques.

Ruderman, Hannum, Leslie and Steed (2001), Center for Creative Leadership (CCL), take note of the articles by Mayer and Salovey and the books by Goleman, but point out that those authors were not the first to describe emotional intelligence in the work place. Ruderman et al. stated that managers, for years, had been describing the attributes of emotional intelligence using terms like "people skills." Perhaps the authors' motivation was to make it clear that organizations like their own (at CCL's Leadership Development Program in Greensboro, N.C.) had been helping mangers and executives to understand themselves and others better *for over 30 years.* Their own measure *Benchmarks* (an observer rating instrument) was used to help the managers they were training to gauge their "emotional intelligence." In fact, they had administered their Benchmarks measure and Bar-On's EQ-i to over 300 managers. The authors noted a "strong connection" between "participative management" from their Benchmarks measure and EI, measured by the EQ-i. They went on to describe the importance of skills of putting people at ease, having managers who are self-aware, achieving a balance between personal life and work, remaining calm in crises, developing and maintaining relationships, persevering in the face of obstacles, taking quick and unhesitating action when necessary, dealing with difficult workers, and being able to change when change is required. Ruderman et al. make their case that CCL was teaching their trainees to be better at transformational leadership, or EI, before the terms were invented. They did acknowledge that they had "done little to scientifically examine and document" what they had been doing.

In Stough's earliest EI study, Palmer, Walls, Burgess, and Stough (2001) assessed 43 past and present students in one of Swinburne University's (Australia) business programs. About two-thirds of the participants held middle or upper level manager positions. The researchers used the Trait Meta Mood Scale (TMMS) (Salovey et al., 1995), a predecessor of the MSCEIT that included emotional as well as cognitive items, and the MLQ to examine the relationship between leadership style and EI. Their prediction that transformational leaders would be higher in EI than transactional leaders was <u>not</u> supported. This finding was based on the total transformational and total transactional scores. However, when the authors continued their analyses down to the level of subscales of the separate dimensions of the TMMS, they did find relationships between some of these sub-scales, such as between emotional monitoring and inspirational motivation and between idealized influence and emotional monitoring. Although they were predicting the opposite direction, the researchers also found a positive relationship between the contingent reward component of transactional leadership and the emotional monitoring subscale, and with contingent reward and the total transformational leadership score, concluding that "perhaps 'contingent reward' overlaps considerably with the

transformational leadership component" (Palmer et al., 2001, p. 8). The authors suggest that there is cautious optimism for pursuing the connection between EI and the competencies of transformational leadership.

Gardner and Stough (2002) correctly note that there are many theoretical links between effective leadership and emotional intelligence, but little empirical research. As suggested by George (2000), if emotional intelligence is associated with an enhanced ability to use positive emotions by accurately perceiving how subordinates feel and also understanding their needs, then high EI leaders can influence these subordinates to support the goals of the leader and the organization. Gardner and Stough abandoned the Mayer and Salovey measure of EI and instead employed the Swinburne University Emotional Intelligence Test (SUEIT) which assesses "the way people typically think, feel and act with emotions at work" (2002, p. 72) and the MLQ (to assess leadership style). They also somewhat modified the definition of transactional leadership by moving *laissez-faire* leadership into a third leadership category. The instruments were returned by 110 "high level managers" (250 sent out).

The first prediction, that EI would be correlated with transformational leadership, but not with transactional or *laissez-faire* leadership, was partially supported in that there was a significant positive relationship for transformational leadership, but a strong negative relationship was found for *laissez-faire* leadership, as well. The relationship was further supported for all five EI factors from the SUEIT, as well as with contingent rewards (part of the transactional leadership style). The self-report measure also included a rating of the perceived outcomes of leadership (extra effort, effectiveness, and satisfaction). This aspect produced very high correlations, but these results called attention to the importance of having other ratings of outcomes than just the perceptions of the high level managers themselves (which the authors suggested in their discussion).

Perhaps, the most interesting negative relationship for *laissez-faire* leaders was that the authors found that leaders' use of the *laissez-faire* style might be dictated— not by an average level of EI—but by a *marked deficit* in EI. The authors raised the point that *laissez-faire* leadership might be selected by default for leaders uncomfortable with their emotions and that their leadership might be improved with EI training (or they might avoid such training as being too uncomfortable for them to undertake).

Mandell and Pherwani (2003) conducted a small study consisting of 13 male and 19 female managers in mid- to large-size companies, with the goal of examining gender differences in the relationship between EI and transformational leadership.

The leadership measure was the MLQ (5x-Rev.) and the EI measure was the EQ-i (Bar-On, 1996). The researchers found that females were significantly higher in EI than males, but there were no gender differences when comparing the relationship between EI and transformational leadership. There was an overall significant positive relationship between the total EI scores and transformational leadership scores of the managers. Mayer and colleagues have also found superiority of females over males with regard to managing own and other's emotions.

Srivsastava and Bharamanaikar (2004) examined leadership effectiveness with a unique population for EI literature (but not unusual for research with Fiedler's Theory of Leadership Effectiveness: Fiedler, 1967). They collected data from 291 Indian army officers. EI was measured using a self-report measure, the Work Profile Questionnaire Emotional Intelligence version (WPQei), which is scored on seven different dimensions of EI (Camaron, 1999). Leadership style was measured by the 5x-short version of the MLQ (Bass & Avolio, 1995). Unusual among the leadership studies, but a positive step, was that subordinates completed the MLQ, allowing subordinates to determine the extent that transformational and transactional leadership style was displayed in the leaders. Perceived success of the leader was measured by a questionnaire developed by Pareek and Rao (1991) and job satisfaction was measured by the Job Satisfaction Survey (Spector, 1994). While not stated clearly, the latter two measures (success and job satisfaction) appear to have been self-report measures completed by the targeted officers, themselves.

The results significantly supported the connection between leader EI and all of the components of the transformational leadership style. In addition, higher EI scores were also found for the contingent reward component of transactional style. EI was not related to job satisfaction, but was related to perceived success. This is one of the only studies to examine age differences and the researchers found that scores for *most of the dimensions for transformational leadership increased with age*, especially inspiration and motivation. Perhaps, since this study provided a cross-section of age and experience, the population for this study was very different from the usual "senior management" populations, who may all perceive themselves as quite successful and effective. There was a strong relationship between transformational leadership behaviors and the leader self-reports of being innovative, intuitive, self-aware, motivated, socially adept, empathic, and managing emotions. The army officers who rated themselves high on EI also perceived themselves to be more successful in their careers.

Kuypers and Weibler (2005) began by examining whether and how emotional competencies are incorporated into transformational leadership (TL). In order to do

this, they used the MLQ and limited their research only to the TL components. The four components of TL are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Since their research focuses on these dimensions, I will briefly define them:

1. Idealized influence—the ability to exert influence by serving as a role model

2. Inspirational motivation—offers meaning, visions and attractive goals

3. Intellectual stimulation—challenging new ideas to address old problems

4. Individualized consideration—taking the coaching role and recognizing individual differences

Kuypers and Weibler further break down the MLQ items into those that explicitly measure emotional behaviors (e.g., "being enthusiastic") and those that are implicit (less behavioral items, e.g., "visions" or "respect"). Unfortunately, the researchers were only able to use 15 of the 46 items from the MLQ in their study, which only allowed them to focus on cognitive rather than emotional features. Therefore, they turned to Goleman's (2001) framework of emotional competencies for their investigation. They described their research methodology as the "interpretative method," because their "research is focusing on the non-measurable qualitative dimensions to understand motives, reasons, and actions" (Kuypers & Weibler, 2005, p. 371). The authors followed Goleman's breakdown of the competencies into personal (self-awareness and self-management) and social (social awareness and relationship management.) The authors then spent five pages describing how the four transformational components *appear to connect theoretically* with emotional competencie*s*. The authors suggest that their "framework provides a 'bedrock' for more rigorous theory building, further analysis and empirical testing" (Kuypers & Weibler, 2005, p. 378).

Brown, Bryant, and Reilly (2005) noted that the connection between transformational leadership (TL) and *desirable outcomes* has been well established and they predicted in their very ambitious study that they would find that TL predicts desirable outcomes. They also predicted that EI and desirable outcomes would be positively related, but they were not sure if this relation would be a simple relationship or would only emerge after factoring out the effects of TL. They also predicted that EQ-i (Bar-On, 1996) would be positively correlated with TL and negatively correlated with contingent reward and with laissez-*faire* leadership styles. Brown et al. also proposed adding EI (as well as TL) to a predictive model of

desirable outcomes and predicted an interaction effect between EI and TL. The sample consisted of 2411 questionnaires returned at a "large U.S. manufacturing facility." The questionnaire included the MLQ (Bass & Avolio, 1996), used to assess the level of TL, and the EQ-i (Bar-On, 1996), used to assess several personality dimensions of EI. The managers and supervisors being studied completed both. Hourly subordinates completed the *desirable outcomes* measure ("perceptions of unit effectiveness, satisfaction with supervision, and willingness to expend extra effort"). The measure also included items to assess turnover, i.e., an expressed desire to transfer to a different internal unit.

According to Brown et al., the results of regression analyses demonstrated that the desirable outcomes subcategories were positively associated with overall TL (although not with all of the TL subscales). More interesting was that the prediction for EI to be positively correlated with desirable outcomes received only limited support. The authors concluded, "EI adds predictive strength to the model" (Brown et al., 2005, p. 341). No significant relationships were found between EI and TL or between EI and contingent reward and *laissez-faire*. .

Brown et al. was the first study <u>not</u> demonstrating that EI adds to or is related to the positive effects that TL has on desirable outcomes. *It was also one of the only studies which did not base its results on either self-report by the leaders, themselves, or on the <u>direct subordinates</u> of the leaders.* It was also the first *large N* study with over 2000 questionnaires returned. The authors did not want to negate the importance of EI as a contributor to leadership, but they did state their belief that the EQ-i is <u>not</u> a useful tool for selecting managers.

The Downey, Papageorgiou, and Stough (2005) study was a follow up on the earlier work of Gardner and Stough (2002) predicting a positive relationship between transformational leadership (TL) and various workplace scales and a negative relationship between EI measures and *laissez-faire* leadership. The difference in this study and the Gardner and Stough study was that 176 <u>female</u> Australian managers were the target leaders in this study. The measure of EI was the Swinburne University Emotional Intelligence Test (SUEIT) but, in this study, a second measure of EI was employed, the Trait Meta-Mood Scale (TMMS) developed by Salovey, Mayer, Goldman, Turvey, and Palfai (1995). The latter measure has three subscales focusing on attention to feelings, clarity of feelings, and mood repair. The third measure, designed for assessing intuition in managers, was the cognitive style index (Allinson & Hayes, 1996). Finally, the measure of leadership style used was the MLQ. *All measures are self-report, completed by the managers themselves.*

Downey et al.'s predictions were partially supported. They found that three of the SUEIT workplace dimensions (understanding emotions, emotional management and emotional control), as well as two of the TMMS dimensions (attention to feelings and clarity of feelings) correlated positively with TL. However, only two of the EI dimensions correlated negatively with *laissez-faire* leadership. Contrary to prediction, *they found a positive relationship between the transactional leadership component, contingent rewards, and workplace dimensions (emotional management and clarity of feelings)*.

When the authors engaged in more detailed analyses, they did find that female *managers who rated themselves highest on TL style also self-reported that they were both more in touch with their own emotional states and with the emotions of others.* The authors described this result as, "the abilities encompassed by EI are intrinsically related to the role of the transformational leader" (Downey et al., 2005, p. 259). Given the limitation that the mangers were reporting self-perceptions, the authors did find the previously reported connection between TL and workplace dimensions. They also repeated their earlier suggestion that *laissez-faire* leaders may be using this leadership style because of their limited social skills. Finally, with regard to the positive relationship between contingent rewards and workplace dimension, the authors tended to downplay the possibility that leaders might be liked because they respond to the material needs of their subordinates. Instead, the authors suggested that *subordinates might have perceived using contingent rewards as evidence that the leaders were considering their emotions*.

Brown and Moshavi (2005), in a conceptual article, took the position that EI might be the "X factor" in transformational leadership (TL). This suggested three possibilities: (a) that it could be an antecedent to TL, i.e., a person with EI competencies might be more likely to engage in TL behavior; (b) that EI might moderate TL, so that TL is enhanced when the leader possesses EI abilities; or (c) that EI is independent of TL behaviors. Brown and Moshavi also pointed out that viewing EI as a trait is too much like the "great man" theory of leadership. Further, they advocated that EI is more of an intellectual capacity than it is a competency, because they believe there is currently better theory building by supporters of this position. *This article appears to reflect an advance in thinking over most of the previously reviewed efforts to find empirical support that EI is the essence of transformational leadership.*

Moss, Ritossa, and Ngu (2006) examined the concept of regulatory focus in an article that was *not* published in an organizational journal. Regulatory focus is described by the authors as falling into two classes: a *promotion focus* in which the

person is striving for advancement and accomplishment and a _prevention focus_ in which the person is motivated by issues of protecting themselves and being safe. This is another study comparing transformational, transactional, and *laissez faire* leaders, EXCEPT that the latter two styles were replaced with a hybrid *corrective-avoidant* scale. The authors describe the transformational leader as one who "motivates all of their followers to extend and unify" (Moss et al., 2006, p. 94), whereas *corrective-avoidant* leader might as well have been called the "bad leader" scale. It described leaders who were absent until things got serious and then stepped in to "lower the boom." Transformational style was conventionally measured by the MLQ and the corrective-avoidant style was measured by a confusing selection of transactional, and *laissez faire* items from the MLQ. The twist in this study was that the authors predicted that the transformational leader would be able to respond more appropriately to the promotion-focused worker while the corrective-avoidant leaders would be more likely to *impair* the prevention-focused worker. A third hypothesis was that the leaders who could figure out what kind of worker (promotion or prevention) they were dealing with, and then adapt their style, would be more transformational.

The study used 263 pairs of Australian managers and subordinates; mangers completed the Swinburne University Emotional Intelligence Test (SUEIT) while subordinates completed the MLQ and scales to measure regulatory focus and organizational commitment. In study 1, hypotheses related to the positive effects of transformational leaders and those high in EI were not supported; these leaders did not positively impact promotion-focused employees. On the other hand, corrective-avoidant leadership styles did impact negatively on the prevention-focus workers. In study 2, the same measures were used as in study 1, except that the NEO-FFI was added to measure Extraversion. The single hypothesis was that the extraverted workers would be less likely to become frustrated and lose their drive when working with an EI leader. The researchers found partial support for their hypotheses. For all of the convolutions and difficult-to-follow distinctions, support for EI was underwhelming.

Barbuto and Burbach (2006) explored the antecedents of transformational leadership. They effectively summarized the historical connection between EI and transformational leadership by connecting it to five underlying factors (described by Carson, Carson, & Birkenmeier, 2000): empathic response, mood regulation, interpersonal skills, internal motivation, and self-awareness. These five factors were described as "the emotional underpinnings of transformational leadership," supported in the research by Barling et al. (2000); and Gardner and Stough (2002). Barbuto and Burbach proposed that all five of the EI factors were correlated with TL.

The researchers evaluated 80 community leaders and gathered dual information from 288 direct-report staff members. EI was measured by an instrument developed by Carson et al. (2000), and leadership was measured by Bass and Avolio's (1995) MLQ measure. Barbuto and Burbach found that *only empathic response shared a significant amount of variance with rater-reported measures of intellectual stimulation and individualized consideration* of the transformational leadership scales. In an interesting relationship, the researchers found that leaders with empathy for their subordinates *rated themselves* higher as transformational leaders. As other dual rater studies have found, *the leaders, who completed both the EI and MLQ measures, rated the connection between EI and transformational leadership as stronger than when the targeted leaders' direct-reporting subordinates are doing the rating.*

Butler and Chinowsky (2006) extended the research of Gardner and Stough (2002) by examining 155 leaders in the construction industry. The Bar-On EQ-i test was used as the measure of EI; the MLQ Form 5X was used to measure transformational, transactional, and *laissez-faire* leadership. When analyzing the construction leaders, the leaders' three top EI strengths were stress tolerance, independence, and optimism. These may not be the highest EI subscales for all leaders, but it is intuitively obvious that stress tolerance likely serves the effective leader in the construction industry extremely well. The top EI weaknesses for the construction leaders were empathy, interpersonal relationships, and social responsibility. As a group, the construction leaders *viewed themselves as transformational leaders who sometimes behaved as transactional leaders*, with *laissez-faire* leadership behaviors seldom used.

Inspirational leadership behavior was reported as the most commonly employed transformational behavior and employing contingent rewards behavior was viewed as the most frequently used transactional leadership behavior. There was also a strong relationship found between total EI and transformational leadership. This study was an important extension of the EI leadership by *pointing out that there are situational demands of leaders and different components of EI may be needed in certain leadership settings more than others*—perhaps, the start of a connection between EI and Fiedler's model. The study also suggested that *(a) there might need to be fine-tuning when using EI measures to select prospective managers and (b) there is growing evidence that transformational/transactional leadership should be viewed as something other than a dichotomy.*

Leadership studies not involving leadership style

In an international study, Vakola, Tsaousis, and Nikolaou (2003) examined organization change in 137 professionals from various public and private

organizations located in Athens, Greece. Unfortunately, given the international nature of the study, the authors had to reconstruct all of the measures to use with the Greek population. Vakola et al. hypothesized that positive attitudes toward organizational change would be correlated with four of the "Big Five" personality traits (openness, agreeableness, conscientiousness and neuroticism). No prediction was made for extraversion since it was not related to organizational change. They also hypothesized that attitudes the professionals had toward organizational change would be related to overall EI, as well as specifically to control of emotions and use of emotions for problem solving. They hypothesized that EI would explain variance beyond the effects of personality. There were additional hypotheses based on earlier research findings, including educational background, but not gender. Measures used included *the attitudes to change questionnaire*, an instrument developed for the study specifically about attitudes toward organizational change. The EI measure was *the emotional intelligence questionnaire*, also developed for the study and modeled after the theoretical model of Mayer and Salovey (1997), the only Greek EI measure available. The personality measure, based on the big five model, was *the traits personality questionnaire 5*, a shortened version of another Greek adaptation of the big five personality traits.

With respect to Hypothesis 1, significant positive correlations with attitude toward organizational change were found for openness, agreeableness and conscientiousness (and for the *unpredicted* extraversion scale). There was also a significant predicted negative correlation for neuroticism. When a hierarchical regression analysis was performed, neuroticism dropped out as a significant predictor. For Hypothesis 2, only the use of emotions for problem solving subscale and the total EI scale survived as significant predictors for the hierarchical analysis, although all were correlated. With regard to Hypothesis 3, both the total EI scale and the use of emotions for problem solving subscale, along with openness to experience and agreeableness in the personality test, predicted positive attitudes toward organizational change, with the use of emotion in problem solving subscale being a stronger predictor than the personality variables.

Judge, Colbert, and Ilies (2004) conducted a meta-analysis of 96 sources on the relationship between intelligence (cognitive, not emotional) and leadership, updating a previous meta-analysis that was completed in 1986. There were some interesting connections to social, if not emotional, intelligence. They found that *the intelligence-leadership relationship was stronger if the intelligence assessment came from the perceptions of others rather than objective measures of intelligence*. Judge, Colbert, and Ilies speculate, "the validity observed for perceptual measures of intelligence reflects the fact that leadership status is afforded to those who effectively manage a

reputation for intelligence" (2004, pp. 547-8). The analyses also supported Fiedler and Garcia's (1987) cognitive resource theory, in that intelligence and leadership were more related under situations when leader stress was low and leaders were more directive. With respect to EI, the authors conclude that *it is difficult to perform a comparison of the relative contributions of intelligence and emotional intelligence because of the lack of psychometric soundness for available EI measures*. Perhaps, under conditions of high stress, or when the leader must be more persuasive than directive, the relative importance of possessing emotional intelligence skills increases.

Carmeli and Josman (2006) echoed the frequent comment that, in spite of glowing descriptions of possible connections between emotional intelligence and positive performance in the workplace, methodologically sound studies examining this connection rare. They go on to say that even if research has been carried out, it is typically based on self-reported evaluations and it overlooks that work performance is actually multidimensional (task performance and organizational citizenship). Carmeli and Josman noted that task performance might not capture the full range of the leader's work role. They maintained that "extra-role behaviors," such as maintaining civil relationships and helping subordinates with issues, also impacted on the work performance. Specifically, the researchers examined two elements of the leader: *altruism* (e.g., helping with a heavy workload) and *general compliance* (e.g., being punctual) which they suggested may be the factors that maintain the leader's respect from subordinates and could, therefore, impact subordinates' willingness to conscientiously perform work for the leader.

Carmeli and Josman assessed 215 employees in diverse organizations in Israel to look for a connection between emotional intelligence with both altruistic behavior and compliant behavior. Data was collected from subordinates and supervisors, as well as the participants, themselves. The dependent measure was an instrument that included items from several different measures. The predictive measure was a self-report measure of emotional intelligence developed by Schutte and colleagues (1998). The researchers found that both altruism and compliance were related to task performance. They also found that the three elements of EI (appraisal and expression of emotions, regulation of emotions, and utilization of emotions) were related to task performance and to altruistic behaviors, but only partially to compliance behaviors. The study was noteworthy because it went beyond the typical self-report-by-leaders approach. Unfortunately, the data from both supervisors and subordinates were combined for the analyses. Perhaps, combining was necessary in order to obtain significance, however, it would have been useful to learn more about the relative importance of EI (and altruism and compliance) from the *separate* perspectives of supervisors and subordinates.

Groves (2006) hypothesized that the emotional expressivity skills of the leader will be related to visionary leadership and that visionary leadership, in turn, would be related to leadership effectiveness, as rated by the subordinates. A third hypothesis predicted that the strength of the relationship between visionary leadership and organizational change would be greater the more emotionally expressive was the leader. Groves examined senior organizational leaders from 64 organizations. He used the *Social Skills Inventory* (Riggio, 1989), a self-report measure, to assess the leaders' emotional expressivity. Visionary leadership was measured by the charismatic leadership questionnaire (Conger & Kanungo, 1994); this measure was given to individuals who reported directly to the respective leader. Five-point Likert items, addressing the amount of change that had taken place in the organization in the past year, assessed leadership effectiveness. Both the leaders and their direct subordinates completed this series of items.

All three hypotheses were supported by regression analysis. Groves concludes, "visionary leaders who also possess emotional expressivity skills appear to generate greater organizational change in the respective work units than leaders lacking emotional expressivity" (Groves, 2006, p. 575). The author does caution that the data were cross-sectional, precluding conclusions of causation, and that the self-report aspect of two of the measures may be distorted by inflated ratings by the leaders. It should also be pointed out that leadership effectiveness may not be equivalent to the amount of change seen by either subordinates or the leaders, themselves, especially with only one Likert item per change type.

In one of the more unusual studies in the leadership area, Greenstein (2006) examined the disparate leadership styles of our nation's first three presidents. One interesting feature of the early presidents was that none of the first three began office with a previously declared program or agenda. They took the model of the "patriot leader" who decides, but is above the fray of, policy disagreements. Their cognitive and educational experience differed; Adams and Jefferson had received an excellent formal education and were quite philosophical and abstract in their thoughts and writings. Adams seemed less governed by principles and changed his mind frequently, compared to Jefferson who, at least on the surface, appeared to have clear and consistent principles. Washington was self-educated (similar to Abraham Lincoln and Andrew Jackson) and was known as a slow, methodical thinker who, in the end, made very accurate and non-impulsive decisions.

Greenstein suggested that EI was lacking in all three, but it was clear from his article that he thought Washington had the positive admiration of his countrymen to fall back on and that Adams had virtually no EI. The nod for most EI probably went

to Jefferson, although he was not exactly an EI all star, claiming Blacks were deficient, but fathering several children with one of his slaves. Washington had a "volcanic" temper that he was sometimes unable to control. Adams was quite aware of his volatile tendencies, but they occasionally would get out of control. Apparently, the writings of Jefferson reveal only that, while serene on the surface, he could hold grudges and was willing to punish those who defied him. Jefferson was an effective personal communicator, making the effort to tour all of the states and, after receiving praise from the local officials, he would praise the communities for their good things. Adams was not much of a communicator, scorning self-promotion and most of his public declarations were expressing emotional reactions about something (he always seemed on the verge of taking the country to war). Jefferson was viewed as, perhaps, the first "modern" president, structuring much of the bureaucracy of the federal government. He did not like controversy and tried to get the sides working together in face-to-face meetings. Washington was aloof and Adams did not really trust anyone, except his wife. While interesting, Greenstein acknowledged that it was possible that a truly "EI president" did not emerge until Bill Clinton.

Kerr, Garvin, Heaton, and Boyle (2006) defined leadership as "a process of social interaction where the leader's ability to influence the behavior of their followers can strongly influence performance outcomes" (p. 268). The implication is that the leader is in the position to influence and his/her ability is a factor in whether or not the leader is effective. The authors take as a "given" that EI is "a key factor in an individual's ability to be socially effective" but later "suggest" that "a high level of EI enables a leader to be better able to monitor how group members are feeling." They also made the assertion that most of the published research on EI is based on student samples; something I have not found to be the case in my review.

Kerr et al. had 38 supervisor participants. The supervisors took the MSCEIT (Mayer, Salovey, Caruso, & Sitarenios, 2003), which measures overall EI and four branches (perceiving emotions, using emotions, understanding emotions, and managing emotions) and was scored using the "expert" scoring method. The measure of leadership effectiveness was a 24-item Likert scale constructed by a third party consultancy specifically for this organization, of which nine of the items related to rating supervisory leadership. An impressive 1,197 employee survey responses were returned. The MSCEIT scores were stratified into three factor levels. The correlation results yielded significant relationships between supervisor ratings for only two of the EI branches: perceiving emotions and using emotions. Therefore, *subordinates did not rate their supervisors as more effective if they had higher self-rated scores for understanding _and_ managing emotions. These results could provide*

evidence that supervisors tend to exaggerate these areas or that subordinates simply do not believe that these characteristics make their leaders more effective.

Stone, Parker, and Wood (2005) looked at the relationship between leadership in schools (principals and vice principals) and EI because of the suggested link between EI and classroom success and emotional well being. The sample was somewhat unusual in EI literature in that out of the 464 leaders, 277 of them were women. All of the leader participants completed the EQ-i (Bar-On, 1997), while each of the leader's immediate supervisors and three of the leader's staff members, using separate questionnaires for supervisors and staff members, evaluated participants. The results indicated that female leaders were significantly higher on the interpersonal dimension of the EQ-i but, otherwise, there were no gender differences. Principals were rated higher on most of the leadership ratings, but vice principals were rated higher on relationship-oriented leadership. A combined supervisor/staff members rating of each leader was calculated and the above-average-rated leaders had higher EI scores than the below average rated leaders. The researchers suggested that their findings could be applied by focusing on individuals high in emotional self-awareness, self-actualization, empathy, interpersonal relationship, flexibility, problem solving, and impulse control for selection to professional staff development programs.

Articles and research on leadership and EI by Richard Boyatzis

The work of Richard Boyatzis falls into a somewhat different category from the preponderant body of research examining the characteristics of transformational or effective leaders and how these characteristics are related to various components of EI. The articles by Boyatzis and his colleagues sampled for this review illustrate these directions sufficiently for the reader to grasp their contribution to research on leadership. First, Boyatzis, Stubbs, and Taylor (2002) focused on preparing people to be excellent leaders. Along with Goleman, Boyatzis refers to these positive leadership characteristics as "competencies." These competencies or abilities fall into three clusters: "(1) Cognitive or intellectual ability…(2) self-management or intrapersonal abilities…and (3) relationship management or interpersonal abilities" (p. 150). Very appropriately, Boyatzis et al. also note the importance of *knowledge* required for the leaders to perform their specific jobs and their desire to make use of their talent. Pointing out the importance of these two crucial features then allows EI to be considered as additional "threshold features." By characterizing EI in this manner, the model shows how low-EI leaders can be rated as competent and even, perhaps, "great" if they are the key to the success of their organization or unit—perhaps, in spite of limited emotional and/or relational abilities. This model is also

important in suggesting that the competencies of EI can be taught along with other competencies without the school, company, or agency feeling that EI competencies are the only path to effective leadership.

Boyatzis and his colleagues proposed to address disappointing feedback from employers regarding MBA graduates by restructuring their MBA program at Case Western Reserve University to provide the EI competencies to their MBA graduate students. More on the techniques employed to teach these competencies can be found in Boyatzis and Taylor (2003). Boyatzis and his colleagues also have performed outcome studies to insure that the competencies that had been attained at graduation remained in their graduates during their post-MBA-program employment. Their design also allowed for a control group of 1987-89 MBA students who were in the Case Western Reserve program prior to restructuring. This was an excellent step as control groups are relatively rare in EI research. Since data were gathered throughout an entire course, there were many opportunities to collect information, ranging from traditional testing methods (questionnaires, Q-sort) to coded one-hour "critical incident" interviews, and group discussions and presentations. Some of the data was self-report, but most was based on the assessments by observers, coders, and peers, which is a positive trend for EI research. Analyses did support predictions that the post-restructuring MBA students scored higher on the selected competency measures; that from start to end of the restructured program, there were significant improvements in the competencies; and that full-time students improved in their competencies more than part-time students. [Note that later follow-up research also demonstrated that graduates who were now employed scored as high or higher on the competency measures, several years into their new jobs.]

In a recent theoretical article involving leaders, Boyatzis, Smith, and Blaize (2006) examined leadership development by incorporating affective neuroscience, as well as stress and wellness research, in order to present a more "holistic" approach. Unfortunately, in the introduction, Boyatzis and colleagues appear to turn their back on 70 years of leadership research (see Riggio et al. 2002) in favor of models that are consistent with EI. The authors then explored the stress faced by leaders, using the term "power stress," and basing their concept of stress on recent conceptualizations of stress. It is unfortunate that Boyatzis and colleague's model of stress ignores the foundational work of Lazarus and Selye, whose research and theoretical footprints are clearly present in the article's second figure labeled "The Power Stress Syndrome." In fairness, researchers in the entire area of EI seem to accept the position that research which is useful to EI, began in the 1990's.

Having summarized the chronic stress model (now referred to as "power stress") and its damaging effects, the article moves on to its central focus: how effective leaders (as coaches) might be able to reduce the stress of subordinates. Boyatzis et al. distinguish "traditional" or *instrumental coaching*, which is coaching primarily to benefit the organization, from "*coaching with compassion*." In this latter view of coaching, compassion involves empathy, caring for the other person, and being willing to respond to the feelings of the other person (and even help). The authors make the connection to stress by contending that *only in the course of compassionate coaching does the process reach the parasympathetic nervous system* of the subordinate and, hence, reduce his/her stress. The article goes on to describe the values of the leader in a compassionate relationship with his or her subordinates and *the relational value, loyalty and respect* that the subordinates will then have toward a compassionate supervisor. It is suggested that the process of compassionate coaching can reduce stress for the leader, as well. The authors also pointed out a problem associated with the leader who cares too compassionately. Instead of using the standard term for this experience, i.e., *burnout*, the authors employ a newer term, "compassion fatigue." The authors imply that if the leader sticks to *supporting hopes and dreams* and does not get bogged down with his/her subordinate's emotional pain and suffering, the leader can reduce the risk of compassion fatigue.

The description of the physiological and psychological stress research and effects in this article appear to be accurate. However, there was no acknowledgement that information on stress effects and stress management has been taught in many employee in-service workshops and has been the basis for corporate wellness programs in operation for many years. The article proposed that if better empathic skills could be taught to leaders, and if leaders could be convinced of the value of taking the time to acknowledge the feelings of subordinates, then these actions could be effectively turned to the leader's benefit.

Boyatzis' research comes much closer to standard empirical research by providing pre-post conditions and a control group (even though non-randomized, which is very common in applied settings). The 2002 study demonstrated that the targeted competencies were effectively developed. The one lingering question is whether the competencies selected for MBA training are the ones that translate into effective leadership. The selected competencies have, primarily, been chosen from theory and inconsistently supported by studies that were often methodologically weak or which only looked at the *theorized* areas of competency. Could other non-EI competencies, like learning how to effectively administer contingent rewards or learning how to assess situations when a relational or empathic approach is not the most effective strategy be even higher priorities for MBA students (e.g., as measured

by Snyder's Self-monitoring Scale)? Further, many of the leadership studies relied upon self-reports by the leaders themselves to not only confirm the presence of EI in the targeted leader, but also allowed the targeted leaders to rate their own effectiveness as leaders. Therefore, the *foundation* for the competencies is potentially weak, in contrast to the Boyatzis research methodology that does demonstrate that the competencies were learned.

Articles critical of the EI research on leadership

Antonakis (2003) has been one of the more outspoken critics of EI leadership research. He completed his dissertation at Yale, examining features of the MLQ. He downplays the claims of EI, including its usefulness in industrial settings, its measures, and even the basic construct. This article began by asking why EI is viewed as such a panacea for organizations and as essential for leadership effectiveness. The focus of Antonakis' comments was an article by Prati et al., which he described as touting the wonders of EI with missionary zeal, including statements that EI is necessary for leadership effectiveness and that is a "fundamental element" of charisma and effectiveness. [Note. I was unable to obtain the original Prati article, but did get a sense of this "zeal" Antonakis was referring to by skimming Prati's doctoral dissertation.]

Antonakis' first premise is that *when* personality characteristics (such as assessed by the Big Five and the Self-monitoring scale) and general intelligence are controlled, *EI uniquely contributes little or nothing* to the topic of leadership effectiveness. He goes on to say that it does not take EI competencies or abilities to know that subordinates will have positive feelings when given a raise and that they will suffer from anxiety and have negative feelings when given a poor performance appraisal. Antonakis also notes that having a leader with controlled emotions is not always the best way to be effective; sometimes a leader's passionate, angry outburst can be more memorable and effective than remaining controlled and empathic.

Antonakis (2004) began his second critical article on EI with additional information and arguments from his 2003 comments to Prati et al. He also responded to the published reply by Prati et al. of his (2003) critique. He compliments Prati et al. for abandoning their all-encompassing Goleman model in favor of the narrower definition of EI used by Salovey and associates. Antonakis believes that a lot of damage has already been done by the expectations raised by the Goleman approach and that it is unconscionable if companies are actually basing their hiring decisions on the results of EI tests, with such little sound empirical support. [Note. In the *EIConsortium* description of the ECI, Goleman specifically

states that employers should not use that instrument for hiring or compensation decisions (http://www.eiconsortium.org/measures/eci_360.htm.)]

Antonakis points out that there are questionable criterion, discriminant, convergent, and incremental validity in the present EI measures. He notes that all of these need to be addressed when constructing EI measures. In addition, Antonakis offered suggestions for several ways EI researchers could do better leadership research:

1. Researchers should avoid the use of leader self-measures.

2. Leaders should avoid filling out <u>both</u> leader <u>and</u> outcome measures.

3. EI measures should be constructed of items that measure EI--not related constructs, like empathy and self-monitoring.

4. Target leaders should complete measures of *g*, EI, <u>and</u> broad personality measures, while followers/peers/bosses should complete the leadership style and performance/satisfaction measures on target leaders.

Antonakis argues that EI leadership researchers first need to make the above changes to measures and procedures. Then, if the results demonstrate that the EI construct still holds up *and* is a significant and *unique* contributor to better understanding of leadership and leadership effectiveness, and then EI is more than worthy to proceed to offer its *validated* contributions to organizations. While I have not personally examined the EI measures and leave that to another reviewer, it appears in my sampling of EI leadership studies, that the methodological suggestions made by Antonakis are on target and would address methodological concerns and limitations found in my literature review.

Antonakis continues in his article to offer some suggestions for the formulation of the EI construct itself with regard to leadership. He questions whether a high level of the ability to appraise emotions is truly necessary for all leaders, especially those at the top level. In fact, as Fiedler's (1967) leadership effectiveness theory pointed out long ago, that there are some situations where being concerned or even bothered with the feelings of others might be detrimental to leadership effectiveness. For example, would General Grant have been successful in his Civil War battles if he had been empathic toward his troop casualties? Antonakis also suggested that EI researchers have not been sensitive to conducting *multi-level research.* Such research might show that some EI competencies are quite valuable at the level of a team leader (or a platoon leader in the infantry), but may

not be needed in the same way by a high-level leader in industry or the military. In addition, Antonakis questioned whether treating each subordinate as a homogeneous informant of the targeted leader's competencies and performance is a useful strategy. I would agree with Antonakis that it might be quite appropriate to have platoon sergeants, for example, evaluate their platoon leader's EI abilities and leadership style, whereas lower enlisted personnel might be much more interested in whether their platoon leaders had insured that the platoon received good food or regular liberty (possibly a strategy for addressing the positive "contingent reward" connection to EI that was frequently reported in this review).

Examples of Promising Research Trends

One promising change on the horizon is the recently introduced Leadership Dimensions Questionnaire (LDQ) by Dulewicz (2007). This instrument, still in its early stages of reliability and validity testing, provides new constructs for transformation leadership (referred to as "Engaging leadership"), transactional leadership ("Involving leadership—a style that is based on a transitional organization which faces significant, but not radical changes in its business model or 'modus operandi,'") and a third leadership style "Goal-oriented leadership—a style that is focused on delivering results within a relatively stable context. This is a leader-led style aligned to a stable organization delivering clear understood results" (Dulewicz, 2007, p. 131). The advantages of these constructs for involving and goal-oriented leadership are clear. Instead of two highly undesirable leadership styles standing in stark contrast to the TL style, the LDQ provides two legitimate alternatives to the TL style. The "other" leaders, as described by Dulewicz, are not "losers," but are simply approaching the leadership situation in a manner different from the engaging or transformational leader. I would strongly recommend that researchers explore alternatives to the MLQ as a means of describing leadership style. One of the most likely effects of such a strategy is that the TL style will be found to be only one path to effective leadership and other variables, such as leadership situation, management level, age, gender all may interact in some manner with being an effective leader.

Rahim and Psenicka (2005) carried out perhaps the most comprehensive international study involving participants from the United States, Greece, Bangladesh, and China. The authors began by taking issue with the premise that emotional intelligence encompasses "everything but IQ: emotional awareness, accurate self-assessment, self-confidence, trustworthiness, conscientiousness, adaptability, innovation and so on" (Rahim & Psenicka, 2005, p. 329). They, like Salovey and Mayer, based their model on ability, which they distinguished from

personality. Their hypothesis was that empathy would mediate between social skills and effective leadership. Participants were 1184 dyads, consisting of MBA students designated as target leaders, and a peer in their MBA program. They employed a self-developed instrument, which specifically measured subordinates' perception of their supervisor's empathy and social skills. They also used a subscale of a 1978 instrument to measure leadership effectiveness, which was also completed by the subordinates.

The authors found *a positive association between social skills and leadership effectiveness in each of the four countries*. They also found that *there was a positive association between empathy and social skills*. Finally, *they controlled for social skills and found that there was still a positive association between empathy and leadership effectiveness in all of the countries except China*. More specifically, the relationship between empathy and leadership was strongest among the U.S. leaders (MBA students), moderate among leaders in Bangladesh and Greece, and non-existent in China. The study addressed several procedural recommendations for improving the methodology of EI leadership studies, including, most importantly, examining the importance of individual factors across settings to evaluate their necessity or broader application. The study's weakness was in not having true subordinates for the rating process. This is a study that new researchers could consider as they freshly approach the relationship between emotional factors and effective leadership. Instead of attempting to confirm a specific list of EI characteristics, back up and begin by examining broader constructs.

Closing Comments and other Recommendations

I began this review with a general knowledge of the various leadership theories as covered by social psychologists. I also had some threads of interest in social intelligence and emotional intelligence as "interesting mediating concepts," as well as some direct experience with leadership effectiveness theory through my personal contacts with Martin Chemers at the University of Utah. These "threads" were starting points for trying to understand the place of EI in leadership research. I briefly examined Goleman's books and some of the non-peer reviewed articles by him and his colleagues describing the potential contributions that EI could make toward reshaping how senior executives and managers are evaluated and trained to be better leaders. They offered promise and generalities, but little research support. My focus for much of the literature review was to examine a sample of mostly research articles aimed at providing empirical support for the importance relationship that EI has with being an effective.

I came away from the majority of my review with a sense that one of the major goals of EI in the leadership area was to engulf transformational leadership (TL) style and redefine it as EI leadership. This approach may have been sidetracked to some extent by the adoption of the MLQ (Bass & Avolio, 1990; and later versions) as the defining measure for leadership style. While this may arguably be an overgeneralization, the TL qualities measured by the MLQ all seemed "good," and transactional and remaining styles (*laissez-faire*) were deemed as "bad" (or for "loser" leaders). Unfortunately, I believe this reinforced the need for EI to wrap itself around the "good" leader style. The efforts to demonstrate the close connection between EI and TL leaders were only moderately successful. Studies that permitted the targeted leaders to self-report on their EI qualities, their leadership style, and their performance effectiveness came close to supporting the positive EI-TL connection. When subordinates and supervisors assessed these qualities of the targeted leaders, many of the EI-TL connections weakened or disappeared. The TL style still stands tall, but EI has only made a case for having some of its features positively connected with the TL style. In most instances, EI did not stand alone as the significant predictor of effective leadership.

Clearly, as we can see from the Ruderman et al. (2001) and the years of research on social intelligence (first defined by R. L. Thorndike in 1920), the ideas for EI did not begin in the 1980's or with the books by Dan Goleman (1995, 1998). Goleman's important early contribution was that he was able package some information that had been inside the halls of academe for the previous 60 years or so and make it exciting to a generation of new researchers, as well as to members of the business and organizational community. This was *not* a minor contribution. It is what George Miller, in 1969, would have appreciated as a way of "giving psychology away." The fact that EI has endured and thrived also attests to its sensible proposals. Who can argue that a leader does not benefit from being better able to understand their own emotions or to recognize and understand the emotions of their subordinates?

However, there is no consensus in the overall research community that EI offers a dramatic improvement over the existing body of research and theory on leadership in social and organizational psychology. Both social psychology and EI use similar terms for defining what is a good leader. Goleman (1998b) describes how EI researchers analyzed 188 mostly large and global companies to determine the personal capabilities that led to recognized excellence in performance. These capabilities included, as one might expect, good technical skills in needed areas of expertise, good analytical reasoning, and what Goleman referred to as *competencies in emotional intelligence*, like working well with others and being able to effect change

when needed. Goleman reported that analyses of highly effective leaders yielded the finding that *emotional intelligence was "twice as important as the others for jobs at all levels"* (1998b, p. 94). Goleman went on to say that emotional intelligence appeared to increase in importance the higher the level of leadership. Cynically, one could take many fields, e.g., teaching, and identify and review teaching research for the past 60 years and pick out 10 very sensible descriptors of good teaching, then give it a new name, such as, "connected teaching," and ask leading educators how important "connected teaching" is, compared to IQ. I would predict that twice as many responders would say "connected teaching" is more important to good teaching than IQ.

It is important to note that the traits, similar to those leadership characteristics identified as relating to EI have been called many other things by other researchers. As noted at the beginning of this review, the "great person theory" of leadership takes the position that an outstanding leader would likely be an effective leader across all situations. If this were the case, such great leaders would likely possess some combination of esteemed traits, such as courage, intelligence, and charisma. These traits are similar to the ones proposed by Goleman. Empirical studies have yielded weak positive (often statistically insignificant) support that the identified "great" leaders are more extraverted, charismatic, socially skilled, as well as being taller, a little more intelligent, and a little less neurotic than their followers. More often, researchers find that great leaders are desirous of power and are very confident. Little emerges from these general searches that suggest a clear consensus of what characterizes all great leaders.

A different approach might be for researchers to identify the leadership capabilities needed *by a specific group or organization* in order to achieve their goals. This could be intelligence, physical strength, computer skills, public relations abilities, etc. The leader needs to have the abilities that the group task requires. Good leaders do need to have *sufficient* interpersonal skills to describe the task, organize the group, get the members/workers to cooperate, and to be *sufficiently* emotionally stable that group members will work with the leader and with each other. Leaders also likely need to have some desire for recognition and prominence (otherwise, why would they subject themselves to the stress of being a leader?). This approach is more realistic because, while certain strengths are required a leader, *it is not necessary to possess every strength in order to lead a group* (Taylor, Peplau & Sears, 2006).

A somewhat different approach is taken by advocates of the "contingency theory of leadership" (Chemers, 1997; Fiedler, 1967). In Fiedler's theory, leaders are

classified as "task oriented" and "relationship oriented." The task-oriented leader is more concerned with getting the job done and less with workers' feelings, while the latter is concerned primarily with being attuned to the needs and feelings of the workers. Fiedler's theory posits that neither leader is superior overall, but that both perform optimally (or dismally) depending on the leadership situation. The task-oriented leader, according to contingency theory, performs very well in stressful situations where the power of the leader is well defined. The relationship-oriented leader does best in less stressful situations, but ones in which the leader holds a more tenuous position of authority and the task is less defined.

A strength of Fiedler's model is that it is not necessary to train leaders to be competent in all areas, some of which may be very uncomfortable to their personalities. It is mostly necessary to teach prospective leaders to recognize types of leadership situations and to understand how to apply their personal traits in the most effective manner. I would urge new EI researchers to examine how the EI and contingency approaches might be integrated. The studies reviewed above did not identify every EI characteristic or competency as associated with effective leaders or with the TL leadership style. This may not be signaling a failure of the EI model, but rather that the strength of EI leaders might be to understand and recognize what their leadership situation requires. Fiedler would suggest restructuring the leadership situation to improve the particular leader's fit between situation and their style. On the other hand, a good EI leader might recognize the importance of bringing in a different style of leader to complement his or her approach rather than to try and become a different person. A university or corporation may find that some EI characteristics are beneficial for all leaders but, in other instances, teaching the skill of identifying different kinds of leadership situations may be more important than striving to make all leaders high in EI characteristics.

Perhaps, the most helpful item in putting the EI leadership literature search into perspective was the 9th Annual Kravis-de Roulet Leadership Conference in April 1999, at Claremont McKenna College (Riggio, Murphy, & Pirozzolo, 2002). This conference examined multiple intelligences and leadership and it took place during what would have been the "early wave" of EI. What emerged from this conference was a history of the ongoing contributions by many leadership research programs actively being carried forward. Whether one explores successful intelligence, social intelligence, sociopolitical intelligence, situational factors influencing leadership effectiveness, motivational dimensions, self-efficacy, or cultural intelligence, the "take home" message by the editors of the articles from that symposium was that, "the rush toward developing full-blown programs to

dramatically improve one's emotional or social intelligence may be a bit premature" (Riggio, Murphy, and Pirozzolo, 2002, p. 242).

One might argue that all of the features of EI are generally favorable and, at worse, harmless, so what is the danger of encouraging programs teaching EI. The answer is: seemingly nothing. Encouraging people to get in touch with their own feelings, to be aware of the feelings of others, and to be more open in communications are likely to be helpful for almost everyone (except spies, torturers, executioners, and snipers). The danger is in teaching a group of potential administrators, managers, students, etc., that individuals possessing EI qualities are superior to all others, so that the EQ-i or the MSCEIT or the ECI are adopted as standard instruments for screening applicants for positions as administrators, managers etc., without having adequate data that it is necessary. It could also be dangerous to reconfigure entire educational programs and expending large sums of money to invest in measurement instruments, consultants, etc., to the detriment of other programs, without having adequate data. Considered in a different way, it is pretty clear that leaders in the business community would not want all of their middle-level managers to be trained with the same sensitivity as therapists!

Returning to the Kravis-de Roulet Leadership Conference, I would urge new EI researchers to return to basics. I have noted earlier, in Dulewicz (2007) and in Rahim and Psenicka (2005), that some researchers do seem to be going back and re-examining whether EI theory and studies in leadership have leapfrogged ahead of their scholarship and need to go back and re-examine whether the foundation can support a rush toward dramatically altering MBA programs or instituting management hiring or even selection procedures for special "executive" training opportunities to those with high EI qualities. There are many useful threads that should be investigated by researchers examining EI instead of simply testing confirmatory hypotheses for EI theoretical conceptions. Some examples from the Kravis-de Roulet Leadership Conference follow:

1. Instead of deciding that the traditional concept of intelligence does not have a relevant role in the study of effective leadership, Sternberg (2002) points to the possible value of assessing complex cognitive tasks (such as analogies and classifications) which could be more important for effective CEOs than being empathic. Perhaps, more important is to get away from the either-or of much EI research—effective leadership could be a combination of emotional awareness *and* the ability to solve complex cognitive tasks—not one of these.

2. Social intelligence was an earlier research thread for emotional intelligence, but it is important for EI researchers not to overlook the work that has

continuing in that area which parallels EI. An example is the research of Gilbert and Zaccaro (in Zaccaro, 2002) suggesting the importance of principle-based and social knowledge structures, which have not been a focus of EI's work on effective leadership.

3. Fred Fiedler (2002) has provided a new look to his theory of leadership effectiveness by focusing more on the cognitive abilities of leaders. This research thread may add new breadth to EI applications, especially when examining it in conjunction with Mayer and Salovey's (1997) model and assessment tool. Fiedler and others have done the heavy lifting by examining the material relevant to what is necessary to complete intellectually demanding leadership tasks.

4. Various EI theorists, including both Goleman and Boyatzis, have described the importance of motivation in making an effective leader. There is little doubt that the path to being a CEO is filled with strong motivations for both power and achievement. The descriptions of motivation are still underdeveloped in EI. Winter (2002) describes how achievement and power motivation are different and should likely be examined separately, perhaps depending upon the stage of focus (e.g., hiring a middle level manager or a CEO). The work of McClelland, Winter and others provides fertile material for either broadening the role of motivation in EI or accepting that EI does not have to be everything; i.e., motivation can be a separate contributor to effective leadership.

I could make many additional suggestions for research from Riggio et al. (2002), but I leave it to the interested reader to pursue the book in more detail. It is not a secret. Several chapters in the book are mentioned in the EIConsortium leadership bibliography. What is missing is any use of it, other than reference to the EI chapters in the post-2002 research articles that I examined.

Get creative and do more than another study in an endless string of studies trying to show a connection between EI and transformational leadership. Examine effective leadership by looking at the relationship between Bar-On's EQ-i and Sternberg's complex intelligence. Bring together Fiedler's cognitive theory with Mayer and Salovey and with Boyatzis' EI competencies. All of these steps can help to more comprehensively describe the characteristics of effective leaders. It is NOT necessary that EI try to define itself to include all that makes leaders effective. MBA programs or executive development programs can combine the components of EI with other components to make truly effective training programs. When research is done on the effectiveness of teaching competencies, we will then have confidence that the competencies we teach are really the ones that prepare future leaders to be effective.

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