

# CHAPTER 10

## THE CURRENT STATE OF THE STREAM ONE ABILITY MODEL (SOAM) OF EMOTIONAL INTELLIGENCE (EI) AND THE FUTURE OF EI

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### ABSTRACT

*This chapter examines EI, presents a history of EI including the various models, and a discussion of the three streams approach to classifying EI literature. The author advocates for the efficacy of the Stream One Ability Model (SOAM) of EI citing previous authors and literature. The commonly used SOAM instruments are discussed in light of recent studies. The discussion turns to alternate tests of the SOAM of EI including Situational Judgment Tests (SJTs). Recommendations include an analysis of SOAM instruments, a new approach to measurement, and increased use of SJTs to capture the four-branch ability model of EI.*

**Keywords:** Emotional intelligence; EI; ability model; MSCEIT; SJTs; emotion regulation

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New Ways of Studying Emotions in Organizations  
Research on Emotion in Organizations, Volume 11, 271–293  
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ISSN: 1746-9791/doi:10.1108/S1746-979120150000011011

## INTRODUCTION

The study of organizations experienced an affective revolution in the past two decades. The discussion of emotions in organizations and workplaces has evolved from a position of nearly “undiscussable” to a mainstream topic in organizational behavior, management, and leadership (Ashkanasy, Hartel, & Zerbe, 2012, p. 1). Indeed, most modern textbooks on organizational behavior, management, and leadership include a mention of emotions and/or emotional intelligence (EI) if not an entire chapter on these topics. While this revolution impacts these fields at all levels of scholarship, the relatively recent nature of these changes contributes to an evolving and dynamic approach to the study of emotions in organizations. The challenge for scholars involves, not just understanding these changes, but guiding and facilitating them within the institutions and organizations they impact. This chapter examines the changing nature of the study of EI, advocates for the Stream One Ability Model (SOAM) of EI, and suggests some future directions for EI scholarship.

Recently, a group of noted scholars suggested that in psychology, theory building is never finished (Matthews, Zeidner, & Roberts, 2012). Further, these authors argued that good research leads to theory refinement and modification and on to further research in a dynamic and circular process. These scholars might have been discussing any number of constructs in the social sciences; however, they were specifically addressing the construct of EI. A growing body of research drawn from a variety of disciplines including management, organizational behavior, individual psychology, industrial psychology, sociology, and leadership suggests that EI plays a role in a variety of organizational and work-related outcomes (McCleskey, 2013). However, EI continues to suffer from an acute form of theoretical pluralism and is variously defined as an ability, a competency, or a trait in its models and conceptions (McCleskey, 2014). The following discussion provides an overview of these models, supports an ability model approach to EI, and reviews some recent literature on the SOAM of EI.

### *History of Emotional Intelligence*

In 1990, Salovey and Mayer published an article that presented a framework for EI. Mayer and his colleagues were the first to publish works that referred to an EI (Mayer, DiPaolo, & Salovey, 1990; Salovey &

Mayer, 1990). Interestingly, the concept of EI was not new. The earliest intelligence researchers understood there was more to the construct of intelligence than the mental abilities represented in the traditional intelligence tests of the day (Riggio, 2002). In fact, Edward Thorndike defined a *social intelligence* in 1920. Unfortunately, attempts at measuring the construct were largely unsuccessful (Thorndike & Stein, 1937). As early as 1967, Guilford argued that multiple intelligences existed including cognition, memory, divergent-production factors, convergent-production abilities, and evaluation. Later, Gardner (1983) presented the idea that individuals possessed an interpersonal and intrapersonal intelligence seven years before the publication of the Salovey and Mayer article. Sternberg (1985) advocated the existence of multiple domains of intelligence including fluid intelligence, crystallized intelligence, and social (practical) intelligence. Salovey and Mayer originally conceived EI as a subset of social intelligence (1990). The term *EI* first appeared in Leuner (1966) although the construct presented in Leuner's work did not resemble the concept of social/EI under discussion here. Payne (1986) used the term in his unpublished doctoral dissertation entitled "A study of emotion: developing EI; self-integration; relating to fear, pain, and desire." As early as 1988, Bar-On discussed the concept of emotional and social intelligence in his unpublished dissertation. Despite these earlier forays into the idea, Salovey and Mayer's published article receives credit for the initial publication of the current conception of EI. Later, EI achieved popular notoriety when Goleman (1995) wrote the bestseller *Emotional intelligence: Why it can matter more than IQ* and cited the work of Salovey and Mayer (1990). Goleman's work landed EI (also called EQ in the early days) on the cover of *Time Magazine* (Gibbs & Epperson, 1995). Today a variety of EI models and approaches exist.

### *The Models and Classifications of EI*

Several different conceptual approaches to modeling the construct of EI exist including the ability model, the mixed models, and the trait model. The Mayer ability model is the most commonly accepted model of EI and is based on a four-branch approach to EI. Four basic abilities comprise the ability model: emotion perception; emotion facilitation; emotion understanding; and emotion regulation (Caruso & Salovey, 2004). Jordan, Dasborough, Daus, and Ashkanasy (2010) described the Mayer ability model and definition as the "gold standard" for defining EI (p. 145).

Antonakis, Ashkanasy, and Dasborough (2009) agree that the future of EI belongs to the ability model. Other authors also express a preference for the ability model based on largely psychometric evaluation criteria (Matthews et al., 2012). Following the recommendations of these scholars, this chapter includes an examination of the recent ability model literature to understand the current state and future directions of EI research. After a brief discussion of the competing models, the chapter returns to recent literature on the SOAM.

### *Mixed Models of EI*

Emotional and social competency models of EI are more commonly known as mixed models of EI. Bar-On (1988) described the first mixed-model of EI. Bar-On's model of competencies and skills included:

the ability to be aware of, to understand, and to express oneself; the ability to be aware of, to understand and relate to others; the ability to deal with strong emotions and control one's impulses; and the ability to adapt to change and to solve problems of a personal or social nature. (Bar-On, 2006, p. 14)

Bar-On's model, which he later named the Bar-On Model of Emotional-Social Intelligence (ESI), includes the components of interpersonal skills, adaptability, stress management, and general mood (Bar-On, 2006, p. 14). Bar-On's model reached farther than the original conception and showed signs of overlap with the more general construct of personality. Other scholars developed additional mixed-model approaches to EI.

Goleman and Boyatzis developed another mixed-model approach to EI (Boyatzis, Goleman, & Rhee, 2000). Goleman's (1995) bestseller, *Emotional Intelligence: Why It Can Matter More Than IQ*, launched the popular concept of EI and became the "touchstone for many of the controversial issues that continue in the academic field of EI to the present day" (McCleskey, 2014). The Salovey and Mayer ability model inspired the Boyatzis–Goleman mixed-model. However, Boyatzis and Goleman expanded the scope of their model to encompass social and emotional competencies linked to effective performance in the workplace. These included a number of competencies sorted into four clusters: self-awareness, self-management, social awareness, and relationship management (Boyatzis, 2009; Cherniss, 2010; Goleman, Boyatzis, & McKee, 2002). This model also showed overlap with the more established construct of personality. An alternative conception views EI as a unique personality trait.

The Trait model of EI consists of four components: well-being (self-confidence, happiness, and optimism); sociability (social competence, assertiveness, and emotion management of others); self-control (stress management, emotion regulation, and low impulses in this); and emotionality (emotional perception of self and others, emotion expression, and empathy). Petrides (2010) describes Trait EI as “the only operational definition in the field that recognizes the inherent subjectivity of emotional experience” (p. 137). Trait EI is a domain comprised of numerous facets including adaptability, assertiveness, emotion expression, emotion management, emotion regulation, impulsiveness, relationships, self-esteem, self-motivation, social awareness, stress management, trait empathy, trait happiness, and trait optimism (Petrides, 2010, p. 137). The trait approach to EI maintains a following within the academic community. Later authors reviewed the distinct paths along which EI was progressing and noted that the research on EI can be categorized along three distinct streams.

### *EI and the Three Streams*

Ashkanasy and Daus (2005) proposed the three streams approach to analyzing EI. Stream One consists of ability measures of EI based on the Salovey and Mayer model. Stream Two includes self-report measures (rather than ability tests) based on the Mayer four-branch ability model. Stream Three comprises mixed-model, personality, and trait approaches. Other scholars have adopted the three streams approach to classifying EI research as well. O’Boyle, Humphrey, Pollack, Hawver, and Story (2011) analyzed the relationship between EI and various measures of job performance. Walter, Cole, and Humphrey (2011) reviewed the major literature on EI and leadership across all three streams. Next, in keeping with the same three streams approach, the current literature on the SOAM of EI is reviewed.

## RECENT LITERATURE IN THE SOAM OF EI

Stream One includes the ability model of EI introduced and refined by Mayer and his colleagues (Mayer, Caruso, & Salovey, 2000; Mayer et al., 1990; Mayer & Salovey, 1997; Salovey & Mayer, 1990) and is limited to those instruments and scales that assess performance or ability as opposed to self-report instruments. A growing group of scholars argue that the performance-based measures of EI hold the greatest opportunity for

continued scientific inquiry and growth of the construct (Antonakis et al., 2009; Cherniss, 2010; Côté & Miners, 2006; Jordan et al., 2010; Lopes, Grewal, Kadis, Gall, & Salovey, 2006; Matthews et al., 2012). Thanks in part to this growing support for SOAM, research based on the SOAM EI construct has increased in recent years and includes inquiry into a variety of subjects, however, the test instruments used to study the SOAM continue to be a controversial area of discussion and several recent articles focus on this issue.

### *SOAM Test Instruments*

The most commonly used SOAM instrument is the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT v2.0; Mayer, Salovey, & Caruso, 2002). The MSCEIT is an ability-based test of EI using four scales with each corresponding to one branch of the Mayer ability model. The test comprises 141 items and has “adequate internal consistency and reliability” (Conte & Dean, 2006, p. 60). Mayer, Salovey, Caruso, and Sitarenios (2003) and Brackett and Salovey (2006) provide additional support for the validity of the MSCEIT. Despite the psychometric evidence, the validity and factorial composition of the MSCEIT remains a consistent topic of conversation in the literature and the instrument has generated diverse opinions and outcomes. For example, Maul (2011) challenged the factorial structure of the MSCEIT and later also questioned the validity of the MSCEIT (Maul, 2012a, 2012b). Despite these and other challenges, the MSCEIT enjoys a large measure of popularity as the primary measure of the SOAM of EI.

### *Recent Studies Utilizing the MSCEIT*

A number of recent articles utilized the MSCEIT as their SOAM EI test instrument. Cherry, Fletcher, and O’Sullivan (2013) studied the SOAM of EI, clinical communication, and attachment styles in a sample of medical students finding incremental variance tied to EI. Doherty, Cronin, and Offiah (2013) examined graduate medical school professional development using both a SOAM EI and STAM (Stream Two Ability Model) instrument and concluded that the two measures (MSCEIT and ECI) may be measuring distinct constructs. Føllesdal and Hagtvet (2013) examined SOAM EI and Transformational Leadership. DiFabio and Kenny (2012)

studied SOAM and STAM EI using the MSCEIT and EIS in a sample of Italian students and found support for a relationship between EI and perceived social support after controlling for personality. Fernandez-Berrocal, Cabello, Castillo, and Extremera (2012) examined the relationship between SOAM EI and gender using the MSCEIT and specifically uncovered the mediating effect of age on the relationship. Abe (2011) found that SOAM EI may contribute to successful experiential learning by fostering student reflective capabilities in a sample of college students. Fox, Bergquist, Casey, Hong, and Sinha (2011) compared cocaine dependent and healthy individuals along lines of SOAM EI, cognitive ability, perceived stress, and impulse control. Montgomery, Stoesz, and McCrimmon (2013) studied the relationship between SOAM EI and self-report interpersonal relations for young adults with Asperger's Syndrome. Kee et al. (2009) discovered that schizophrenia patients performed significantly worse than control groups at identifying, understanding, and managing emotions as measured using the MSCEIT. Additionally, the amount of the deficit correlated with the severity of their symptoms (Kee et al., 2009). Côté et al. (2011) utilized the emotion regulation portion of the MSCEIT in a SOAM EI study of emotion regulation and personality across organization rank. The study found that level of Agreeableness significantly impacted the relationship between Emotion Regulation and organizational rank (Côté et al., 2011). Barbey, Colom, and Grafman (2014) examined the neurological basis of SOAM EI in patients with focal brain injuries. The authors found that latent scores for IQ and personality predict scores for SOAM EI and suggested the need for an "integrative framework for understanding the architecture of executive, social and emotional processes" (Barbey et al., 2014, p. 265). Grunes (2014) failed to find a significant relationship between SOAM EI measured using the MSCEIT and leadership styles in a sample of Australian educational leaders. Karim (2010) looked for support for the cross-cultural validity of the MSCEIT. Leopold et al. (2012) extended earlier findings by showing that the ventromedial prefrontal cortex is associated with abilities in affective Theory of Mind and that this deficit is associated with SOAM EI. MacCann, Fogarty, Zeidner, and Roberts (2011) demonstrated that coping skills mediate the relationship between SOAM EI and academic performance using a variety of SOAM instruments including the MSCEIT. MacCann, Lipnevich, and Roberts (2012) included the MSCEIT in a study incorporating SJTs to study SOAM EI and emotional competencies in students. Margaret Hayes and Reilly (2013) conducted a comparative study of youth detainees and a control group along the dimensions of psychiatric disorder, cognitive ability, and SOAM EI. Dong, Seo, and Bartol (2014)



examined the relationship between developmental job experience (DJE) and positive and negative individual outcomes (advancement potential and turnover intention) and found that EI (as measured using the MSCEIT v2.0) moderated the relationship. These studies represent a nonexhaustive sample of recent articles featuring the MSCEIT as the SOAM EI test instrument. Table 1 summarizes this discussion of recent literature including the MSCEITv2.0. Despite this growing list of peer-reviewed literature, criticism of the MSCEIT also continues to accumulate.

### *Criticisms of the MSCEIT*

Authors critical of the MSCEIT include Roberts et al. (2006), Fiori and Antonakis (2011, 2012), Matthews, Zeidner, and Roberts (2007), Maul (2012a, 2012b) among others. Some of the critics of the MSCEIT have questioned its construct validity based on the fact that it does not correlate very closely with some other tests of emotion recognition or perception including the Vocal-1 ( $r = .45$ ), the STEU ( $r = .48$ ), and the Eyes of the Mind ( $r = .68$ ). For a discussion of these issues, see Mayer, Salovey, and Caruso (2012). Additionally, Maul (2012a, 2012b) openly questioned the validity of the MSCEIT and in a point counterpoint edition of *Emotion Review*, criticism of and support for the MSCEIT were provided by some of the SOAM model's supporters (MacCann et al., 2012; Mayer et al., 2012). Ultimately, while the MSCEIT is not a perfect instrument, it is currently "the only established standardized test" of SOAM EI (Fiori & Antonakis, 2011, p. 329). These authors suggested that the MSCEIT is a valuable research tool despite its shortcomings and provided scholars and practitioners follow a few simple suggestions. Researchers suggested using branch rather than total EI scores, controlling for the effects of personality and general mental ability (GMA), accounting for measurement error, and considering an alternate factor structure when using the MSCEIT. Fiori and Antonakis (2011) argued that researchers use branch scores rather than looking at the total score on the MSCEIT, control for the effects of personality and general mental ability (GMA), and account for measurement error when using the MSCEIT. An additional issue involves the factorial structure of the MSCEIT. A number of studies reached the conclusion that the Using Emotions to Facilitate Thought branch of the SOAM could not be identified using a variety of statistical analyses (Keele & Bell, 2008; Maul, 2012a, 2012b; Roberts et al., 2006; Rode et al., 2007; Rossen, Kranzler, & Algina, 2008). Matthews et al. (2007) previously



**Table 1.** Recent Studies Utilizing the MSCEIT v2.0 Instrument to Measure SOAM EI.

Author(s)	Instrument	Results
Abe (2011)	MSCEIT v2.0	Relationship between EI and experiential learning
Barbey et al. (2014)	MSCEIT v2.0	Examined neurological basis of SOAM EI in patients with focal brain injuries
Cherry et al. (2013)	MSCEIT v2.0	Supported relationship between EI and clinical communication
Côté et al. (2011)	MSCEIT v2.0 emotion regulation	Examined emotion regulation and personality across organization rank
DiFabio and Kenny (2012)	MSCEIT v2.0 and EIS	Relationship between EI and perceived social support
Doherty et al. (2013)	MSCEIT v2.0 and ECI	Relationship exists between EI and professional development, two instruments measure distinct constructs
Fernandez-Berrocá et al. (2012)	MSCEIT v2.0	Found relationship between EI and gender mediated by age
Føllesdal and Hagtvet (2013)	MSCEIT v2.0	Supported relationship between EI and Transformational Leadership
Fox et al. (2011)	MSCEIT v2.0	Compared dependent versus healthy individuals on EI, cognitive ability, perceived stress, and impulse control
Grunes (2014)	MSCEIT v2.0	Failed to find a significant relationship between EI and leadership styles
Karim (2010)	MSCEIT v2.0	Support for the cross-cultural validity of the MSCEIT
Kee et al. (2009)	MSCEIT v2.0	Schizophrenia patients performed worse at identifying, understanding, and managing emotions
Leopold et al. (2012)	MSCEIT v2.0	Ventromedial prefrontal cortex is associated with abilities and is associated with EI
MacCann et al. (2011)	MSCEIT v2.0 & various	Coping skills mediate the relationship between EI and academic performance
MacCann et al. (2012)	MSCEIT v2.0 & SJTs	Studied EI and emotional competencies in students
Margaret Hayes and Reilly (2013)	MSCEIT v2.0	Studied youth detainees and compared psychiatric disorder, cognitive ability, and EI
Montgomery et al. (2013)	MSCEIT v2.0	Relationship between SOAM EI and self-report interpersonal relations for young adults with Asperger’s Syndrome

*Note:* MSCEIT v2.0, Mayer–Salovey–Caruso-Emotional-Intelligence-Text version 2.0; ECI, Emotional Competence Inventory; ESI, Emotional and Social Intelligence; SJTs, Situational Judgment Tests.

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raised this argument as well. Accordingly, other scholars also demonstrated that unlike the Using Emotions branch, the remaining three branches possess adequate structural and incremental validity, and generalizability (Fan, Jackson, Yang, Tang, & Zhang, 2010; Joseph & Newman, 2010; Mayer, Roberts, & Barsade, 2008). Gardner and Qualter (2010) conducted a factorial analysis of the MSCEIT and found support for a three branch model including the Experiential EI area score (Perceiving Emotions and Using Emotions), Understanding Emotions and Management Emotions. These findings supported the meta-analytical work of Fan et al. (2010). Despite these findings, Føllesdal and Hagtvet (2013) succeeded in creating a new factorial structure of the MSCEIT using alternative subscales in the Perceiving Emotions Branch and found significant results in their study for the Managing Emotions branch, total EI score, and one of their new branches labeled APE/NE. This study confirmed that the controversies surrounding the validity of the MSCEIT remain unsettled to date. Another issue with the MSCEIT involves its cost. It is currently the most expensive option for studying the SOAM of EI. The MSCEIT is not the only performance-based ability test instrument used to measure part or all of the SOAM of EI.

### *Alternative Tests of the SOAM*

Matthews et al. (2012) describe a variety of alternative tests and methodologies useful in the measurement of SOAM. These include emotion recognition tasks and measures and situational judgment tests (SJTs). While few studies to date have utilized these alternative SOAM measures, each shows some promise in helping to close the psychometric gaps left open by the MSCEIT. The study of emotion recognition tasks represents a well-established facet of psychological research methodology.

#### *Emotion Recognition*

Emotion recognition includes facial recognition, body language or nonverbal recognition, and vocal recognition. The study of facial recognition dates back to the work of Darwin (1872/1955). Beginning in the 1950s, Ekman conducted pioneering work in the field of facial recognition. Ekman developed the Facial Action Coding System (FACS) and this system set the precedent for the field (Ekman, 1982; Ekman & Friesen, 1975). Indeed, Salovey and Mayer's seminal 1990 article cited Ekman's work when discussing the formation of their initial theory of EI. Instruments

commonly used to measure facial recognition include the Japanese Caucasian Brief Affect Recognition Test (JACBART) and the Diagnostic Analysis of Nonverbal Accuracy in Adult Facial Expressions (DANVA2-AF), part of the DANVA suite of test instruments developed by [Nowicki and Duke \(2001\)](#). The JACBART respondents view posed facial expressions for short durations showing either happiness, contempt, disgust, sadness, anger, surprise, or fear. This assessment is similar to the Faces and Pictures tasks of the Perceiving Emotions branch of the MSCEITv2.0 ([Mayer et al., 2002](#)). Unfortunately and in contradiction to intuition, [Roberts et al. \(2006\)](#) found a nearly zero correlation between the JACBART and the Faces task of the MSCEIT. [MacCann, Reid, O'Brien, and Roberts \(2003\)](#) found validity evidence in support of the JACBART as a measure of emotion perception. However, very few if any recent studies employed the JACBART to examine the SOAM. Similarly, few studies utilized the DANVA to examine EI relationships ([Byron, 2007](#); [Rubin, Munz, & Bommer, 2005](#)) or examined an aspect of the SOAM individually such as Emotion Regulation ([Schmid Mast & Darioly, 2014](#)). The Communication of Affect Receiving Ability Test (CARAT), the Profile of Nonverbal Sensitivity (PONS), and the Interpersonal Perception Task (IPT) also include recognition of facial expressions; however, these instruments include overall nonverbal expression and are addressed later in the chapter. The study of vocal recognition is another avenue that researchers use to examine emotion recognition.

The common tests of verbal recognition include the [Scherer's \(2007\)](#) Vocal Expression Recognition Index (Vocal-I) and the DANVA2-AP ([Roberts, MacCann, Matthews, & Zeidner, 2010](#)). The Vocal-I uses emotions heard in a foreign language to elicit respondent judgments about expressions of joy, sadness, fear, anger, and neutral feelings ([Roberts et al., 2010](#)). The DANVA2-AP uses audio files to elicit respondents to classify sentences into happy, sad, angry, or fearful categories ([Roberts et al., 2010](#)). While various emotion recognition tests focus on faces, voices, and body gestures, [Bänziger, Grandjean, and Scherer \(2009\)](#) developed a test that combines all three categories. The Multimodal Emotion Recognition Test (MERT) represents a logical step forward in the science of emotion recognition testing. These tests represent the most common measurements of emotion recognition in use today. For a more thorough review of these tests and additional emotion recognition instruments, see [Hall, Andrzejewski, and Yopchick \(2009\)](#). The results from the meta-analysis conducted by [Hall et al. \(2009\)](#) led the researchers to conclude that there is no doubt that accurate emotion recognition is connected to healthy

functioning and this applies to a variety of domains including workplace settings. While the efficacy of emotion recognition instruments is indicated, a relative paucity of studies exists linking these tests to SOAM EI. This has led some researchers to continue to search for alternatives to the MSCEIT. Recently McCleskey (2014) joined a group of scholars who previously recommended expanded use of SJTs in the study of SOAM EI.

### *Situational Judgment Tests (SJTs)*

SJTs are not a novel approach to the measurement of emotional constructs. The first scale ever used to measure emotional expression was the Beth Israel Hospital Psychosomatic Questionnaire (Sifneos, 1973). This instrument presented verbal situations to patients and hospital personnel recorded the patients' verbal responses (Salovey & Mayer, 1990). It was an early SJT. The MSCEIT also functions as an SJT in two sections, the emotions management task and the emotional relations task (Mayer et al., 2002). Some researchers have developed new tests of the SOAM of EI using the SJT approach (MacCann & Roberts, 2008; Roberts et al., 2010). MacCann and Roberts (2008) point out that the majority of SOAM research comes from a single instrument, the MSCEIT v2.0 (and its predecessors, MSCEIT and the MEIS). This represents an issue because test effects cannot be distinguished from construct effects and because the MSCEIT is "empirically rather than theoretically keyed, such that EI scores do not have a strong theoretical background" (MacCann & Roberts, 2008, p. 540). For these reasons, MacCann & Roberts developed two new tests, the Situational Test of Emotional Understanding (STEU) and the Situational Test of Emotion Management (STEM). The initial reliability and validity of these tests offers promise and the characteristics of the STEM were "experimentally manipulated to disentangle test effects from construct effects" (MacCann & Roberts, 2008, p. 540). The STEU correlates to the Understanding Emotions branch. The STEU is also available in a newly developed short form called STEU-B (Allen, Weissman, Hellwig, MacCann, & Roberts, 2014). Other SJTs developed to measure this branch include the Levels of Emotional Awareness Scale (LEAS) (Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990) and the Test of Emotional Intelligence (TEMINT) (Schmidt-Atzert & Buhner, 2002).

The LEAS solicits responses along the dimensions of anger, fear, sadness, and happiness. The respondents describe their feelings as reaction to various scenes (Lane et al., 1990). The LEAS correlates with emotion recognition and the ability to respond to aversive moods (Lane, 2000). Lane, Reiman, et al. (1998) found that both the LEAS and the Toronto

Alexithymia Scale (TAS-20) showed similar correlations along the characteristics of age, sex, socioeconomic status, and years of school providing further evidence of construct validity for the LEAS. LEAS scores also correlate with Positron Emission Topography, which adds neuro-scientific support for its construct validity (Lane, Sechrest, & Riedel, 1998). Another version of the LEAS was developed for children (LEAS-C) ages 9–12 (Bajgar, Ciarrochi, Lane, & Deane, 2005). A more recent study conducted by Parling, Mortazavi, and Ghaderi (2010) utilized the LEAS to examine emotional self-awareness in alexithymics and a control group among individuals suffering with an eating disorder. Another study revealed that those patients experiencing somatoform disorders manifested deficits in emotional awareness as measured using the LEAS (Subic-Wrana, Beutel, Knebel, & Lane, 2010). Begeer et al. (2011) studied individuals with Autism disorders that undertook Theory of Mind training to assess improvements in emotional awareness using the LEAS and found none. Other SJTs are less well-known than the LEAS.

A less well-known SJT has been used as a measure of emotion recognition. The Emotion Recognition Profile (ERP-Q: Quoidbach, Nelis, Mikolajczak, & Hansenne, 2007) consists of 16 scenarios and the respondent chooses among 8 outcomes for each. The ERP-Q is available in both English and French and is available in a more recent revised version called the ERP-R (Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011). The revised ERP shows good evidence of validity, independence of nonverbal reasoning and verbal skills, and relates positively to EI (Trait EI) and relevant personality dimensions (Nelis et al., 2011). The validity evidence mentioned here compares the ERP-R to a Stream Three Mixed Model (STMM) of EI. Additional studies should address validity evidence when compared with SOAM measures. Schmidt-Atzert and Buhner (2002) developed The TEMINT as another SJT aimed at measuring the ability to understand emotions.

The TEMINT requires respondents to rate the feelings of aversion, anger, fear, etc. experienced in various situations. The test scores relative to the emotions are reported by the target participants themselves. Therefore, objectively correct answers exist based on the self-report of the targets (Schmidt-Atzert & Buhner, 2002). Blickle et al. (2009) utilized TEMINT and found a relationship between emotional reasoning and the emotion recognition ability over and above the effects of personality and cognitive ability. Blickle, Momm, Liu, Witzki, and Steinmayr (2011) provided further support for TEMINT. However, Amelang and Steinmayr (2006) previously found contradictory results. DeBusk and Austin (2011) incorporated

TEMINT to study the relationship between SOAM and facial recognition but failed to show a significant connection. Two common SJT measures exist in the area of Managing Emotions as well.

The two common SJT measures used to measure emotional management are the Emotional Management Test (EMT) and the SJT for Management (STEM). Several recent studies utilized the STEM including Burrus et al. (2012), which demonstrated a link between SOAM and emotional well-being. MacCann (2010) examined both the STEU and the STEM and compared consensus versus dichotomous scoring methods. MacCann et al. (2011) examined the mediating role of coping between SOAM EI and academic performance using sample groups from the STEM youth version and the MSCEIT. While these represent the commonly used SJTs to date, development of SJTs continues. The STEU, STEM, TEMINT, and LEAS each address a subset of the SOAM EI branches. Other researchers attempted to create more robust SJTs to test the SOAM EI.

One such SJT is the Situational Judgment Test of Emotional Abilities (SJTEA) developed by Roberts et al. (2011). The SJTEA consists of 16 items and participants are presented a series of short video clips establishing the context of a scenario or “emotionally-laden” situation (Fallon et al., 2014). While still relatively new, the SJTEA has demonstrated internal reliability, and moderate to high relationships with the SOAM EI branches. The SJTEA also appears to “encompass both emotional and intellectual components” and has demonstrated some evidence of predictive validity (Matthews et al., 2012, p. 120). In addition to the SJTEA, Sharma, Gangopadhyay, Austin, and Mandal (2013) developed another new SJT for EI. Initial results show good reliability and validity and additional studies using this instrument may prove promising. Table 2 summarizes the list of instruments discussed here. SJTs represent an exciting development in the study of the SOAM EI construct.

## RECOMMENDATIONS FOR THE FUTURE OF SOAM EI

As noted above, significant support for the SOAM EI construct exists and continues to accumulate. Despite this encouraging trend, criticism of the SOAM and its most commonly used test instrument also continues to grow. In the effort to move the conversation forward, the measures of SOAM EI discussed here should be analyzed to resolve the underlying dimensional and factorial confusions (Matthews et al., 2012). It might be

**Table 2.** Instruments Used to Measure the SOAM EI.

Name	Commonly	Measures	Author and Date
Mayer–Salovey–Caruso-emotional-intelligence-test version 2.0	MSCEIT v2.0	Emotional intelligence	Mayer et al. (2002)
Japanese Caucasian brief affect recognition test	JACBART	Facial expressions	Matsumoto (2000)
Diagnostic analysis of nonverbal accuracy in adult facial expressions	DANVA2-AF	Facial expressions	Nowicki and Duke (2001)
Diagnostic analysis of nonverbal accuracy in adult prosody	DANVA2-AP	Vocal expressions	Nowicki and Duke (2001)
Diagnostic analysis of nonverbal accuracy	DANVA2	Nonverbal expression	Nowicki and Duke (2001)
Vocal expression recognition index (Vocal-I)	Vocal-I	Vocal expressions	Scherer (2007)
The multimodal emotion recognition test	MERT	Multimodal	Bänziger et al. (2009)
Beth Israel Hospital Psychosomatic Questionnaire	N/A	Situational judgment	Sifneos (1973)
MSCEIT v2.0 (emotions management, emotions relation)	MSCEIT v2.0	Situational judgment	Mayer et al. (2002)
The situational test of emotional understanding	STEU	Situational judgment	MacCann and Roberts (2008)
The situational test of emotion management	STEM	Situational judgment	MacCann and Roberts (2008)
The situational test of emotional understanding short form	STEU-B	Situational judgment	Allen et al. (2014)
The levels of emotional awareness scale	LEAS	Situational judgment	Lane et al. (1990)
The levels of emotional awareness scale for children	LEAS-C	Situational judgment	Bajgar et al. (2005)
The emotion regulation profile-revised	ERP-P	Situational judgment	Quoidbach et al. (2007)
The test of emotional intelligence	TEMINT	Situational judgment	Schmidt-Atzert and Buhner (2002)
The emotional management test	EMT	Situational judgment	Burrus et al. (2012)
Situational judgment test of emotional abilities	SJTEA	Situational judgment	Roberts et al. (2011)
Situational judgment test for EI	N/A	Situational judgment	Sharma et al. (2013)



time for Mayer and his colleagues to introduce MSCEITv3.0 instead of continuing to point and counterpoint their critics in a psychometric tennis match as they did recently in *Emotion Review* (Mayer et al., 2012). The work of Føllesdal and Hagtvet (2013) may be the right place to start that process. Perhaps Mayer et al. can join the Norwegians in the creation of a more psychometrically convincing MSCEIT and silence many critics of the SOAM. In the meantime, McCleskey (2014) argued that SJTs offer a wealth of new research opportunities and the EI field is only beginning to take advantage of these opportunities. An SJT designed to examine all four branches of the SOAM, multimedia based, and web enabled, could catapult the SOAM ahead of its simpler to administrate and less expensive STAM competitors. These solutions offer a way forward for the SOAM and may finally bring clarity and progress for the study of EI in organizations. As a further clarification, it might be time to begin referring to STMM (Stream Three Mixed Model) research by a new name or it may need to be dropped altogether. Cherniss (2010) argued the former and offered Emotional and Social Competence (ESC) as a more accurate description of the STMM approaches. The difference between the STMM approaches and the Stream One and Stream Two research adds considerable confusion to a field that is too new and dynamic to add confusion where it is unnecessary. As this chapter noted at the beginning, theory building is never finished. Additional research efforts should focus on clarifying the SOAM EI instruments, expanding the use and effectiveness of SJTs, and continuing to move the EI community of scholars toward the SOAM of EI construct. This chapter examined the changing nature of the study of EI, advocated for the SOAM of EI, and suggested some future directions for EI scholarship.

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