

# Relation of an Ability Measure of Emotional Intelligence to Personality

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Is emotional intelligence simply a naive theory of personality, or is it a form of intelligence? If emotional intelligence is to be of value, it must measure something unique and distinct from standard personality traits. To explore this question, this study examined an ability test of emotional intelligence and its relationship to personality test variables to determine the extent to which these constructs overlap. A sample of 183 men and women took the Multifactor Emotional Intelligence Scale (Mayer, Caruso, & Salovey, 1999), an ability measure of emotional intelligence as well as measures of career interests, personality, and social behavior. Emotional intelligence was measured reliably and was relatively independent of traditionally defined personality traits, supporting the discriminant validity of the emotional intelligence construct.

The ability model of emotional intelligence centers on a person's skill in recognizing emotional information and carrying out abstract reasoning using this emotional information (Mayer & Salovey, 1997). More specifically, emotional intelligence involves the "abilities to perceive, appraise, and express emotion; to access and/or

generate feelings when they facilitate thought; to understand emotion and emotional knowledge; and to regulate emotions to promote emotional and intellectual growth” (Mayer & Salovey, 1997, p. 10). The definition posits four different abilities or skills, which Mayer and Salovey referred to as *branches*.

The first branch of the ability model is *Identifying Emotions*. This branch includes a number of skills, such as the ability to identify feelings, express emotions accurately, and differentiate between real and phony emotional expressions. The second branch, *Emotional Facilitation of Thought* (or *Using Emotions*), includes the ability to use emotions to redirect attention to important events, to generate emotions that facilitate decision making, to use mood swings as a means to consider multiple points of view, and harness different emotions to encourage different approaches to problem solving (for instance, to use a happy mood to assist in generating creative, new ideas). The third branch, *Understanding Emotions*, is the ability to understand complex emotions and emotional “chains,” how emotions transition from one stage to another, the ability to recognize the causes of emotions, and the ability to understand relationships among emotions. The fourth branch of the ability model is *Managing Emotions*. Managing Emotions includes the ability to stay aware of one’s emotions, even those that are unpleasant, the ability to determine whether an emotion is clear or typical, and the ability to solve emotion-laden problems without necessarily suppressing negative emotions. Empirical evidence supporting the four-branch model is reported elsewhere (Mayer, Caruso, & Salovey, 1999; see also Roberts, Zeidner, & Matthews, 2001).

For many laypeople and scientists alike, emotional intelligence was defined in a popular book by Goleman (1995). Goleman based his work on the initial Salovey and Mayer (1990) definition but added components such as zeal, persistence, and social skills. The result of this popularization is that there is a broad range of approaches to the subject, from the Mayer–Salovey ability-based conception, to lists of competencies (Goleman, 1998), to approaches centering on psychological well-being (Bar-On, 1997).

In an attempt to understand better the disparate approaches, we proposed two alternative conceptions of emotional intelligence: an ability model and a mixed-model (Mayer, Salovey, & Caruso, 2000). Ability models place emotional intelligence within the sphere of an intelligence, in which emotion and thought interact in meaningful and adaptive ways. An emotional intelligence is viewed much like verbal or spatial intelligence, except that it operates on, and with, emotional content. Mixed models blend various aspects of personality in what is often an atheoretical manner. The resulting conglomerate of traits, dispositions, skills, competencies, and abilities is labeled emotional intelligence, even though the model predominately involves neither emotion nor intelligence.

These different models have also given rise to different ways to measure emotional intelligence. Mixed models have been operationalized in self-report measures (e.g., Bar-On, 1997) or observer ratings such as 360-degree assess-

ments (e.g., Boyatzis, Goleman, & Rhee, 2000). The ability-based approach has also seen the development of self-report measures (e.g., Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Schutte et al., 1998). Although we still view such scales as having value, we believe that ability or performance tests of emotional intelligence most directly operationalize the construct as an intelligence, by asking test takers to solve problems about, and using, emotions. We developed a multitask, ability measure of emotional intelligence, the Multifactor Emotional Intelligence Scale (MEIS), based on the four-branch ability model of emotional intelligence. The MEIS includes tasks such as judging the emotions in faces and designs, generating and then reasoning with an emotion, defining complex emotion terms, and selecting an optimal emotional decision-making strategy (see, e.g., Mayer et al., 1999).<sup>1</sup>

Some researchers have cast a critical eye toward the emotional intelligence field, aiming to tease out the fad from the science (e.g., Davies, Stankov, & Roberts, 1998; Mayer et al., 2000; Roberts et al., 2001). The key issues appear to be (a) whether emotional intelligence can be operationalized; (b) whether reliable emotional intelligence tests can be constructed; (c) whether emotional intelligence is a new construct, and can be differentiated from existing personality trait models; (d) what emotional intelligence predicts and the level of such prediction; and (e) how to determine correct answers for such tests.

This study seeks to address some of these issues by examining the reliability of the MEIS, its relationship to commonly measured personality traits (discriminant validity), and its relationship to certain (self-reported) behaviors (convergent validity). The operationalization of the concept and the determination of objectively scored answers have been addressed elsewhere (Mayer et al., 1999; Mayer, Salovey, Caruso, & Sitarenios, 2001).

## METHOD

### Participants

Participants were 52 male and 128 female University of New Hampshire undergraduates participating in the experiment as part of an introductory psychology course requirement (3 of the 183 participants did not report gender). Almost all (156, or 85%) were 18 or 19 years old ( $M = 18.52$ ,  $SD = 1.52$ ).

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<sup>1</sup>A newer ability measure of emotional intelligence, the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002), has been developed. The MSCEIT is shorter than the Multifactor Emotional Intelligence Scales, has adequate internal consistency reliability, and demonstrates strong convergence between two scoring methods.

## Materials

*MEIS.* The MEIS is a paper-and-pencil ability-based measure of emotional intelligence. The MEIS yields an overall, emotional intelligence score, four subscores that correspond to each of the four branches of the Mayer and Salovey (1997) model of emotional intelligence, and 12 scores for individual subtests. We present a brief overview of the 12 MEIS subtests next as they have been described in detail elsewhere (see Mayer et al., 1999).

The first branch of the Mayer–Salovey model, Identifying Emotions, was operationalized in four subtests, each of which required the test taker to accurately identify emotions in Faces, Designs, Music, or brief Stories.

Branch 2, Emotional Facilitation of Thought (Using Emotions), was measured by two subtests. Synthesia asked the test taker to imagine a situation in which they felt a certain emotion and then to describe it in nonemotional language. Feeling Biases required the test taker to evaluate relevant and irrelevant emotional information with respect to cognitive information.

Understanding Emotions, the third Branch, was measured with four subtests that measured knowledge of complex emotions (Complex Blends), how emotions alter over time (Progressions), likely changes from an initial emotional state (Transitions), and the likelihood of emotional reactions of two people in a similar situation (Perspectives).

Branch 4, Managing Emotions, was measured by two subtests. Managing Others evaluated the effectiveness of various alternative responses in resolving an emotional situation involving other people, and Managing Self evaluated responses in situations involving the test taker.

All subtests were scored using a consensus method, which was based on a sample of 503 adult participants (see Mayer et al., 1999). In this method, the proportion of the 503 participants selecting a given response alternative was used to compute the score for participants in this study. Consensus scoring relies on the pooled observations of individuals, thus socially defining the “correct” answers to emotional intelligence ability items (for a discussion of scoring methods, see Mayer et al., 2001). A total emotional intelligence score, four branch scores, and 12 subtest scores were computed.

*Criterion measures.* To assess the relationship between personality traits and emotional intelligence, participants completed the 16 PF, Fifth Edition (Cattell, Cattell, & Cattell, 1993). The 16 PF is a 185-item test yielding 16 Primary Factors, as well as a score for impression management, a measure of response bias. The 16 Primary Factors are Warmth, Reasoning (a 15-item objectively-scored verbal reasoning scale), Emotional Stability, Dominance, Liveliness, Rule-Consciousness, Social Boldness, Sensitivity, Vigilance, Abstractedness, Privatness, Apprehension, Openness to Change, Self-Reliance, Perfectionism, and Tension.

The Primary Factors can be combined into five higher order or Global Factors: Extraversion, Anxiety, Tough-Mindedness, Independence, and Self-Control. The mean Cronbach's alpha for the 16 scales is .74, ranging from .64 to .85 (Russell & Karol, 1994).

To examine the relationship of emotional intelligence to social behavior, participants completed the Fundamental Interpersonal Relations Orientation–Behavior (FIRO–B; Schutz, 1989). The FIRO–B consists of 54 items and examines two aspects of three dimensions of social or interpersonal needs. The two aspects are Expressed behavior (how a person behaves or acts towards others) and Wanted needs (how a person desires to be treated by others). The three dimensions are Inclusion (being with people in general), Affection (being close to people), and Control (being in charge or having someone be in charge of you). The Inclusion scales measure how outgoing and friendly people act toward others in general (Expressed Inclusion) and how much contact they desire from others (Wanted Inclusion). The Affection scales measure how warm and friendly a person acts toward specific people, often in more intimate settings (Expressed Affection) and how much a person desires to be close to others (Wanted Affection). The Control scales assess how much responsibility and decision making power a person displays (Expressed Control) and how much structure and direction a person desires from others (Wanted Control). The six expressed and wanted scores' split-half reliability ranges from .93 to .94 (Schutz, 1978). We also computed overall Inclusion, Affection, and Control scores by summing expressed and wanted scores.

To examine the relationship of emotional intelligence to career choice, participants completed the Holland Self-Directed Search (SDS; Holland, 1990), Form CP, a measure of career interests. Holland posited that there are six different interest categories: Realistic (hands-on trades), Investigative (analytical careers), Artistic (creative careers), Social (helping careers), Enterprising (business and leadership careers), and Conventional (detail-oriented careers). The SDS yields three scores for each of the six interest categories: Activities, Careers, and Competencies. These three are summed to yield one score for each of the six interest categories.

## Procedure

The study was conducted over two experimental sessions. In Session 1, participants received a test package that included a consent form and a set of research materials. After indicating their age, sex, and ethnicity, participants proceeded to the MEIS, which was self-administered except for the Music task for which an experimenter played an audio tape of the stimuli. They next completed the SDS and the FIRO–B scale.

For most participants (150 of 183, or 82%), Session 2 was held 2 weeks after Session 1. One participant had a 1-week delay, 19 participants had a 3-week delay, and 14 had an unspecified delay. Analyses were computed separately for the 150

participants with a 2-week delay and the other 33 participants, but there were no appreciable differences in the findings, so data were pooled across all participants in subsequent analyses. The format for Session 2 was similar to the first session, with the exception that participants completed the 16 PF rather than the SDS and FIRO-B scales.

## RESULTS

### Descriptive Data

The means and standard deviations for the total MEIS, the four MEIS branch scores, and the 12 MEIS subtests are reported in Table 1 for test Sessions 1 and 2. As can be seen from these data, participants performed at the same general level across sessions. (Given that a consensus scoring method was used, means cannot be compared across branches or subtests.) Table 2 lists the means and standard deviations for the FIRO-B, SDS, and 16 PF.

TABLE 1  
Descriptive Statistics for MEIS for Test Session 1 and 2

<i>Total/Branch</i>	<i>M</i>		<i>SD</i>		$\alpha$		<i>r</i> <sub>12</sub> <i>Retest</i>
	<i>Test 1</i>	<i>Test 2</i>	<i>Test 1</i>	<i>Test 2</i>	<i>Test 1</i>	<i>Test 2</i>	
Total MEIS	.35	.34	.03	.04	.95	.96	.75
Branch 1: Identify	.40	.37	.05	.07	.94	.96	.68
Faces	.39	.37	.07	.08	.85	.88	.54
Music	.46	.43	.07	.09	.87	.89	.60
Designs	.36	.33	.07	.09	.85	.92	.49
Stories	.38	.35	.06	.07	.78	.85	.60
Branch 2: Facilitation	.31	.31	.03	.03	.84	.85	.60
Synesthesia	.32	.31	.04	.04	.85	.85	.49
Biases	.31	.31	.04	.05	.60	.71	.38
Branch 3: Understand	.42	.41	.04	.05	.74	.80	.62
Blends	.49	.49	.09	.10	.34	.52	.46
Progressions	.57	.55	.09	.10	.31	.40	.44
Transitions	.30	.29	.04	.03	.58	.57	.37
Perspectives	.31	.30	.04	.03	.69	.76	.53
Branch 4: Manage	.28	.28	.03	.03	.76	.78	.61
Other	.29	.28	.03	.04	.73	.64	.49
Self	.27	.27	.03	.03	.61	.68	.57

*Note.* *N* = 180 to 183. MEIS = Multifactor Emotional Intelligence Scale.

TABLE 2  
Descriptive Statistics for Criterion Scales

<i>Test/Scale</i>	<i>M</i>	<i>SD</i>
16 PF Primary Scales		
Warmth	5.81	1.78
Reasoning	5.32	1.78
Emotional Stability	4.76	1.60
Dominance	4.92	1.99
Liveliness	6.79	1.46
Rule-Consciousness	4.44	1.42
Social Boldness	5.51	1.86
Sensitivity	5.62	1.83
Vigilance	6.42	1.68
Abstracted	6.25	1.58
Privateness	5.14	1.78
Apprehension	6.51	1.70
Openness to Change	5.29	1.92
Self-Reliance	5.21	1.53
Perfectionism	5.00	1.56
Tension	5.93	1.67
16 PF Global Factors		
Extraversion	4.76	0.60
Anxiety	4.68	0.60
Toughmindedness	9.48	0.65
Independence	1.45	0.62
Control	3.53	0.48
SDS		
Realistic	9.95	7.44
Investigative	15.11	5.67
Artistic	16.86	8.94
Social	21.09	7.53
Enterprising	15.37	6.90
Conventional	10.24	5.92
FIRO-B		
Inclusion	11.77	4.20
Expressed Inclusion	5.57	2.01
Wanted Inclusion	6.19	2.82
Affection	12.13	4.26
Expressed Affection	5.78	2.31
Wanted Affection	6.34	2.55
Control	5.38	3.25
Expressed Control	2.48	2.29
Wanted Control	2.90	2.31

*Note.* SDS = Holland Self-Directed Search; FIRO-B = Fundamental Interpersonal Relations Orientation-Behavior.

### Internal Consistency of the MEIS

The internal consistencies (measured as Cronbach's alpha) for the total MEIS, the four MEIS branch scores, and the 12 MEIS subtests are also reported in Table 1. For Test Session 1, the total MEIS score had an internal consistency of .95, with alphas for the four branch scores ranging from .74 to .94. Individual subtest alphas ranged from a low of .31 for the Progressions scale (which also, along with Blends, had the fewest number of items, 8) to .87 for the Music scale. For Test Session 2, the total MEIS score had an internal consistency of .96, with alphas for the four branch scores ranging from .78 to .96. Individual subtest alphas ranged from .40 to .92.

### Test–Retest Reliability

Next, we examined the test–retest reliability of the MEIS, which is also reported in Table 1. For the total MEIS score, the test–retest correlation was  $r(183) = .75$ , with the four branch scores ranging from  $r(183) = .60$  to  $r(183) = .68$ . The correlations for the 12 subtests ranged from  $r(183) = .37$  for the Transitions scale to  $r(183) = .60$  for the Music and Stories subtests.

### MEIS—Personality Relationships

As there are 37 correlations between the total MEIS and personality scales (185 if we include the MEIS branch scores), we would expect a few significant relationships due to chance alone. Therefore, it is prudent to interpret only those correlations in which  $p$  is less than .01, rather than .05. The correlations between Session 1 MEIS total and 4 branch scores with the 16 PF scales are reported in Table 3. Only a few significant correlations between emotional intelligence and personality were obtained. These were for the Reasoning Primary Factor, a 15-item verbal reasoning ability scale, not a self-report personality trait. The MEIS also had a significant correlation with Sensitivity (with more emotionally intelligent people being more sentimental). The Extraversion Global Factor scale was significantly correlated with MEIS, with emotionally intelligent people being more outgoing. It appears, although, that the MEIS is generally not associated with the 16 PF primary factor scores. In addition, the MEIS appears to be relatively free from the effects of response bias, as indicated by the  $r(183) = .00$  correlation between total MEIS and the 16 PF Impression Management scale.

### MEIS—Career Interest Relationships

Table 4 lists the correlations of the MEIS with the SDS and the FIRO–B. A few correlations between the MEIS and the SDS were significant at the  $p < .01$  level. People interested in Social (helping) careers tend to score somewhat higher on the

TABLE 3  
MEIS and 16 PF Correlations

Factor	MEIS Score/Branch				
	Total	Identify	Facilitation	Understand	Manage
16 PF Primary Factor					
Warmth	.14	.06	.13	.11	.13
Reasoning	.21**	.01	.20**	.29**	.20**
Emotional Stability	.10	.10	.08	.05	.06
Dominance	.04	.01	.04	-.06	.09
Liveliness	.10	-.01	.22**	.00	.18*
Rule-Consciousness	.01	.04	.05	.00	-.07
Social Boldness	.01	-.01	.08	-.04	.02
Sensitivity	.22**	.15*	.20**	.16*	.15*
Vigilance	-.17*	-.20**	-.04	-.16*	-.05
Abstracted	-.02	-.05	.02	-.02	.03
Privateness	-.14	-.15*	-.11	-.07	-.03
Apprehension	.09	.00	.07	.14	.07
Openness to Change	.10	.10	.02	.03	.13
Self-Reliance	-.16*	-.09	-.13	-.05	-.25**
Perfectionism	-.13	-.14	-.06	-.08	-.07
Tension	.00	-.14	.03	.09	.10
Impression Management	.00	.11	-.04	-.08	-.04
16 PF Global Factors					
Extraversion	.16*	.08	.19*	.07	.18*
Anxiety	-.06	-.16*	-.01	.04	.01
Tough-Mindedness	-.21**	-.13	-.19*	-.13	-.19*
Independence	.03	.00	.03	-.02	.09
Self-Control	-.02	.01	-.05	.00	-.06

Note.  $N = 182$  to  $183$ . MEIS = Multifactor Emotional Intelligence Scale.

\* $p < .05$ . \*\* $p < .01$ .

Facilitation of Thought (Using Emotions) branch,  $r(182) = .20, p < .01$ . People interested in pursuing Enterprising careers (in sales and management) tend to score lower on the Understanding Emotions branch,  $r(182) = -.20, p < .01$ .

An analysis of the FIRO-B and SDS indicated that FIRO-B Affection scores were significantly related to Artistic interests,  $r(182) = .23, p < .01$ , and to Social interests,  $r(182) = .23, p < .01$ . Likewise, Inclusion scores were also related to Artistic interests,  $r(182) = .24, p < .01$ , and to Social interests,  $r(182) = .31, p < .01$ . None of the correlations between FIRO-B Control scores and SDS interest scores were significant.

### MEIS—Social Behavior Relationships

Small, but significant correlations were obtained between the MEIS and self-reported social behavior and needs. The MEIS was significantly related to overall Af-

fection and Inclusion scores, but not overall Control scores. A further inspection of these data suggest that wanted Affection and wanted Inclusion are more strongly associated with MEIS scores than is a person’s expression of social interest.

**Distinctiveness of the MEIS**

We next submitted the four MEIS branch scores, 6 SDS scores, 3 overall FIRO–B scores, and the 5 Global Factors from the 16 PF to a principal components analysis to determine whether emotional intelligence ability tasks could be separated empirically from familiar personality constructs. Seven factors with eigenvalues greater than 1.0 were extracted (eigenvalues for the first 10 factors were 3.40, 2.21, 1.48, 1.43, 1.39, 1.11, 1.03). However, a five-factor solution was the easiest and clearest solution to interpret, and thus, the first five factors only were retained and submitted to a varimax rotation. The first five factors accounted for 55% of the total variance. The rotated pattern and structure coefficients are reported in Table 5. The first factor, a Sociability factor, includes Extraversion and Independence scales from the 16 PF, the Inclusion and Affection scales from the FIRO–B, and the SDS Social scale. Factor 2, an Emotional

**TABLE 4**  
MEIS, Career Interest, and Self-Reported Social Behavior Correlations

<i>Test/Scale</i>	<i>MEIS Score/Branch</i>				
	<i>Total</i>	<i>Identify</i>	<i>Facilitation</i>	<i>Understand</i>	<i>Manage</i>
<b>SDS</b>					
Realistic	-.05	-.08	-.07	.02	-.02
Investigative	.10	.02	.08	.12	.10
Artistic	-.01	-.01	.05	-.05	.01
Social	.15*	.07	.20**	.07	.16*
Enterprising	-.17*	-.15*	-.06	-.20**	-.03
Conventional	-.07	-.02	-.08	-.05	-.04
<b>FIRO–B</b>					
Inclusion	.26**	.17*	.34**	.07	.24**
Expressed Inclusion	.19*	.14	.26**	.01	.19*
Wanted Inclusion	.26**	.16*	.32**	.10	.22**
Affection	.16*	.09	.21**	.09	.11
Expressed Affection	.08	.04	.17*	.00	.04
Wanted Affection	.20**	.12	.19*	.15*	.15*
Control	-.06	-.13	-.01	.03	-.03
Expressed Control	-.07	-.05	-.02	-.04	-.12
Wanted Control	-.01	-.13	.00	.09	.09

*Note.* *N* = 182 to 183. MEIS = Multifactor Emotional Intelligence Scale; SDS = Holland Self-Directed Search; FIRO–B = Fundamental Interpersonal Relations Orientation–Behavior.  
\**p* < .05. \*\**p* < .01.

TABLE 5  
 Varimax-Rotated Principal Components Analysis With Pattern/Structure Coefficients

<i>Test/Scale</i>	<i>Factor</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
16PF-Extraversion	<u>.78</u>	.04	-.06	-.12	-.20
FIRO-Inclusion	<u>.74</u>	.25	-.11	-.08	.06
FIRO-Affection	<u>.69</u>	.17	-.12	-.04	.08
Holland-Social	<u>.66</u>	.10	.22	.21	.06
16PF-Independence	<u>.46</u>	-.15	<u>.40</u>	-.16	-.17
MEIS-Facilitation	.22	<u>.77</u>	-.02	.02	-.02
MEIS-Understand	-.08	<u>.73</u>	.05	.08	-.05
MEIS-Identify	.07	<u>.68</u>	-.03	-.19	.01
MEIS-Manage	.18	<u>.57</u>	-.07	.01	-.06
Holland-Realistic	-.15	-.06	<u>.70</u>	-.22	.12
Holland-Investigative	-.04	.24	<u>.65</u>	.03	-.05
Holland-Artistic	<u>.45</u>	-.06	<u>.52</u>	.34	-.12
16PF-Anxiety	-.03	-.04	-.09	<u>.70</u>	-.08
FIRO-Control	-.05	-.02	-.03	<u>.69</u>	.12
Holland-Convention	.06	-.04	.19	<u>.32</u>	<u>.64</u>
16PF-Control	-.10	.04	-.21	-.16	<u>.63</u>
Holland-Enterprising	<u>.41</u>	-.28	<u>.36</u>	.18	<u>.56</u>
16PF-Tough-Minded	<u>-.42</u>	-.17	-.13	<u>-.34</u>	<u>.50</u>

*Note.*  $N = 183$ . Underlined values = pattern/structure coefficients that are equal to or greater than .30. FIRO-B = Fundamental Interpersonal Relations Orientation-Behavior; MEIS = Multifactor Emotional Intelligence Scale.

Intelligence factor, loads all four branch scores from the MEIS and no other scales above .30. The third factor, an Interest factor, loads three SDS scales: Realistic, Investigative, and Artistic. The fourth factor, Neuroticism, loads the 16 PF Anxiety scale and the FIRO-B Control scale. The last factor, Rationality, includes the SDS Conventional and Enterprising scales and the 16 PF Self-Control and Tough-Mindedness scales. The MEIS clearly assessed constructs different from those measured by the 16 PF, FIRO-B, and SDS.

## DISCUSSION

The MEIS demonstrates adequate internal consistency. The full-scale MEIS alpha is comparable to the average reliability coefficients reported for the Wechsler Adult Intelligence Scale's (WAIS-III; The Psychological Corporation, 1997, p. 50, Table 3.1) Full-Scale, Verbal, and Performance IQ scores (.98, .97, .94, respectively). At the level of the 12 individual tasks, reliability ranged from a low of .31 to

a high of .87. Some of these reliability scores are certainly lower than what one desires in an ability test.<sup>2</sup> For comparison, the subtests of the WAIS-III range from .70 to .93.

Although Davies et al. (1998) expressed concern about the low reliability of the emotion perception tasks employed in their study, we found the Branch 1, or Emotion Perception tasks of the MEIS, to have reasonably high reliability. In part, this is likely due to the fact that these tasks consisted of many items (up to 60). MEIS tasks with the lowest reliability were from the Understanding Emotions branch, and these two tasks had the fewest items (8 each). Although the alphas for some of these tasks are too low for clinical use, more reliable tasks could be developed simply by adding more items to the tasks. For example, if we wished to create a Blends task with an alpha of .80, the Spearman-Brown formula suggests that we could do so if we increase the number of items from 8 to 71. Thus, the issue of reliability for ability tests of emotional intelligence appears to be a practical as well as an applied issue. The practical issue is developing item types that result in a more reliable task. If this proves to be difficult, the applied issue becomes whether one would find a 71-item subtest too long for test takers to complete. Alternatively, one could only report reliable scores (i.e., the total and four branch scores).

The test-retest correlations for the Branch scores of the MEIS are positive and significant, ranging from .60 to .68, albeit somewhat lower than what is expected for an ability measure. By comparison, the WAIS-III has test-retest reliability ranging from .83 for the Performance IQ score to .91 for both Verbal and Full-Scale IQ (these are for age group 16 to 29; The Psychological Corporation, 1997, p. 58). At the level of individual MEIS tasks, test-retest reliability varied from .37 to .60. Comparable data for the WAIS-III's 14 subtests range from .48 for the Letter-Number Sequencing subtest to .92 for the Information subtest. We will need to understand better the reasons why the MEIS is less stable across time than are other measures of intelligence, although we are encouraged that this first systematic measure of emotional intelligence could produce a full scale test-retest correlation of .75.

Another difference between the MEIS and ability measures of intelligence is the absence of practice effects. As can be seen in Table 1, the means for the total and four branch scores are slightly lower (and not significantly so) for Test Session 2 than they are for Test Session 1, indicating that there was a slight performance decrement. Ability tests, such as the WAIS-III, typically show an increase in performance on some tasks due to practice effects (The Psychological Corporation, 1997). However, practice effects are expected only when the correct answer becomes clear during item administration, in which feedback is provided, or when exposure to materials can enhance performance. For instance, when a person is

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<sup>2</sup>These low task-level reliabilities have been mitigated somewhat in the Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer, Salovey, Caruso, & Sitarenios, 2001).

asked to put pieces of a puzzle together, performance will likely be enhanced the second time they complete the same puzzle, as participants are more likely to recognize what it is they are putting together. In contrast, completion of the MEIS items would not be expected to enhance a person's performance, and memory for answers after 2 weeks is likely rather low.

In this study, emotional intelligence was separable from several, standard personality traits. The correlational and factor analytic data strongly suggest that the MEIS is not measuring constructs that are assessed by standard personality tests, such as the 16 PF. Although other models of emotional intelligence, and their corresponding measures, appear to be based on a general personality approach (for a review, see Mayer et al., 2000), the ability approach places emotional intelligence in an ability or intelligence framework. Therefore, the claim that "little remains of emotional intelligence" (after controlling for personality constructs; Davies et al., 1998, p. 1013), appears to be a matter of which emotional intelligence one is referring to: an ability-based model or a trait-based model.

Although it is critical to demonstrate that emotional intelligence, defined and measured as an ability, can be measured reliably and can be differentiated from other constructs, it is also important to address what it predicts. Emotional intelligence may play some role in career choice. The correlation between Branch 2 (Facilitating Thought) and Helping careers is of interest, as the ability to generate a feeling and reason with it may, in part, underlie empathic ability. Another interesting finding was the negative correlation between Enterprising, or business, interests, and overall emotional intelligence. In combination with the lack of relationship between Expressed Control and the MEIS ( $r = -.09$ ), indicating no statistically significant relationship between emotional intelligence and the desire to lead, it may be that those attracted to some standard business-related occupations may be somewhat lower in emotional intelligence. It is important to recognize that these data do not address leadership or business effectiveness or success, just desires and preferences.

In addition, emotional intelligence was related to a self-report measure of social behavior and social needs. More emotionally intelligent people desire greater social involvement, both in a general sense, as well as in terms of intimate relationships.

Although claims that emotional intelligence "can be as powerful, and at times more powerful, than IQ" (Goleman, 1995, p. 34; similarly, Goleman, 1998, p. 31) have been made, little evidence will ever be collected to support such a claim. Instead, emotional intelligence should be viewed as broadening our understanding of human mental abilities. We expect emotional intelligence to contribute at some reasonable level of prediction of certain outcomes, but at levels that are typically obtained in such research.

Research is needed on the relation of emotional intelligence to actual behavior, as opposed to self-reported behavior. We must determine how we can utilize such objective measures in assessing the emotional abilities of clients. For instance, it

will be interesting to determine whether a client's actual emotional abilities relate to their diagnosis as well as to their prognosis in therapy. Is it possible to identify a specific emotional deficit or strength in emotional perception, emotional facilitation, emotional understanding, or emotional management that can become the focus of a treatment plan? We hope researchers will now turn their attention to answering such questions.

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