Nearly a quarter of a century has passed since Salovey and Mayer (1990) introduced the first formal model of emotional intelligence into the scientific literature and demonstrated how aspects of it might be measured (Mayer, DiPaolo, & Salovey, 1990). Synthesizing research from developmental and social psychology with an emerging literature on mental abilities, they defined emotional intelligence as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). Today, several thousand publications have cited that article. Research on emotional intelligence, its correlates, and its applications has flourished, and efforts to enhance individuals’ emotional intelligence have proliferated across the globe. Former British Prime Minister Tony Blair recently asserted that “one big change in what kids should learn is the need to nurture creative thinking and emotional intelligence” (Global Ed & Skills, 2014). High-ranking business schools have added emotional intelligence screenings to their battery of entrance assessments to help determine which students are likely to be top performers (Korn, 2013). The University of Málaga in Spain now offers a master’s degree in emotional intelligence.

These developments belie the construct’s initial reception. At first, the concept that individuals might differ in their ability to reason adaptively with and about emotions did not sway many within academia; in fact, it elicited criticism (see Mayer & Salovey, 1993). For one thing, as emotion researcher Joseph LeDoux (2000, p. 156) noted, “emotion research was a victim of the cognitive revolution” of the mid-20th century. For some time, the cognitive psychological approach to explaining human behavior overshadowed interest in emotion (Neisser, 1967). The 1980s and 1990s saw a surge of interest in affective science (Barsade, Brief, & Spataro, 2003), but even then, the idea of an emotional intelligence—with its emphasis on individual differences—ran counter to existing trends in emotion research. Only within the last decade, roughly, have neuroscientists increasingly begun to appreciate the value of individual neurobiological differences in emotion processing (e.g., Eugène et al., 2003; Hamann & Canli, 2004). Prior to that, neuroscience tended to focus on universal processing trends, considering individual differences to be statistical “noise” (Hamann & Canli, 2004; Plomin & Kosslyn, 2001). Such “noise” distracted from a century-long endeavor to first agree upon the provenance of emotions within the human organism (i.e., the brain as opposed to visceral organs) and then to map the general neural circuitry underlying emotional experience in animals and humans (see Davidson, Jackson, & Kalin, 2000, for a concise historical summary). Moreover, theories and measures of intelligence had long been concerned mainly with the g factor (Spearman, 1904), general intelligence conceptualized as interrelated cognitive capacities.
like abstract and mathematical reasoning (e.g., Sattler, 1982; Spearman, 1927; Wechsler, 1939). Finally, emotional intelligence had to overcome an entrenched view of emotions as destabilizing, disorganized forces that prevent logical reasoning (e.g., Lefford, 1946; Young, 1943). That mistrust of emotions has roots in Stoic philosophy, which presumed that the self-centeredness of emotional experience precluded its leading people to act in rational (i.e., moral, altruistic) ways (see Lyons, 1999).

However, a current trend of insight into the possible existence of distinct intelligences, including social intelligence (Thorndike, 1920), gained momentum as the latter part of the 20th century drew to a close. It manifested in the proposal of a “cognitive loop” among mood and judgment (Izard, Shaller, Clark, & Karp, 1978), Gardner’s (1983/1993) theory of multiple intelligences, and Sternberg’s (1985) triarchic theory of intelligence. By questioning the view that IQ was the prime determinant of success in life, these and other investigations into the link between emotion and cognition (e.g., Damasio, 1994) laid the groundwork for the “affective revolution” some argue is now under way (Barsade et al., 2003).

The book The Bell Curve (Herrnstein & Murray, 1994) may have pushed the tipping point; it lent a particularly controversial voice to the argument that IQ is preeminently predictive. The authors linked IQ to social class and race in a manner that sparked considerable backlash (see Lynn, 1999) and prompted the American Psychological Association to assemble a task force on the state of intelligence research (Neisser et al., 1996). One year after the publication of The Bell Curve, psychologist and reporter Daniel Goleman (1995) published a trade book—Emotional Intelligence—that provided a unique counterpoint to The Bell Curve’s polemic assertions (see Cartwright & Papas, 2008; Matthews, Zeidner, & Roberts, 2002). Goleman presented a persuasive articulation of what audiences inflamed by The Bell Curve likely wanted acknowledged: that there are ways to be smart beyond what standardized intelligence tests measure (e.g., Mayer, Salovey, & Caruso, 2000).

Indeed, some have remarked that “the EI construct gives hope for a more utopian, classless society” (Zeidner, Matthews, & Roberts, 2009, p. xii). Goleman’s book quickly climbed the New York Times best-seller list and catapulted emotional intelligence to prominence on the international stage. It was then that the term “emotional intelligence” came into wide usage among the general public and researchers (for instance, a search on Google Scholar returns 32 results for publications with “emotional intelligence” in the title in the 20 years before Goleman’s book was published, and over 10,000 results in the 20 years following). But along with that popularization came many misconceptions about the infant construct. Perhaps most problematic, as others have argued (e.g., Zeidner, Roberts, & Matthews, 2002), Goleman’s (1995a) description of the construct encompassed a plethora of valued, nonintellectual human characteristics (e.g., motivation, persistence, willingness to delay gratification, hope; p. 34) that are beyond the scope of emotional intelligence, strictly defined. Thus, in the two decades that have followed, science has had to work to catch up to—and put into perspective—the hype.

In this chapter, we describe the four-branch ability model of emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990) and its measurement. We review the correlates of emotional intelligence in several domains of functioning and outline approaches to developing the four emotional intelligence abilities. We consider current limitations and areas of controversy in the field and conclude by proposing promising directions for expanding our understanding of the construct.

**The Ability Model of Emotional Intelligence**

Emotions are a critical source of information about the environment (e.g., Levenson, 1994; Schwarz, 1990; Schwarz & Clore, 1983) that can organize and direct cognitive activities and behaviors in adaptive ways (e.g., Darwin, 1872; Frijda, 1986; Izard, 1971; Leeper, 1948; Salovey & Mayer, 1990; Schwarz & Clore, 1983). Emotions may signal to us, among other things, that we are in harm’s way (fear), have experienced something pleasurable and should strive to repeat it (happiness), our access to something we need or desire is being blocked (anger), or that we have lost something important (sadness). (See Ekman, 1992, 1994, for a discussion of basic emotions and their common antecedent events.) The functional utility of emotions has been established since Darwin’s (1872) time, but what was novel about emotional intelligence theory when it was introduced was its assertion that individuals might vary in their ability to make advantageous use of the information emotions impart.
In 1997, Mayer and Salovey revised their original (Salovey & Mayer, 1990) definition of emotional intelligence to refine and outline more specifically the abilities the construct encompasses. They wrote:

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)

The distinct but related mental aptitudes identified in this definition constitute the four-branch or ability model of emotional intelligence. Other models have emerged as the concept has gained traction (Cherniss, 2010) such as the Bar-On (1997, 2006) model, which includes intrapersonal and interpersonal skills, general mood, adaptability, and stress management; the Boyatzis–Goleman model (Boyatzis & Sala, 2004), concerned mainly with social and emotional competencies considered pertinent to performance in the workplace; and the trait emotional intelligence model (Petrides & Furnham, 2001; Petrides, Pita, & Kokkinaki, 2007), consisting of sociability, emotionality, well-being, and self-control. These models represent “mixed models” of emotional intelligence, so-called because they “mix” some skills from the ability model (e.g., perceiving emotion) with elements of personality and behavioral preferences such as assertiveness and self-esteem (see Mayer, Roberts, & Barsade, 2008; Mayer, Salovey, & Caruso, 2008). Trait emotional intelligence proponents posit that the construct “encompasses . . . empathy, impulsivity, and assertiveness as well as elements of social . . . and personal intelligence” (Petrides & Furnham, 2003, p. 278). Bar-On (1997) proposed that emotional intelligence includes, among other preferences and traits, optimism and the perceived ability to manage relationships.

Mayer and Salovey (1993) cautioned against confusing behavioral preferences with intelligence, writing, “Although a trait such as extraversion may depend on social skill, or result in it, a trait is a behavioral preference rather than an ability. Knowing what another person feels, in contrast, is a mental ability” (p. 435). When conceptualized as a set of mental abilities, emotional intelligence is not only a new, distinct psychological variable, it also meets the criteria for a standard intelligence (Carroll, 1993; Fancher, 1985). Specifically, ability emotional intelligence (1) is a set of mental abilities that (2) are distinct from but correlated with one another and with abilities included in other recognized intelligence frameworks, and that (3) increase with age and experience (Mayer, Caruso, & Salovey, 1999; Mayer, Salovey, Caruso, & Sitarenios, 2001; Rivers et al., 2012). In contrast, emotional intelligence conceptualized—as in mixed models—as a combination of personality traits, behavioral preferences, and perceived mental abilities overlaps with other variables. This makes discerning its unique impact on outcomes of interest complicated at best (Brackett & Mayer, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). This is one reason researchers have criticized the use of “emotional intelligence” as a catchall term for valued non-cognitive qualities (e.g., Daus & Ashkanasy, 2003; Joseph & Newman, 2010; Zeidner, Roberts, & Matthews, 2004). A construct that is defined too broadly risks becoming meaningless if the aim is to investigate its unique relationship to important life outcomes and to understand how it can be targeted via intervention. Emotional intelligence, understood and assessed as a discrete mental ability, incrementally predicts certain outcomes (e.g., social effectiveness) over and above general intelligence and personality (see Mayer, Salovey, et al., 2008). It is presumably for these reasons that the four-branch model has been called the “gold standard” in emotional intelligence research (Daus & Ashkanasy, 2003, p. 72). The remainder of this chapter focuses on the ability model and its measurement and correlates, beginning with a delineation of the model’s four branches.

The Four Branches of the Ability Model

Mayer and Salovey’s critical review of the literature on intelligence, emotion, and the relationship between the two resulted in the four-branch model of emotional intelligence, which encompasses perceiving emotion, using emotion to facilitate thought, understanding emotion, and regulating emotion (Mayer & Salovey, 1997; Salovey & Mayer, 1990). Each of these abilities is described here.

Perceiving Emotion

The first branch of emotional intelligence is the ability to accurately perceive and appraise emotions in the self and others. This ability supports humans’ innate tendency to be social. As one
prominent social psychologist has written, “Social living is only possible because humans possess an elaborate cognitive capacity to perceive and evaluate others, infer their intentions, and respond with sophisticated and highly adaptable interpersonal strategies” (Forgas, 2006, p. 270). Individuals skilled in emotion perception can identify emotions in their own physical states and thoughts as well as in others’ facial expressions, vocalizations, gestures, and movements. They can also discern emotion in cultural artifacts such as works of art. They are able to express their emotions and the needs related to them. A more advanced skill on this branch is the ability to determine whether or not an emotional expression is genuine. Individuals’ ability to perceive emotions in others’ faces, voices, and movements begins in infancy (e.g., Flom & Bahrnick, 2007; Nelson & Dolgin, 1985; Schwartz, Izard, & Ansel, 1985; Walker-Andrews, 2005; Zieber, Kangas, Hock, & Bhart, 2014) and forms the foundation for the other emotional skills. Once emotion perception abilities are established, using, understanding, and regulating emotions become possible (Joseph & Newman, 2010; Mayer et al., 1999; Mayer & Salovey, 1997).

**Using Emotion to Facilitate Thought**

Consistent with a foundational premise of emotional intelligence—that emotions can assist cognitive processing—the second branch of the ability model encompasses individuals’ capacity to leverage emotions to facilitate cognitive activities like problem solving. Individuals equipped with this skill can determine which activities may benefit from the emotion they are currently experiencing, and can also generate the emotions most likely to facilitate tasks that need to be done. For instance, research supports a significant link between pleasant, high-arousal emotions (e.g., happiness) and creative, original thinking (Baas, De Dreu, & Nijstad, 2008; Fredrickson, 1998; Jamison, 2005; however, see also Hunsinger, Isbell, & Clore, 2012). In contrast, unpleasant, high-arousal emotions like fear are associated negatively with cognitive flexibility (Baas et al., 2008). However, unpleasant emotions do appear to be better suited than pleasant ones for deductive reasoning tasks (Palfai & Salovey, 1993) and making contingency judgments (Schwarz & Bless, 1991). According to the ability model, someone skilled in using emotions is more likely to take advantage of a pleasant, high-energy emotion to brainstorm or generate new approaches to a problem.

**Understanding Emotion**

The ability to understand the causes and consequences of emotions falls under the third branch of the framework. A basic skill on this branch is labeling emotions accurately and understanding that different emotion words are related (e.g., “joyful” and “elated” are nuanced experiences of “happy”). Individuals vary in their ability to label qualitatively distinct emotional experiences with different emotion words (Barrett, 1998; Barrett, Gross, Christensen, & Benvenuto, 2001; Feldman, 1995). For example, one person may report feeling “mad” or “bad” after any unpleasant event while another person specifies that one event caused “frustration” while another caused “despair.” This phenomenon is referred to as emotion differentiation or emotion granularity (Barrett et al., 2001). Research has linked greater emotion differentiation—especially for unpleasant emotions—to lower levels of depression (Demiralp et al., 2012; Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014) as well as less neuroticism and higher self-esteem (Erbas et al., 2014). Theoretically, these findings can be attributed to higher differentiators’ greater understanding of the causes and consequences of a variety of emotions, which should allow them to respond to and regulate emotions more adaptively (Erbas et al., 2014; Schwarz, 1990). Individuals who label unpleasant emotions in a granular way tend to regulate unpleasant emotions more frequently, and by employing a larger repertoire of strategies, than those who describe their emotional experiences in broader strokes (Barrett et al., 2001).

Other skills on the third branch include recognizing why certain emotions occur (e.g., accomplishing a goal causes pride), foreseeing the trajectory of an emotion that goes unregulated (e.g., sadness can degrade into hopelessness), surmising what occurred to change one emotion into another (e.g., anger transitions to satisfaction when an injustice is righted), and understanding how multiple emotions can “blend” to form another emotion (e.g., disgust and anger combined become contempt). Although not made explicit in this model, to understand emotions fully one also should take into account the historical and cultural contexts in which they are experienced. For example, individuals displaying acedia (sloth) in the early Christian Church and modern-day sufferers of depression may share feelings of apathy. However, acedia was considered to be a cardinal sin, while depression is increasingly explained in
terms of neurochemical imbalances that have no bearing on one’s moral standing (Frevert, 2011).

Thus,

Even if there are signs of acedia . . . and depression that resemble each other, the labeling, framing and contextualising of those signs are vastly different. Relating the symptoms to diverse systems of reference (magic, religion, arts and sciences, neurobiology) affects the value attributed to them. This in turn affects the appraisal and experience of those states. (p. 36)

As emotional intelligence matures and is examined more thoroughly in light of cultural distinctions and shifts in societal values over time, the need to consider context when assessing the causes and consequences of emotions will only increase.

Regulating Emotion

Individuals’ ability to manage their own and others’ emotions is the scope of the fourth branch of emotional intelligence. This branch includes skills such as remaining open to experiencing both pleasant and unpleasant emotions, judging the usefulness of a particular emotion in a specific situation, and using effective emotion regulation strategies with consideration for the situational context and desired outcome. Emotion regulation strategies vary in effectiveness. For example, studies have examined the relative efficacy of cognitive reappraisal and expressive suppression. Individuals who reappraise (i.e., construe in a different way in their minds) an event that could potentially elicit a negative emotional response have been found to experience more pleasant and fewer unpleasant emotions and to function better interpersonally and experience greater well-being (Gross & John, 2003). Individuals who engage in expressive suppression (e.g., disguising how they feel) experience the opposite outcomes: more unpleasant and fewer pleasant emotions, less effective interpersonal functioning, and poorer well-being (Gross & John, 2003). In fact, deficits in emotion regulation ability are a hallmark of many psychological disorders—including but not limited to mood disorders—and addressing these deficits directly may significantly aid in the treatment of such conditions (Werner & Gross, 2010). The ability model of emotional intelligence posits that individuals with more refined emotion regulation skills are more likely to choose effective regulation strategies (i.e., those with fewer cognitive and social costs).

In order to demonstrate that these four abilities—perceiving, using, understanding, and regulating emotion—provide an adaptive advantage, we must be able to assess them validly in diverse samples and examine their relationship to domains that are important for successful, healthy functioning. Next, we consider how emotional intelligence is measured and review some of its established correlates.

Assessing Emotional Intelligence

Accumulating research demonstrates that emotional intelligence can be assessed reliably and validly with performance measures, which ask respondents to demonstrate emotional intelligence by completing carefully designed exercises and tasks. Performance measures contrast with self-report (e.g., Bar-On Emotional Quotient inventory [EQ-i]; Bar-On, 2006) and multirater (e.g., Emotional Competence Inventory [ECI]; Boyatzis & Sala, 2004) measures, which ask respondents to estimate and report on their own or others’ capabilities rather than to demonstrate them. Although self-report measures offer practical advantages such as being relatively inexpensive, quick, and easy to administer (e.g., Riggio & Riggio, 2001), in most cases these advantages do not outweigh the limitations of this measurement approach. Self-report measures are problematic because they substantially overlap with existing personality measures (Brackett et al., 2006; Webb et al., 2013), capture perceived—not actual—abilities (Paulhus, Lysy, & Yik, 1998), and are susceptible to social desirability bias and faking (Day & Carroll, 2008; Tett, Freund, Christiansen, Fox, & Coaster, 2012). Multirater measures such as the ECI (Boyatzis & Sala, 2004) attenuate some of the limitations of self-report measures by requiring input from at least two different sources, which increases internal validity (Palmer & Stough, 2005). However, the psychometric properties of multirater measures of emotional intelligence are not well established (Cherniss, 2010). For these reasons, using performance measures of emotional intelligence, when feasible, is preferable to using other measurement approaches.

The Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002b) is the most commonly used performance measure of emotional intelligence in adults, and its validity has been demonstrated in multiple studies (e.g., Brackett & Mayer, 2003; Mayer, Sa-
The MSCEIT can be completed in approximately 40 minutes, administered either via a computer or paper version of the test. The test assesses each of the four branches of the ability model via two tasks. For instance, the perceiving emotions branch of the test asks respondents to view photographs of human faces and works of art and to identify how much of each of a particular emotion is represented in each picture. The managing emotions branch of the test presents respondents with a series of emotion-laden scenarios and asks them to rate the effectiveness of various strategies for maintaining, reducing, or otherwise regulating the particular emotions highlighted in the vignettes. Five scores are generated for the MSCEIT: an overall emotional intelligence score and four branch scores. The MSCEIT can be scored in two ways (Mayer, Salovey, & Caruso, 2002a): responses are awarded a certain number of points based on the degree of their overlap with either responses provided by a large, normative sample (consensus scoring) or those provided by a panel of emotion experts (expert scoring). Consensus and expert scores are correlated highly (Brackett & Salovey, 2006). The Mayer–Salovey–Caruso Emotional Intelligence Test—Youth Version (MSCEIT-YV; Mayer, Caruso, & Salovey, 2005) is a valid performance measure of emotional intelligence in youth ages 10–17 years (Peters, Kranzler, & Rossen, 2009; Rivers et al., 2012). Its language, pictures, and vignettes have been adapted to the adolescent population (e.g., younger faces).

An important consideration when determining the usefulness of an emotional intelligence measure is its relationship to measures of other constructs that, theoretically, should or should not overlap with it. Emotional intelligence, as a cognitive ability, should overlap to some degree with existing intelligence paradigms while still demonstrating unique variance (Mayer et al., 1999). As a measure of mental ability, emotional intelligence theoretically should not overlap significantly with measures of personality or general well-being. A recent meta-analysis found that, indeed, MSCEIT scores correlate positively with measures of verbal, nonverbal, and overall intelligence (Kong, 2014). Conversely, MSCEIT scores are discriminable from measures of well-being and personality, such as the Big Five, while self-report measures such as the EQ-i are significantly less separable from such constructs (i.e., they overlap to a greater degree with personality measures; Brackett & Mayer, 2003). Furthermore, the MSCEIT and self-report measures of emotional intelligence are only minimally related (Brackett & Mayer, 2003). These associations, or lack thereof, lend support to the utility of the MSCEIT for measuring validly the distinct, mental ability to reason with and about emotions. A more thorough comparison of emotional intelligence measures can be found in Mayer, Roberts, et al. (2008).

The MSCEIT and MSCEIT-YV are not without limitations. The tests do not capture the real-time application of emotion knowledge. For example, when someone experiences a strong emotion, is that person able to regulate it effectively in the moment? The current versions of the MSCEIT cannot evaluate this. Additionally, a number of studies have questioned the four-factor structure of the tests (e.g., Maul, 2011). In particular, there is some evidence to support the potentially superior fit of a three-factor structure that does not include the second branch: using emotions to facilitate thought (e.g., Fan, Jackson, Yang, Tang, & Zhang, 2010; Maul, 2011; Palmer, Gignac, Manocha, & Stough, 2005). Despite these limitations, converging evidence suggests that, of the assessments currently available, the MSCEIT measures emotional intelligence most reliably (Jordan, Dasborough, Daus, & Ashkanasy, 2010). Next, we describe the correlates of emotional intelligence as assessed by the MSCEIT and the MSCEIT-YV.

**Correlates of Emotional Intelligence as Measured by the MSCEIT**

Due in part to the many disparate definitions of emotional intelligence that emerged after the concept was proposed (e.g., Cherniss, 2010), extraordinary claims have been made about its significance; for instance, that “a highly developed emotional intelligence will make you a candidate for CEO or a brilliant trial lawyer” (Goleman, 1997, p. 76). While being emotionally intelligent is no guarantee of achieving great success in any particular field, evidence accumulated over the last 25 years suggests that emotional intelligence—measured as an ability—is related to important outcomes in many domains: particularly, health, relationships, academic achievement, and work performance (see Brackett, Rivers, & Salovey, 2011; Mayer, Roberts, et al., 2008; Rivers et al., 2012, for reviews). We summarize some key associations with the MSCEIT and MSCEIT-YV here. For most of the associations described, correlations range from .15 to .40. Associations that...
are not statistically significant are not included in this summary.

**Emotional Intelligence and Health**

One of the ways emotional intelligence appears to facilitate adaptive living is through its relationship to health outcomes. A recent meta-analysis demonstrated that individuals higher in emotional intelligence experience better physical, mental, and psychosomatic health (Martins, Ramalho, & Morin, 2010). Among adolescents, emotional intelligence appears to predict mental health (i.e., higher scores correlate with less depression and fewer conduct problems) over and above personality and cognitive ability (Davis & Humphrey, 2012) and to protect against suicidal behavior (Cha & Nock, 2009). Additionally, it appears that emotional intelligence protects against engagement in health risk behaviors for both adults and adolescents. Adolescents higher in emotional intelligence are less likely to use alcohol (Trinidad & Johnson, 2002) or smoke cigarettes, and report lower intentions to smoke cigarettes (Duncan et al., 2013; Trinidad & Johnson, 2002; Trinidad, Unger, Chou, & Johnson, 2004). Among college students, higher emotional intelligence has been linked to lower rates of substance abuse, adjustment problems, and aggressive behaviors (Rivers, Brackett, Omori, et al., 2013). Among adult males, lower emotional intelligence has been linked to increased use of illegal drugs and alcohol (Brackett, Mayer, & Warner, 2004). While the relationship between emotional intelligence and broad health categories (i.e., physical, mental, and psychosomatic) is well established (Martins et al., 2010), more research is needed to expand knowledge of the associations between emotional intelligence and specific health difficulties and risky behaviors, as well as the mechanisms underlying the associations.

**Emotional Intelligence and Interpersonal Functioning**

Emotional intelligence is thought to contribute to successful interpersonal functioning by equipping individuals with the tools needed to assess and understand others’ emotions and points of view, and to communicate about and manage their own and others’ emotions more effectively. Individuals higher in emotional intelligence are perceived by peers to be more interpersonally sensitive than those with lower scores (Lopes, Salovey, Côté, Beers, & Petty, 2005). Such individuals also tend to report better relationships with friends, parents, members of the opposite sex, and romantic partners (Brackett, Warner, & Bosco, 2005; Lopes et al., 2004; Lopes, Salovey, & Straus, 2003), and to exhibit more secure attachment styles in adulthood (Kafetsios, 2004) as compared to their counterparts with lower MSCEIT scores. Among men, MSCEIT scores have been shown to predict social competence (Brackett et al., 2006). Adolescents who score higher on the MSCEIT-YV are rated both by themselves and by their teachers as being more socially competent than students with lower scores (Rivers et al., 2012). These and similar findings should not be interpreted, however, as indicating that emotionally intelligent individuals are merely more agreeable (although in some samples there is a modest correlation between the two variables; e.g., \( r = .24 \) in Brackett et al., 2004). For one thing, the results of most of these studies remain significant after controlling for personality variables (see Brackett, Rivers, et al., 2011). Moreover, it appears that individuals higher in emotional intelligence prefer to feel the emotions that are most useful for a given situation, whether those emotions are pleasant or not (Ford & Tamir, 2012). For example, a person high in emotional intelligence who needs to confront someone is more likely to prefer to feel anger than a more pleasant, but potentially less useful, emotion (Ford & Tamir, 2012). Similarly, a recent study indicates that individuals higher in emotional intelligence demonstrate flexibility when choosing interpersonal strategies (i.e., cooperating or competing as is beneficial, as opposed to always cooperating) in a way that maximizes their gains over the long term in a laboratory-based, socially interactive game (Fernández-Berrocal, Extremera, Lopes, & Ruiz-Aranda, 2014). It would appear, then, that individuals high in emotional intelligence may be more interpersonally successful because they are more flexible and responsive to their social circumstances—and the resultant emotions—at any given time. Future research could investigate whether this is the case.

**Emotional Intelligence and Academic Achievement**

Accumulating data suggest that emotional intelligence is related to academic performance through the former’s impact on students’ attention, self-regulation, and adaptation in school (Lopes & Salovey, 2004). Among a sample of col-
Emotional intelligence has been a popular topic in organizational settings since its introduction, spurred in part by such claims as “For star performance in all jobs, in every field, emotional competence is twice as important as purely cognitive abilities” (Goleman, 1998, p. 34). Research has linked emotional intelligence to important workplace outcomes including performance and leadership ability, although the associations cannot be characterized as “twice as” predictive as those related to cognitive ability. Recent meta-analyses have found that individuals with higher emotional intelligence scores perform better on the job (Joseph & Newman, 2010; O’Boyle, Humphrey, Polack, Hawver, & Story, 2011), particularly in the context of jobs requiring more emotional labor (e.g., displaying specific emotions, as would be expected of customer service workers; Côté, 2014; Joseph & Newman, 2010). In two studies, emotional intelligence correlated with leadership emergence, which is the extent to which someone not in an official leadership position exerts influence with his or her colleagues (Côté, Lopes, Salovey, & Miners, 2010). These associations remained significant after controlling for cognitive ability and personality (and no correlations were found between self-reported emotional intelligence and leadership emergence). While individual studies (e.g., Leban & Zulauf, 2004) have shown promising associations between emotional intelligence and transformational leadership—the leadership style in which leaders motivate and inspire their subordinates to work toward a common vision (Bass, 1985; Bass & Riggio, 2006)—a recent meta-analysis (Harms & Credé, 2010) found a relationship only when the same rater assessed both emotional intelligence and transformational leadership. When multiple rating sources were used (e.g., the leader assessed emotional intelligence and a peer or subordinate assessed leadership style), there was no significant relationship between the variables (Harms & Credé, 2010). Future investigations in this area might consider the possible role of emotional intelligence in leaders’ decision-making styles, as well as observed leadership styles as opposed to self- or informant ratings of leadership styles. (See Brackett and colleagues, 2013; Côté, 2014, for more detailed reviews of the literature on emotional intelligence in the workplace.)

Summary

Emotional intelligence, measured as an ability, correlates with important outcomes in the domains of health, relationships, academics, and the workplace, but more work should be done to ascertain the mechanisms by which such associations occur. Furthermore, as the MSCEIT-YV was developed more recently than the MSCEIT, additional investigations into the correlates of emotional intelligence among older children and adolescents should be undertaken. Given the link between emotional intelligence and important life outcomes, emotional intelligence appears to be a desirable set of abilities to possess, and individuals may wonder whether—and how—they can increase their emotional intelligence. We now turn...
to a consideration of how emotional intelligence might be developed.

**Developing Emotional Intelligence**

Mayer and Salovey (1997) observed early on that "most skills can be improved through education . . . it is likely this will hold true for at least some of the skills related to emotional intelligence" (p. 19). Perhaps a less cautious endorsement of this concept is this statement from neuroscientists Davidson and McEwen (2012):

> Just as we as a society are learning to take more responsibility for our physical health by engaging in regular physical exercise, we can also take more responsibility for our minds and brains by engaging in certain mental exercises that can induce plastic changes in the brain and that may have enduring beneficial consequences for social and emotional behavior. This also invites the perspective that qualities such as well-being ought to be viewed, at least in part, as a product of trainable skills and that interventions explicitly designed to promote well-being may have beneficial behavioral and biological effects. (p. 690)

We propose that, as a set of mental abilities or skills that underlie adaptive social and emotional functioning and well-being, emotional intelligence and the training of its component skills may be understood from a similar perspective. Although empirical evidence of the potential for emotional intelligence skill growth has been slow to accumulate, that which does exist is promising. In this section, we review the existing evidence as well as overview the state of efforts to improve emotional intelligence in the home and at school. We also consider how burgeoning technological advancements might expand the reach and format of emotional skill development endeavors across the lifespan.

**Theoretical and Empirical Evidence Related to Developing Emotional Intelligence**

Just as we would not expect a person's intelligence to change dramatically over time, it is unlikely that individuals experience dramatic shifts in their overall emotional intelligence beyond the natural increase that occurs with age and education. However, it is clear that people can and do learn information about emotions and related skills, and can acquire new emotion language and regulation strategies as they age and accumulate a wider range of life experiences. Indeed, neuroscientists have suggested that "social and emotional characteristics can be educated in ways that are not dissimilar from certain forms of cognitive learning" (Davidson & McEwen, 2012, p. 694). A recent review of the literature supports this assertion; emotional intelligence interventions show promise, with preliminary studies demonstrating a moderate effect size (Schutte, Malouff, & Thorsteinsson, 2013). This review, however, identified only two studies that both used a true experimental, random-assignment design and that assessed participants' emotional intelligence with ability assessments. For instance, one well-designed intervention study showed a significant increase in emotional intelligence among young adults in the treatment group and not the control group, with effects still measurable at a 6-month follow-up (Nelis, Quoidbach, Mikołajczak, & Hansen, 2009). However, this study used measures of trait and not ability emotional intelligence, so results should be interpreted with caution. There is a need for additional, well-designed investigations into the impact of ability emotional intelligence training.

Despite their limitations, the existing studies Schutte and colleagues (2013) identified provide a foundation for further examinations into the development of emotional intelligence. One study found that athletes randomly assigned to participate in 10 three-hour emotional intelligence workshops had significantly higher MSCEIT scores at posttest than at baseline, and had significantly higher MSCEIT scores than their peers in the control group (Crombie, Lombard, & Noakes, 2011). A second study found similar results among business school students (Reuben, Sapienza, & Zingales, 2009). Participants assigned to a 16-hour, not-for-credit course in emotional intelligence showed a significant gain in overall MSCEIT performance upon course completion, while the pre- and posttest MSCEIT scores of their peers in an attention-control (i.e., business etiquette) course showed no significant change. Whether the effects of either intervention were lasting is unclear and future studies should attempt to replicate the findings and track retention of skills over time. As Lindbäum (2009) cautions, there is a significant difference between short-term training and comprehensive education where emotional intelligence is concerned.

Another well-established finding that bears on our consideration of the potential for teaching emotional intelligence is that individuals' beliefs about the malleability of intelligence are linked
to achievement (e.g., Blackwell, Trzesniewski, & Dweck, 2007; Hong, Chiu, Dweck, Lin, & Wan, 1999; Stipek & Gralinski, 1996). Specifically, individuals who believe skills can be improved through attention and effort tend to perform better than those who believe intelligence is fixed and unchangeable. Furthermore, comprehensive, evidence-based efforts to shape children's social and emotional development early on in life have been shown to provide clear social, emotional, behavioral, and academic advantages (Durlak et al., 2011). It is for the reasons outlined in this section that we encourage individuals—particularly caregivers and educators—to adopt and promulgate an optimistic view of the potential for developing emotional intelligence. Promising avenues for developing these skills in the home, at school, and by leveraging new technologies are where we now turn.

Parents' Socialization of Children's Emotional Skills

Mayer and Salovey (1997) wrote that "emotional skills begin in the home with good parent–child interaction" (p. 19). Of course, children may be socialized by caregivers other than parents, but for ease of language we use the term "parents" for socializers in the home as opposed to those in the education system. Parents teach children (whether consciously or not) how to behave and interact around emotions through (1) their reactions to their children's expressions of emotion, (2) their discussion of emotions, and (3) their own emotional expressiveness (Eisenberg, Cumberland, & Spinrad, 1998). Children's observation of these modeled behaviors is a key component of emotional development (Bandura, 1977; Morris, Silk, Steinberg, Myers, & Robinson, 2007; Parke, 1994). Families' emotional climate—including the marital relationship and parenting styles—also has an impact on children's emotion socialization and, in particular, emotion regulation ability (Morris et al., 2007). The emotion socialization process is bidirectional; families influence the child's socialization process and the child (via gender, temperament, and other factors) influences the family's actions and responses related to emotion socialization (Eisenberg et al., 1998; Morris et al., 2007).

One prominent theoretical framework of emotion socialization in the home posits that parents' philosophies of emotion fall into two categories: emotion dismissing and emotion coaching (Gottman, 2011; Gottman, Katz, & Hooven, 1996; Katz, Maliken, & Stettler, 2012). According to this theory, called parental meta-emotion philosophy, parents with a dismissing philosophy tend to minimize or deny their children's negative emotions. In contrast, parents who coach emotions are more likely to engage in five behaviors: (1) being aware of children's emotions, even at a low intensity; (2) taking the perspective that emotional expression indicates an opportunity to connect and teach; (3) communicating to children that their emotions are acceptable; (4) helping children label their emotions; and (5) setting appropriate boundaries and/or facilitating emotional problem solving. While this theory is not explicitly based in the ability model of emotional intelligence, it does map on to three of the four branches: perceiving, understanding, and managing emotions. Parents' emotion philosophies appear to predict actual parenting behaviors as well as children's physiological ability to regulate emotions (Gottman et al., 1996). A recent review of the literature related to this theory found that parents' emotion socialization style was related to important child outcomes, including peer relationships and psychosocial adjustment (Katz et al., 2012).

Two interventions based in parental meta-emotion philosophy are Tuning in to Kids (Havighurst, Wilson, Harley, & Prior, 2009) and Tuning in to Toddlers (Lauw, Havighurst, Wilson, Harley, & Northam, 2014). Both programs aim to strengthen parent–child emotional connections by teaching the five-step model of emotion coaching described above via videos; group exercises, such as role plays and discussions; and home activities. A randomized control study of Tuning in to Kids found that after six group sessions and two booster sessions, parents in the intervention group showed increased emotion awareness and regulation, more emotion labeling and coaching behavior, and less emotion dismissing behavior. Children of parents in the intervention group showed increased emotion knowledge (Havighurst, Wilson, Harley, Prior, & Kehoe, 2010). A pilot study of Tuning in to Toddlers revealed that after attending six sessions, parents were rated by themselves and by observers as using more emotion coaching behavior, less emotion dismissing behavior, and a higher level of emotion talk (Lauw et al., 2014). Future evaluations of the program designed for toddlers would be improved by the use of a control group.

As interventions with a basis in this model become more fully developed and available, additional research should be done to determine their impact on actual parenting behavior and child.
outcomes. Parent training programs and interventions more closely based in the four-branch model of emotional intelligence should also be developed, keeping in mind that it is critical to ensure that emotion socializers themselves are proficient in the perception, use, understanding, and managing of emotions before they can successfully cultivate emotional intelligence in children. This is true for parents or other caregivers in the home, and for teachers in the classroom, where we turn next.

**Teaching Emotional Intelligence in the Classroom**

Over the past couple of decades, it has become increasingly clear that emotions are central to students’ academic, personal, and social success both in and outside of the classroom. In 1994 at a conference hosted by the Fetzer Institute, the term “social and emotional learning” (SEL) was introduced to describe efforts to promote skill building among youth that support positive relationships and well-being throughout life (Elbertson, Brackett, & Weissberg, 2010). The Collaborative for Academic, Social, and Emotional Learning (CASEL) was formed soon after with the mission of integrating SEL into existing academic curricula from early childhood through high school. With hundreds of programs now available that claim to teach social and emotional competencies to students, standards for what constitutes effective SEL programming have been adjusted throughout the years (e.g., Durlak et al., 2011; Elias et al., 1997; Payton et al., 2000). CASEL (www.casel.org) has begun to identify and endorse school-based SEL programs (“CASEL SElect” programs; see CASEL, 2012) that meet rigorous standards, including offering quality training and implementation support and being well designed, evidence based, and universal (i.e., implemented across the entire student body and not just select groups of at-risk students).

The positive impact of teaching SEL in schools using high-quality programming has been established empirically. A meta-analysis including over 200 studies of school-based SEL programs found that teachers delivered them successfully and that they significantly enhanced students’ social and emotional skills, behavior, attitudes toward school, and academic performance (Durlak et al., 2011). The authors of the meta-analysis identified four components that are critical to successful SEL programs: they should be sequenced, active, focused, and explicit (SAFE; Durlak et al., 2011). Two SEL programs that are rooted in emotion science and meet these SAFE standards are RULER (an acronym for the five key skills of emotional intelligence: recognizing, understanding, labeling, expressing, and regulating emotion), and the promoting alternative thinking strategies (PATHS) curriculum. Here, we overview these programs briefly.

RULER is a schoolwide approach to developing children’s emotional intelligence from prekindergarten through high school that was developed at the Yale Center for Emotional Intelligence (Brackett, Kremenitzer, et al., 2011). RULER is grounded in the ability model of emotional intelligence and is designed to enhance emotional skills and improve interactions between and among school leaders, teachers, students, and families. RULER supports educators in using new teaching practices to help children learn about emotions and refine their ability to be self-aware, acquire the language of emotions, and practice emotion regulation skills. For instance, using RULER’s Mood Meter, teachers and students develop the skills of emotional intelligence by checking in with and labeling their emotions on a regular basis, examining and understanding the likely causes and consequences of those emotions, and expressing and regulating emotions using effective strategies. In addition to tools that foster empathy, emotional awareness, and effective emotion regulation, classrooms use RULER’s Feeling Words Curriculum to support students’ attainment of a large “emotions vocabulary” that is contextualized and integrated into routine academic instruction via shared personal stories, discussions of world events, and developmentally appropriate storybooks and literature.

Evidence is accumulating for RULER’s positive impact. One quasi-experiment showed that students in middle school classrooms integrating RULER for one academic year had higher year-end grades and higher teacher ratings of social and emotional competence compared with students in the control group (Brackett et al., 2012). A randomized control trial in 62 schools found that classrooms randomly assigned to the RULER intervention had higher degrees of warmth and connectedness between teachers and students, more indicators of student autonomy and leadership, less bullying-related behaviors, and a greater focus on students’ interests and motivations, as rated by independent observers of the classrooms (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013). These first-year shifts in the emotional qualities of classrooms were followed by other improvements: compared with classrooms randomized to the con-
trol, business-as-usual condition, independent observers rated classrooms in the RULER condition as exhibiting greater emotional support, better classroom organization, and better instructional support at the end of the second year (Hagelskamp, Brackett, Rivers, & Salovey, 2013). Higher emotional intelligence and more advanced social problem-solving skills were associated with greater fidelity of program implementation (Reyes, Brack-ett, Rivers, Elberston, & Salovey, 2012).

The PATHS curriculum (Kusche & Greenberg, 1994) was designed to promote social and emotional development among students who are deaf or hearing impaired (Greenberg & Kusché, 1993) but has since expanded to include students in general education from prekindergarten through sixth grade (see www.pathtraining.com). PATHS has its theoretical basis in the affective–behavioral–cognitive–dynamic (ABCD) model of development (Greenberg & Kusché, 1993), which recognizes that children's emotional experience precedes their cognitive and linguistic development, and posits that these affective, cognitive, linguistic, and behavioral systems must be integrated strategically as children develop in order to nurture social and emotional competence. PATHS promotes emotional awareness, understanding, and regulation to help children choose adaptive approaches to interpersonal challenges. PATHS teachers deliver developmentally appropriate lessons at least two times per week throughout the school year. The lessons allow children to practice emotion regulation strategies, to label emotions, and to problem solve about their emotional experiences. PATHS has been shown to decrease students' externalizing and internalizing behaviors and depression, as well as to increase students' emotion recognition and understanding skills, teacher ratings of students' prosocial behavior, and students' social problem-solving skills (Domitrovich, Cortes, & Greenberg, 2007; Greenberg & Kusché, 1998; Greenberg, Kusché, Cook, & Quamma, 1995; Kam, Greenberg, & Kusché, 2004).

Because SEL, like emotional intelligence, has been defined in many ways, standardizing SEL efforts could help to illuminate their impact and moderators (Durlak et al., 2011). SEL is not synonymous with emotional intelligence, and so care should be taken in interpreting outcomes of SEL interventions as evidence for the effects of teaching emotional intelligence. Relatedly, there is currently no comprehensive measure of ability emotional intelligence for children 9 years and younger. This presents a major challenge to researchers' ability to evaluate home- and school-based efforts to enhance emotional intelligence in young children, even though individual measures of the specific subskills that make up emotional intelligence exist for this age range (e.g., the emotion perception “box task,” which is not reliant on reading or verbal skills; Russell & Widen, 2002). The development of an omnibus measure-of-ability emotional intelligence in young children would constitute a groundbreaking contribution to the field; it would allow for more thorough and even evaluation of intervention attempts, and would inform our understanding of the timing and nature of the developmental milestones of emotional skill acquisition.

**Leveraging Technology to Enhance Emotional Intelligence**

Across domains (i.e., homes, schools, and even professional organizations), technology may pave new pathways to developing emotional skills, particularly as it becomes increasingly accessible, portable, and sophisticated. Rosalind Picard and colleagues, working in the Affective Computing Research Group at MIT, use biosensors and long-term measurements of autonomic nervous system function to increase self-awareness and improve emotion regulation in everyday life via a wearable device (“iCalm”; Hedman et al., 2009). RULER's Mood Meter, described above, is available as an “app” that can be downloaded to mobile devices to allow (and remind) users of all ages to label and track their emotions over time to discover their emotional tendencies and triggers. Going a step further, virtual avatars and robots are increasingly employed to assess users' emotions and aid in emotion regulation (Klein, Moon, & Picard, 2002; Picard & Klein, 2002; Ring, Barry, Totzke, & Bickmore, 2013; Wada & Shibata, 2007). For example, one study found that virtual agents (avatars) that actively engaged isolated older adults and assessed their emotional states succeeded in reducing the users' feelings of loneliness (Ring et al., 2013). This type of interaction has the added benefit of modeling to adults that some unpleasant emotions may be reduced by engaging in social contact. In a similar vein, therapeutic robotic seals introduced into geriatric care settings were found to increase socialization and reduce stress among users, as assessed by video observations and the analysis of hormone levels, respectively (Wada & Shibata, 2007).

The technologies described here could theoretically be incorporated into settings such as schools using programs like RULER to bolster skill-build-
ing efforts, and may be particularly helpful for reaching individuals who are less comfortable sharing their emotions via traditional conversation and group discussion. Teachers could prompt students to interact with a social robot or avatar placed in the classroom, out of earshot of other students. The agent could prompt students to indicate how pleasant or unpleasant they feel and how high or low their energy is, and then could help students to label their emotions and determine what activities might benefit from them. The agent could also recommend strategies for reducing negative emotions or maintaining positive ones. A similar, adult-centered interface could be used in workplaces in relatively private places to encourage self-awareness and reflection. Data could be shared immediately with individual users or could be collected and considered in the aggregate to determine general emotional states and whether particular days of the week or specific events generally trigger more unpleasant or pleasant emotions. Results could guide shifts in schedules or activities and could inform more individualized emotional intelligence interventions for specific settings and groups.

Limitations and Future Directions for Emotional Intelligence

Even after 25 years of research, much about emotional intelligence remains to be learned and refined. Perhaps most pressing to address, the current approach to measuring the construct is far from perfect. As discussed above, there is some debate regarding the fitness of the four-factor structure of the MSCEIT, and there should be continued attempts to replicate the proposed structure or to present and test alternatives. The challenges of measuring the real-time application of emotional knowledge must also be addressed with innovative approaches—for example, by finding cost- and time-effective ways to induce emotions and assess regulation strategies as they are actually employed. The fact that the majority of ability emotional intelligence research uses the MSCEIT increases the likelihood that test effects have become confounded with construct effects (MacCann & Roberts, 2008). Researchers have developed new measurement approaches in an effort to address this concern (e.g., the Situational Test of Emotional Understanding and the Situational Test of Emotion Management; MacCann & Roberts, 2008), and these merit further exploration. Finally, there is a need for a comprehensive performance assessment of emotional intelligence for children under the age of 10. The success of such a measure will depend on its sensitivity to developmental milestones (cognitive, emotional, and linguistic) across childhood.

Other considerations for future research have to do with the generalizability of conclusions about emotional intelligence across genders and cultures. It has been established meta-analytically that females score significantly higher on performance measures of emotional intelligence than do males (Joseph & Newman, 2010). It would be interesting to examine whether interventions are differentially effective across sexes, and whether skill-development efforts could or should be tailored to gender differences to help close this gap. In terms of cultural context, there is reason to believe that global variance in emotion display rules and other cultural norms around emotions would impact the fit of the construct and related scales across cultural groups. It is only recently that cross-cultural investigations of ability emotional intelligence have been undertaken, but there is limited evidence that the MSCEIT is generalizable across Eastern (Pakistani) and Western (French) student samples (Karim & Weisz, 2010). Thus, the question of cultural generalizability begs further exploration.

Finally, while it is natural to frame emotional intelligence in terms of its adaptive and positive consequences for individuals and society, some researchers have also begun to explore the construct’s relationship to social deviance and Machiavellianism—in other words, its “dark side” (Austin, Farrelly, Black, & Moore, 2007; Côté, DeCelles, McCarthy, Van Kleef, & Hideg, 2011; Winkel, Wyland, Shaffer, & Clason, 2011). Are individuals who are better at perceiving and regulating emotions in themselves and others also better able to manipulate others’ emotions toward selfish or even immoral ends? While empirical evidence is limited and mixed, there is some indication that higher emotional intelligence may be related to deviant behavior in some contexts (Winkel et al., 2011). Future research could endeavor to identify the conditions that make the “misuse” of emotional intelligence less likely.

Conclusion

Emotions permeate every aspect of our lives. They provide us invaluable information about our environment and the people in it, and they become adaptive when they are attended to and leveraged with skill. For the past quarter-century, emotion-
al intelligence research has helped to illuminate what it means to apply skill to our emotional experience. While multiple perspectives still abound on what emotional intelligence is, what it should be expected to predict, and how it should be measured, a picture of the construct as a set of specific mental abilities best measured via performance assessments is beginning to emerge as the accepted standard. The exact extent to which the enhancement of these abilities in individuals is possible remains to be seen, but it is clear that well-designed efforts to enhance emotional intelligence show promise for improving functioning and well-being in many domains.

ACKNOWLEDGMENTS

The writing of this chapter was supported in part by grants awarded to Marc A. Brackett and Susan E. Rivers from the William T. Grant Foundation (No. 180276), Einhorn Family Charitable Trust, NoVo Foundation, and SRA International, Inc. We acknowledge and are grateful for the contributions of Elise Bausseron, Lance Linke, Catalina Torrente, and Sherri Widen in preparation of this chapter.

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