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CHAPTER

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A Field Guide to Emotional Intelligence

The field of emotional intelligence (EI) began as a topic of study within academic psychology. From there, educators, psychiatrists, human resource specialists, and others became interested, and the field grew. Today, popular magazines and articles report on the field's activities, while rigorous scholarly journals publish articles in the area. The diversity of those interested in the field has led to a comparable diversity of definitions used for EI, the measures involved, and the claims for its significance. In fact, a person encountering the EI field for the first time may wonder how to make sense of it all. To provide a field guide, this chapter will briefly discuss five central questions. First, "How did the field begin (and how was it popularized)?" This question is central to understanding the diversity of constituencies and definitions employed. In fact, the field is so diverse and has so many competing interests that the second question, "Which EI are we talking about?" is critical. A closely allied question is, "How is EI best measured?" because which EI we are talking about will direct our measurement approach. The last two questions concern the significance of the area. Many astonishing claims have been made for EI. The question, "Is EI the best predictor of success in life?" addresses such claims and asks whether they could be true. The last question, "Why is EI important?" is in many ways a rejoinder to the popular claims. That is, if those claims are untrue, does EI still matter?

The discussion of the above questions will be focused on upholding reasonable conceptual standards that make a science worth studying. So, throughout the chapter I will make a concerted effort to discuss the field

in a critical, careful fashion. In particular, I will advocate for such matters as (a) a history of the field based on a reasonable understanding of the areas that led up to it, (b) terminology that is consistent with existing research in psychology, (c) measures that are valid, and (d) realism concerning predictive claims. People interpret such things as consistency, validity, and realism differently, of course, and that is where the more serious and interesting controversies will arise.

How Did the Field Begin (and How Was It Popularized)?

Philosophical considerations of the relations between thought and emotion in Western culture go back more than 2000 years (see [41] for an overview). Here, however, I concentrate on activities in psychology from 1900 forward, using a fivefold division of years: (1) from 1900 to 1969, during which the psychological study of intelligence and emotions were relatively separate; (2) from 1970 to 1989, when psychologists focused on how emotions and thought influenced each other; (3) from 1990 to 1993, which marked the emergence of EI as a topic of study; (4) from 1994 to 1997, when the concept was popularized, and (5) the present era of clarifying research. Table 1.1 provides an overview of the five time periods.

The period from 1900–1969 was an era that treated research in intelligence and in emotion as separate areas. Within the area of intelligence, the first tests were developed, explored, and understood. Intelligence became viewed as involving the capacity to carry out valid, abstract reasoning, and various biological explanations of intelligence were investigated. Within emotions research, early investigators focused on a chicken-and-egg problem: Would a person who encountered a stressful situation such as meeting a bear in the woods first respond physiologically (e.g., with an increased heart rate) and then feel emotion, or was the emotional feeling primary, followed by physiological changes. A second problem focused on whether emotions held universal meaning, or whether they were culturally determined and idiosyncratic. Darwin had argued that emotions evolved across animal species; this was met with skepticism by social psychologists who believed that emotions were manifested differently in different cultures (see [15] for a review).

The second era, 1970–1989, was a time when several precursors of EI were put into place. Whereas intelligence and emotion previously had been considered separate fields, they were now integrated in the new field of "cognition and affect" (i.e., thought and emotion). Within this

TABLE 1.1. The emergence of the emotional intelligence concept: An overview

1900–1969: *Intelligence and Emotions as Separate, Narrow Fields*	*Intelligence research:* The realm of psychological testing for intelligence was developed during this period and a sophisticated technology of intelligence tests arose (see [18] for a review). *Emotions research:* In the separate field of emotion, debate centered on the chicken-and-egg problem of which happens first: physiological reaction, or emotion. In other areas of work, Darwin had argued for the heritability and evolution of emotional responses, but during this time, emotion was often viewed as culturally determined, largely a product of pathology, and idiosyncratic (see [15] for a review of Darwin's work). *The search for social intelligence:* As intelligence testing emerged, the focus was on verbal and propositional intelligence. A number of psychologists sought to identify a social intelligence as well; however, efforts in this direction were apparently discouraging and conceptions of intelligence stayed exclusively cognitive.
1970–1989: *Precursors to Emotional Intelligence*	The precursors to "emotional intelligence" were put into place in this two-decade period. The field of *cognition and affect* emerged to examine how emotions interacted with thoughts. It was suggested that depressed people might be more realistic and accurate than others and that mood swings might enhance creativity [28]. The field of *nonverbal communication* developed scales devoted to perception of nonverbal information—some of it emotional—in faces and posture [6]. Those in the field of *artificial intelligence* examined how computers might understand and reason about the emotional aspects of stories [14]. Gardner's new theory of *multiple intelligences* described an "intrapersonal intelligence," which involves, among many other things, the capacity to perceive and symbolize emotions. Empirical work on *social intelligence* found that it divided into social skills, empathy skills, prosocial attitudes, social anxiety, and emotionality (sensitivity) [27]. Brain research began to separate out connections between emotion and cognition (e.g., [50]). Occasional use of the term "emotional intelligence" appeared (e.g., [52, pp. 103, 107]).
1990–1993: *The Emergence of Emotional Intelligence*	In the four-year period beginning in the 1990s, Mayer and Salovey published a series of articles on emotional intelligence. The article, "Emotional Intelligence" provided a first review of areas potentially relevant to an emotional intelligence. At the same time, a demonstration study, including the first ability measure of emotional intelligence under that name was published. An editorial in the journal *Intelligence* argued for the existence of an emotional intelligence as an actual intelligence. (See [36], [38]; [45]). During this time, further foundations of emotional intelligence were developed, particularly in the brain sciences (e.g., [12]).

(*Continued*)

TABLE 1.1. The emergence of the emotional intelligence concept: An overview

1994–1997: *The Popularization and Broadening*	Goleman, a science journalist, published the popular book, *Emotional Intelligence*, loosely modeled on the academic writings in the area (see above). The book became a worldwide best-seller and was widely copied. *Time Magazine* used the term "EQ" on its cover. A number of personality scales were published under the name of emotional intelligence. (See [2], [9], [22].)
1998–Present: *Research on and Institutionalization of Emotional Intelligence*	A number of refinements to the concept of emotional intelligence take place, along with the introduction of new measures of the concept and the first peer-reviewed research articles on the subject. (See [2], [13], [34].)

area, researchers sought lawful rules of what emotions meant and when they arose. Earlier philosophical writings concerning the logic of emotions were rediscovered. Researchers reasserted Darwin's idea that emotions had evolved across species, and that emotions were universal expressions of internal feelings about relationships. The influence of emotion on thought was examined in depressed individuals, as well as those suffering from bipolar disorder (manic depression). Researchers in artificial intelligence became interested in whether expert systems could be developed in the form of computer programs that could understand the feelings of story characters. To do this required drawing on some of the same basic laws of emotions and their meanings as were studied in cognition and affect. There was a small but definite interchange among researchers in artificial intelligence and those studying cognition and affect (see [41] for an overview).

Although the term "emotional intelligence" was used sporadically during this time, it was never defined or described in any definite way—probably because the foundations of the concept were still being developed. Such definitions that arose were precursor definitions, in the sense that they either referred explicitly to EI but were unclear, or were clear but failed to refer to emotional intelligence. For example, an unpublished dissertation by Dr. Wayne Payne distinguished EI from more purely cognitive forms of intelligence as follows:

> The facts, meanings, truths, relationships, etc., [of emotional intelligence] are those that exist in the realm of emotion. Thus, feelings are facts. . . . The meanings are *felt* meanings; the truths are emotional truths; the relationships are interpersonal relationships. And the problems we solve are emotional problems, that is, problems in the way we feel. [44, p. 165]

This is partway to an EI. For example, "the problems we solve are . . . problems in the way we feel" makes sense. Still, at this point much in this definition seems more rhetorical than clear. For example, the concept of "*felt* meanings" or the statement that "feelings are facts" are not explained in the text, and make sense, at best, only looking back from a better-developed field.

Another sort of precursor definition was clear but did not refer to an EI. For example, Howard Gardner wrote of intrapersonal intelligence, that the "capacity at work here is *access to one's own feeling life*—one's range of affects or emotions" [20, p. 239]. For Gardner, however, this access to feeling life did not constitute EI, but rather was part of a more general self and social knowing that were intertwined with one another [20, 240 ff.]. Gardner continues to view any separate EI as an inappropriate application of the intelligence concept [21]. A number of other areas developed precursors to EI. For example, in the literature on child development, a concept of emotional giftedness (also termed "emotional overexcitability") was proposed, which, in some ways, also anticipated the concept of EI [11, p 116].

There were several things left to be done in the late 1980s before the EI field could properly emerge. One was to draw together the various strands of research that had been performed and to recognize that they pointed to an (until then) overlooked human capacity. Another was to define the term "emotional intelligence" in an explicit, clear fashion and to connect the term to the relevant research lines that supported it. Yet another was to demonstrate some empirical evidence for the concept. In 1990, my colleague Dr. Peter Salovey and I drew together much of the above research and developed a formal theory of EI and a coordinated measurement demonstration. To do so, we examined evidence from intelligence and emotions research, as well as research in aesthetics, artificial intelligence, brain research, and clinical psychology. We applied the term "emotional intelligence," to the human capacity we believed existed and reported a study employing the first empirical test designed explicitly to measure the concept [36, 45]. In a follow-up editorial in 1993, in the journal *Intelligence*, we argued that EI was a basic, overlooked intelligence that held the promise to meet a rigorous definition of intelligence. It called for serious study in the area [38]. For these reasons, the third era, 1990 to 1993, is generally regarded as the demarcation point for the emergence of the study of EI (e.g., [16, 22], p. 43; Sternberg, this volume).

The fourth era (1994 to 1997) marked a rather unusual turn of events as the field became popularized and broadened. It was during this time that the term "emotional intelligence" was popularized in a best-selling book by a science journalist, Daniel Goleman [22]. He and others seized upon the term as a banner for a great deal of research and public policy.

In the book and the popular accounts that accompanied it, EI was said to be, possibly, the best predictor of success in life, to be accessible by virtually anyone, and to be similar to "character." The book's combination of lively writing, extraordinary claims for the concept, and loose description of the concept created an explosion of activity in a new, and now increasingly fuzzily defined, area. Tests were sold as measures of EI that were not originally defined that way, associations of educators and business people were created to teach and consult on EI—defined as nearly anything having to do with character—and many other popular books attempted to ride the coattails of the success of the 1995 popularization.

We are now in the current period, extending roughly from 1998 to the present. During this time, theoretical and research refinements in the area have taken place, new measures of EI have been developed, and serious research is taking place within the field, of which this volume is one example. The field is complicated by the fact that it possesses both scientific and popular aspects. These often-conflicting constituencies have led to definitions of EI that verge on the chaotic. This is why the next sections address the question of which EI we are talking about.

Which Emotional Intelligence Are We Talking About?

Definitions

Nowadays we speak of many different kinds of intelligences. In each case, intelligence refers to the capacity to perceive, understand, and use symbols; that is, to reason abstractly. For example, we talk of verbal intelligence, spatial intelligence, social intelligence, and other interrelated intelligences. The modifier—verbal, spatial, or social—specifies the intelligence and what it refers to. So, verbal intelligence denotes the capacity to understand and use words. Spatial intelligence denotes the capacity to understand and use objects in space. Social intelligence denotes the capacity to understand, and use social information. Within psychology, EI belongs to this same group of interrelated intelligences and denotes the capacity to understand, and use emotional information. In addition, EI plausibly reflects the emotion system's capacity to enhance intelligence.

The initial ability definitions of EI arose in 1990 in working with Salovey. These early definitions used a two-part approach, speaking first of the general processing of emotional information and second specifying the skills involved in such processing. An early version of our definition follows:

> A type of emotional information processing that includes accurate appraisal of emotions in oneself and others, appropriate expression of emotion, and adaptive regulation of emotion in such a way as to enhance living. [36, p. 773]

By 1999, my colleagues and I had expanded on this definition a bit, keeping its two-part form:

> Emotional intelligence refers to an ability to recognize the meanings of emotions and their relationships, and to reason and problem-solve on the basis of them. Emotional intelligence is involved in the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them. [34, p. 267]

During the popularization of EI, its definition was changed quite substantially. In Goleman's [22, p. 43) treatment of our definition [22, p. 189], EI became the five areas of

> knowing one's emotions . . . managing emotions . . . motivating oneself . . . recognizing emotions in others . . . [and] handling relationships. [22, p. xii]

With this small change, the emphasis was shifted toward motivation (motivating oneself) and social relationships generally speaking (handling relationships). Ability at understanding and processing emotion was mixed in with some other characteristics. A different mixed model is presented in a manual describing a test under the name of an emotional quotient:

> *an array of noncognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures.* [2, p. 14]

Thus there emerged two lines of definitions: (a) the original approach that defined EI as an intelligence involving emotion and (b) the popularized, mixed approaches that blended EI with other skills and characteristics such as well-being, motivation, and capacities to engage in relationships.

Component Abilities and Skills

The apparently small changes in the wording of the definitions above become magnified when one examines more specific lists of characteristics said to define EI. Consider the three models of emotional intelligence presented in Table 1.2. The ability theory (updated in 1997) divides EI into four areas. The first area includes ability at emotional perception and expression, including the accurate assessment of emotions in the self and others. The second area involves the ability to use emotions to facilitate thought, including the accurate association of emotions to other sensa-

TABLE 1.2. Characteristics said to make up emotional intelligence

Ability approach		Mixed approach			
Mayer, Caruso, & Salovey [34] (revised from Salovey & Mayer [45])		**Bar-On [2]**		**Goleman [23] (revised from Goleman [22] and Salovey & Mayer [45])**	
(1) The ability to perceive emotions accurately	Accurately perceiving emotions in faces, music, and designs	(1) Intra-personal EQ	Emotional self-awareness, Assertiveness, self-regard, Self-actualization, Independence	(1) Self-awareness	Emotional awareness Accurate self-assessment Self-confidence
(2) The ability to use emotions to facilitate thought	Accurately relating emotions to other basic sensations (e.g., colors, textures) Using emotions to shift perspectives	(2) Inter-personal EQ	Empathy, Interpersonal relationships, Social responsibility	(2) Self-regulation	Self-control Trustworthiness Conscientiousness Adaptability Innovation
(3) The ability to understand emotions and their meanings	Ability to analyze emotions in parts Ability to understand likely transitions from one feeling to another Ability to understand [illegible]	(3) Adaptability EQ	Problem solving, Reality testing	(3) Motivation	Achievement drive Commitment Initiative Optimism
(4) The ability to manage emotions	Ability to manage emotions in the self Ability to manage emotions in others	(4) Stress management EQ	Stress tolerance, Impulse control	(4) Empathy	Understanding others Developing others Service orientation Leveraging diversity Political awareness
		(5) General mood EQ	Happiness Optimism	(5) Social Skills	Influence Communication Conflict management Leadership Change catalyst Building bonds Collaboration and cooperation Team capabilities

tions, and the ability to use emotions to enhance thought. The third area, understanding emotions, involves analyzing emotions into parts, understanding likely transitions from one feeling to another, and understanding complex feelings in social situations. Finally, the fourth area, managing emotions, involves the ability to manage feelings in oneself and others.

The mixed definition that defines EI as noncognitive competencies [2] is far broader. It starts with five categories: (1) intrapersonal, which includes such qualities as self-actualization, independence, and emotional self-awareness; (2) interpersonal, which includes such qualities as empathy and social responsibility; (3) adaptability, which includes such qualities as problem solving and reality testing; (4) stress management, which involves impulse control and stress tolerance; and (5) general mood, which includes happiness and optimism.

This can be contrasted with the five-part popular elaboration of EI proposed by Goleman. Updated to its 1998 areas, the (1) self-awareness area includes such attributes as emotional awareness and self-confidence; (2) self-regulation includes self-control, trustworthiness, and innovation; (3) motivation includes achievement drive, initiative, and optimism; (4) empathy includes such attributes as understanding others and political awareness; and (5) social skills involve such qualities as influence, conflict management, and team capabilities.

Big Divisions of Personality Inform What EI Ought to Denote

Recall that the term EI was said to most naturally describe the ability to carry out reasoning in regard to emotions, and to include emotion's enhancement of thought. These ideas are central to the ability model; they are, however, oddly de-emphasized or missing from the mixed, broadened models just reviewed. For example, why might motivation be included within a theory of EI? Motivation is often considered to be a sphere of mental functioning separate from emotions and cognition. Are persistence, optimism, political savvy, and the like parts of EI—and if not, what are they?

Personality psychology is the relevant discipline to decide, for it studies hundreds of parts of the mind. And indeed, virtually all personality parts, from EI to extroversion, can be systematically organized and classified according to their structures and functions [7], [29], [30], [42]. The above classification systems can be approximated with reasonable precision using a simpler approach, which I will refer to here as the systems set of Primary Parts. This approach divides personality into four primary parts, in a sort of updated version of the id, ego, and superego. These four parts can then be divided and subdivided until one arrives at all the commonly discussed contemporary parts of personality according to those compre-

TABLE 1.3. The systems set division of personality[a]

Major divisions or "agents" of personality	Traits describing the divisions
Energy Lattice: Represents the coherent cooperation of the lower-level motivational and emotional systems of personality. It consists of a person's basic urges and emotional responses to those basic urges.	* Motives Need for achievement Need for affiliation Need for power *Motivational levels Persistence Zeal *Emotions Happiness Anger Sadness/depression *Emotional Style Emotionality—Emotional stability
Knowledge Works: Represents the information store of personality: feelings and thoughts about the self and the world, and operates on that knowledge.	*Abilities and achievement Verbal intelligence Spatial intelligence Emotional intelligence *Cognitive styles Optimism—Pessimism Detail orientation
Role Player: Responsible for expressing and projecting internal personality into the world. It plans important social activities and roles and carries those out.	*Expressive Styles Extroversion—Introversion Warmth—Coldness *Expressive Skills Politeness Good eye contact Role-playing ability
Conscious Executive: The seat of consciousness contains both consciousness and the conscious will (self-control). It oversees personality and contributes high-level, creative thought when necessary.	*Consciousness Aware—Unaware Self-conscious—unself-conscious *Will High–low willpower

[a]Modifed and developed from the Relational Classification System for the Parts of Personality [29].

hensive classification systems [31]. By doing this, one can see where the proposed parts of EI, such as persistence, optimism, political savvy, and self-control, fall within the personality system.

Briefly, the four parts are as follows. The **energy lattice** includes an individual's motives and emotions, and provides a general direction to

the individual in terms of doing things. The **knowledge works** contains information about the self and the world required for the individual to function, including diverse areas of knowledge such as one's life history, mathematical knowledge (e.g., how to add), and social and emotional knowledge. The third, **role player**, forms and enacts plans about how to interact socially, such as leading (or following) others, or being sympathetic, or making a good impression. Finally, there is an **executive consciousness**, which contains a person's conscious awareness, consciously managing and regulating the other parts of personality.

Now consider persistence and zeal, optimism, political savvy, and self-control, all of which have been said by popularizers to make up EI. Persistence and zeal are properties that primarily describe the energy lattice and its capacity to direct the individual in the face of obstacles. A second proposed part of EI is "optimism"—a way of envisioning the world that is embedded in an individual's knowledge works. Third, consider political savvy: Can a person publicly convey a supportive attitude toward others and take bold stands on issues? Can he or she avoid alienating those who disagree? This is surely a skill associated with the individual's role player. Finally, self-control involves the power of the conscious executive: Can the person change to become a better person? Self-control is essential to getting along in life.

The fact that these four attributes pertain to four different parts of personality suggest that they are rather unrelated to each other. The popularizers' additions (persistence, optimism, political savvy, and self-control) seem to have little to do specifically with emotions or intelligence. Perhaps they share the common fact that certain people desire to possess those qualities. Other than that, there is little or nothing to suggest that they form a unitary whole. Indeed, they may conflict with one another. Persistence toward a goal may undercut political savvy; optimism may promote a *lack* of self-control if a person thinks, "Oh, I won't get caught" or "It won't hurt."

Contrast that with EI conceived of as an ability. This EI is focused on the knowledge works and its interactions with the emotions of the energy lattice. In terms of these four primary parts, the knowledge works perceives emotion by monitoring and feeling the emotion in the energy lattice. Sometimes, emotion from the energy lattice activates (e.g., energizes) concepts in the knowledge works and reprioritizes life endeavors in a smart way. For example, a serious illness might remind a person of what is truly important in life. Additional learning occurs as the role player experiments with various emotion-laden actions. Gradually, the knowledge works builds up expert knowledge about emotions that can become quite accurate. Finally, through attempts at self-management (from the conscious executive), the best emotional reactions for the individual can

be favored and encouraged. This conception of EI is unitary because it is centered in the knowledge works. And because, although it involves the other parts as well, does so only insofar as those other parts contribute to the intelligent interaction of emotion and thought. Its unifying theme is that emotion enhances thoughts and the person is intelligent about emotion.

The difference between the ability-based and mixed-list approaches to EI, therefore, are very substantial. Mixed-list approaches are of potential value in that they are studying multiple aspects of personality at once. They are not, however, particularly related to any new concept of EI, or even to emotion or intelligence. Indeed, the decades-old California Psychological Inventory (CPI) [26] is composed of a number of individual scales that sound like some of today's mixed-list emotional intelligence tests: self-acceptance, empathy, responsibility, socialization, good impression, well-being, tolerance, intellectual efficiency, flexibility, and self-control. (The CPI was originally designed to measure folk conceptions of mental health).

Seemingly in response to such issues, some mixed-concept researchers acknowledge that EI—as they see it—is "not at all new" [3, p. xi]. Perhaps more germane is that such scales of mixed qualities largely duplicate personality research under a different name. A careful connection of such mixed-list approaches to the personality field would make the tests easier to interpret and understand because of the considerable overlap between new scales and old. By contrast, EI as ability does have promise as one among a set of new intelligences, including practical intelligence and newly revised versions of social intelligence (e.g., 49).

There is one relatively new area in these long lists of mixed traits. It involves measures of the meta-experience of mood. Meta-experience refers to reflections on mood such as, "I know how I'm feeling," and "I clearly understand my mood." Scales under the name meta-experience, meta-mood, and meta-emotion, as well as similar concepts from the field of alexithymia (inability to use emotion words), were one of many precursors of EI (e.g., [37], [39], [46, p. 147], [46]). These scales measure a reflective, conscious experience of emotion that appears important to know about. Still, as my colleagues and I wrote of one of our own scales of meta-experience, "we have little interest in claiming that the measure discussed here is some kind of emotional intelligence test" [46]. That would seem to be over-claiming what they really do measure—a reflective, conscious experience of mood.

If mixed models of personality are little more than haphazard composites of personality traits, it seems worth returning to the more focused ability conception. Still, there are arguments against the ability approach. The first is that it may be more exciting (and easier) to gather together the group of positive personality qualities suggested by popularizers and use them

to predict success at work or at home. There is nothing wrong with assessing such positive qualities and combining them. Still, if a researcher adds all those positive attributes together, he or she will not likely come up with a simple, powerful predictor of success. Prediction studies of important criteria, such as getting good grades in school, being happily married, or landing a good job, indicate that each type of success is a product of qualities unique to that area. These studies also regularly show that qualities that generally seem good can interfere with success in a specific area.

The problem becomes that what is "positive" depends on the how and when it is applied. The optimist's supportive comment, "Don't worry, you'll get over it," may work for some individuals. It could, however, just as easily raise the specter of death for a seriously ill person, seem cruel to the man who wants to honor his recently-deceased wife, or dismissive to a spouse who feels she isn't being heard seriously. Conversely, the seemingly negative expression of anger can have many positive consequences when used to set limits for children, warn complacent students they must work harder, and indicate that an employee has to get organized. When, in the dark days of World War II, Winston Churchill offered the British people, "Blood, sweat, and tears," he was not nice and it was not optimistic, but it was arguably quite emotionally intelligent. It is for these reasons (and the fact that a century of personality research contradicts the likelihood) that EI researchers who hope to somehow live up to popular claims about success by studying the positive aspects of personality are likely to be disappointed. The fact is that "positive attributes" can take prediction only so far. This returns the researcher to the search for new, powerful dimensions of prediction that have been overlooked. One of these, perhaps, is EI as an ability. The irksome thing about such new dimensions is that they take some time and sophistication to properly measure and assess their importance. That agenda cannot keep up with the escalating claims for EI in the popular literature (to be discussed).

The final argument for why mixed approaches might work is that they indirectly measure EI ability. This argument states that people higher in EI should become happier and more optimistic than others over time, so measuring optimism and happiness is enough. According to this argument, if one formed two groups of people, one high and one low in EI ability, but otherwise matched on their average emotional states (e.g., depression, aggression, and anxiety), the group high on EI would feel better over time because of their superior emotional understanding. This is a potentially compelling point, and it is likely true to a slight degree. Still, the relationship between EI and such positive qualities as optimism or self-esteem is not strong for several reasons. First, EI is not always highly valued or rewarded by society, and so the person with high levels

of it may experience a great deal of frustration at seeing what others cannot see. Second, even if a person's EI is valued, his or her goals may not be happiness. There are many people quite willing to take on emotionally difficult roles—helper, caretaker, therapist—so as to make the world a better place. Consider Paul Britton, a leading criminal psychologist in Great Britain. Motivated by the plight of crime victims, he empathically entered into their lives to try to identify the criminals who abused and, sometimes, murdered, them. Britton valued a sense of helping and moral responsibility over happiness. Speaking of the victims and their families who he tried to help, he wrote:

> Looking back, I don't remember the victims' faces because usually the pictures I see are taken after death when the light has gone out of their eyes. What I do remember are their minds because so much of what I do involves learning the intimate details and rhythm of their lives. It's knowing them and knowing what happened to them that makes the pain and sadness of the deaths even greater. This is not enjoyable work. [5, p. 650]

A third reason EI does not inexorably lead to happiness is that emotional work and self-improvement, like any personal change, typically takes a long time. Hence, such positive differences that EI can bring about in personality may not be seen until middle age or later.

Although it would be nice, persistent, and optimistic to argue that "mixed" concepts of EI represent a unique and novel perspective on EI, it may be more realistic to view them as haphazard descriptions of desirable personality and compare them with other descriptions of desirable personalities. Such serious comparisons have not yet taken place. This book on EI must deal broadly with the field, and that means including both versions of EI: the "intelligence" version and the "mixed" version.

☐ How Is Emotional Intelligence Best Measured?

The concept of EI emerged with attempts to measure it. An experimental measure of EI was introduced along with the first theory (see [36]). As the concept became popularized, journalists expressed some ambivalence about measuring EI. In its story on EI, *Time Magazine* asked, "What's your EQ?" in big block letters across its cover. The lower-left-hand corner of the page elaborated: "It's not your IQ. It's not even a number. But emotional intelligence may be the best predictor of success in life, redefining what it means to be smart."

The statement, "It's not even a number," implied that EI might not be quantified in any usual sense. Yet the same passage made the apparently

quantitative assertion that it may be "the best predictor of success in life." The present discussion examines how EI can indeed be measured (and sometimes, mismeasured). The next section returns to the issue of what EI predicts.

After the 1995 *Time Magazine* piece and other popularizations there was a rush to create scales of EI. With the popularization, the cacophany of conceptualizations and definitions began. Consequently, the first difference among measures to check is what definition of EI they are based on.

Scales Sorted by Definition of EI

For example, in the wake of the popularization, a number of quickly developed measures emerged. Some popular magazine and newspaper articles included ad hoc scales of optimism, or of delay of gratification, to measure EI. Other approaches involved relabeling already-existing tests, or tests then coming to market, as measures of the concept. Given the broad definition of EI employed in the popularizations, virtually any preexisting personality test that measured positive attributes could be considered a relevant measure. The Bar-On EQ-i (Emotional Quotient Inventory), published in 1997, was said to be based on a 1988 scale originally intended as a measure of psychological well-being [2]. The Emotional Competencies Inventory (ECI) by Goleman and Boyatzis was based on earlier work that modeled and assessed effective managers according to general competencies [4]. Goleman [24, p. 320] stated that 14 of 16 abilities on this earlier Boyatzis scale "were emotional competencies."

Such scales of well-being or managerial effectiveness were occasionally said to have started the era of EI. Given the dozens of already existing scales of well-being and managerial effectiveness, it seems strange to single out one or another of them as starting a field. No such early scale included a theory of EI—or even a use of the term. Moreover, if EI equals persistence, zeal, optimism, empathy, and character, dozens of traditional personality scales could be said to measure EI. For example, the widely used, well-validated CPI might be considered the first measure of EI given its coverage of social strengths, dominance, and motivation—and its initial publication date of 1956—and yet this would seem to stretch matters.

New scales also were developed. Some of these used mixed models as well, such as the EQ Map (Orioli, credited in [9]). A scale by Schutte and her colleagues [47] was based on a combination of the ability theory and more popular approaches. My colleagues and I further developed our own ability line of measurement research in the area, based on our ability conceptions (e.g., [36]).

Scales Sorted by Measurement Approach

Beyond the model or definition of EI upon which the scales were based, a second chief difference among them was their measurement approach. Many of the scales described above employed self-judgments (e.g., "How emotionally smart are you?"). Self-judgments measure differently than observer ratings (e.g., asking an observer how emotionally smart you are), and both of these measure something different than ability tests with right or wrong answers (e.g., "What does 'envy' mean?"). Self-judgments work if one views EI as a collection of certain nonability-related personality traits. For example, Schutte and colleagues' scale, the EQ Map, and the EQ-i questionnaire ask many similar questions such as, "Are you clear about your emotions?" "Are you good at solving problems?" and "Is your mood positive?" Scales such as this, which correlate very highly with pleasant mood (and have negative correlations with unpleasant mood) basically measure a person's self-perceived well-being. It is exactly this quality of positivity that accounts for the fact that most of these scales have very high correlations with positive emotionality (about r = .50 to .80, depending upon the scales). Because positive emotionality predicts a lot of good things, so might a lot of these new scales, but it is a case of reinventing the wheel. There is little evidence, as of yet, that predictions from any of these mixed scales go beyond predictions that can be made from positive emotionality and the absence of negative affectivity. (For a detailed review of this issue, see Chapter 2.)

Another serious problem with self-report is that it does not relate to actual measured intelligence. In the traditional intelligence field, at least, measured IQ does not correlate well with self-reported intelligence, with correlations rarely exceeding modest levels (e.g., between r = .00 and .30). This makes sense if one thinks of a school classroom. Therein, one will find average students who think they are much brighter than they are, students who excel but are so self-critical that they don't fully grasp their own capacities, and students so limited in mental capacity that they cannot fully comprehend the question.

A real-life example of this concerns an amateur sailor who had repeatedly run aground in a homemade boat off the north coast of Wales while trying to sail across the Irish Sea from Anglesey. Upon the occasion of his eleventh rescue—at a cost to British taxpayers of more than $85,000—he was described by his rescuers as "clueless." This assessment did not coincide with the sailor's own self-judgment. He explained that any navigational training was superfluous, in his case. Referring to his lack of a skipper's license he told reporters: "I don't need one. . . . I'm far more intelligent.'" He had, however, been using a road map as his primary

navigation device (Reuters, August 11, 2000). This is merely an extreme example of the disconnect between actual and self-judged ability.

A second approach to measuring EI is to use observer ratings. This makes particular sense if one considers EI to refer to effective behavior. In observer ratings, an observer—someone who knows the person—decides whether a person is emotionally intelligent or not. Within organizational settings it is sometimes the custom to measure "360 degrees of feedback" from all around the individual. So, a manager in a company would receive feedback from subordinates, colleagues, and supervisors on a number of competencies believed related to EI. An example of such a scale using a mixed definition of EI is the ECI [25].

What held true for self-report and intelligence, however, also holds true for observer ratings. That is, it is hard for observers to judge others' intelligence. A very bright mental performance may be over many an observer's head. Moreover, even very bright observers may confuse performance that is a consequence of intelligence with performance that is more a product of average intelligence mixed with hard work, luck, or creativity. In all, it is no wonder that observer reports of intelligence do not correlate well with actual intelligence either. (One exception is that teachers are fairly good estimators of their students' intelligence.)

If one adheres to a concept of EI as an intelligence, one is likely to seek out ability tests as the measure of choice. These are tests in which a person has to solve problems and there are "right" answers. This is the traditional way in which intelligence is measured and some measures of EI also use that approach. For example, one can show people a face and see if they understand the emotions expressed in the facial expression. Or, one could ask people what "anger" means, and see how well they understand its definition. Examples of such scales are the Multifactor Emotional Intelligence Scale (MEIS), and the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT). These tests provide the best evidence yet that EI is a true intelligence, is different from cognitive intelligence, predicts important new things, and develops with age. Because these tests have been described in great detail elsewhere, I will not repeat these descriptions here (see [34], [40]; also, Chapter 9).

The question, "Which EI are you talking about?" becomes critical here, because it is likely that these different approaches will yield quite different measurements on the same person. When two tests measure the same thing, people are supposed to obtain the same score on them. In the realm of intelligence testing, a person who scores high on the Wechsler Adult Intelligence Scale should (and usually does) score high on the Stanford Binet Intelligence Scale. Similarly, another person who scores low on a given intelligence test will score low on another [51], [53]. The same is true in the realm of testing social traits: Someone who scores high on the

Eysenck Personality Inventory Scale of Extroversion will similarly score high on the NEO-PI scale of Extroversion [10], [17]. That is, tests that measure the same entity should rank people the same way.

That is likely to be *un*true for scales in the area of EI. Scales based on an ability model will measure characteristics with only minimal relations to scales based on concepts of well-being or success. Research thus far suggests that ability measures chiefly assess the capacity to process emotional information. Self-report measures of mixed models may pick up some of that (see [46]). At the same time, however, their primary measurement is of positive mood, optimism, positive self-regard, and extroversion. In fact, the overlap of the mixed scales with traditional personality traits is so high that researchers have concluded that nothing new is measured by such self-report approaches relative to existing scales (e.g., [13], [43]). Finally, the observer rating approaches appear to measure some combination of a person's social impact or social dominance, as perceived by others, along with issues surrounding the person's reputation at work (see also Chapter 2 for a further discussion of these perspectives).

The clear distinction between ability scales and self-report measures is an important one in the intelligence literature, and yet there are areas where intelligence as an ability and other personality traits do overlap modestly. For example, traditional intelligence has low but definite relations to other traits such as intellectual flow and intellectual curiosity [33]. In the case of EI, there is a correlation between ability scales and self-reported empathy of about $r = .00$ to 30 and a lower relationship with meta-experiences of mood. As test-to-test correlations go, these are very low and indicate the essential independence of the measures. By way of contrast self-report scales have very high correlations with each other and with positive mood ($r = .50$ to $.80$). Because mood state is highly predictive of many outcomes (e.g., rated job satisfaction, rated well-being, and so on), it is important to control for current mood in empirical work done with self-judgment scales. Regrettably, most research in this area does *not* do this.

Although all of the above attributes are potentially important, they are related unequally to notions of what EI really concerns. It may turn out that as the field develops more attention is paid to these discrepancies.

☐ Is Emotional Intelligence the Best Predictor of Success in Life?

The first theory of EI made only the claim—controversial enough at the time—that such an intelligence might exist. Ten years later, that claim is still somewhat disputed, despite a groundswell of support for the idea. In

addition to the claim that EI might exist was some discussion of what EI might predict: social sensitivity, persistence, and general well-being.

Claims for EI escalated markedly in popularizations of the concept. Emotional intelligence was said to be as or more important than IQ in predicting success in life (e.g., [22, p. 34]). My colleagues and I never made such claims. Indeed, the claim was astonishing, as intelligence has long been considered the benchmark predictor of academic success, and, sometimes, of professional success. Walter Mischel's brutal critique of personality assessment in 1967 carefully left aside intelligence as too powerful to criticize. Why? Intelligence regularly predicts academic grade point average at $r = .50$ level; moreover, the prestige of an occupation (as rated by independent observers) correlates about $r = .80$ with the average IQ of people in the occupation.

To claim that EI outpredicts intelligence means that it should have correlations above those $r = .50$ and $r = .80$—a stiff hurdle. Those searching for documented evidence for the 1995 claim in the popular book were disappointed. For example, a widely reported Bell Labs study of engineers was said to indicate that emotionally intelligent engineers outperformed others at work. The study in question, however, involved no psychological measurements at all, and emotion was barely mentioned in the study, which was focused instead on the fact that successful engineers shared information with their peers. Although such sharing of information *might* be a matter of EI, it could as easily have been a matter of extroversion, political savvy, expediency, or common decency. The article does not say.

It was perhaps popular claims such as this, along with the opportunistic relabeling of self-report measures as measures of EI, that led some psychologists to dismiss the area entirely. That dismissive position is, perhaps, equally extreme in a negative way. For example, writing in the *Journal of Personality and Social Psychology*, Davies, Stankov, and Roberts [13] wrote, "as presently postulated, little remains of emotional intelligence that is unique and psychometrically sound."

Rather than retreat from such claims, however, the popular claims escalated—doubled, in fact. For example, EI became "twice as important as IQ and other technical skills," in Goleman's [23, p. 31] book, and this claim was repeated by him in a much-read article in the *Harvard Business Review* [24]. This time, documentation was produced: The figure was based on a survey of job descriptions that indicated that "emotionally-intelligence-related criteria appeared twice as often as technical requirements." Basing such an extreme claim on such a study is worrisome. Job performance is, of course, not best measured by the study of job descriptions. What *is* measured is merely the words used in job advertisements. It is unsurprising that so many of those words would fall within the EI cat-

egory employed by Goleman. As noted, by 1998, Goleman had expanded his list of emotionally intelligent attributes to 25 characteristics so broad that almost anything not explicitly labeled IQ, from political savvy to tolerance for diversity, were included in EI. To return to the first issue: The content of job advertisements does not necessarily reflect actual success. Such content rather may be affected as much by how many adjectives it takes to communicate an impression as by anything else. Understanding what actually predicts success requires employing actual measures of personality and predicting actual on-the-job performance.

So, there is little or no evidence thus far that EI is the best predictor of success in life, let alone twice as important as IQ. This lead us to the last question, "Why is emotional intelligence important?"

Why Is Emotional Intelligence Important?

Why is EI important? The answer depends on which EI one is talking about. The more general, popular, "mixed" versions of EI have generated a renewed excitement over general scales of personality—lurking under the label "emotional intelligence." Emotional intelligence has, in other words, served to interest organizations in predicting good performance through traditional personality assessment. Given the potential value of personality measures, that cannot be all bad. When the dust settles, self-report measures of EI will probably be found to be composed—mostly—of standard personality traits: extroversion, sociability, self-esteem, optimism, and so forth, and a few of the newish qualities such as metamood experience. Although the greater part of such scales do not have much to do with either emotion or intelligence, or even EI, as understood here, they possess the same predictive powers as the original personality traits that they measure under a new name. As those original personality traits have been underemphasized in the recent past, that is not all bad.

In fact, a host of relationships have been found between self-report instruments of EI and on-the-job satisfaction and, sometimes, performance. None of these are on the scale of being more important than intelligence; still, they are promising. For example, one self-report scale, the EQ-i, apparently distinguished successful Air Force recruiters from unsuccessful recruiters [48]. Such findings, if able to withstand the rigors of peer review, and if replicable, are of pragmatic value. Their scientific interpretation, however, is another matter. The particular self-report measure used correlated very highly with measures of positivity such as extroversion and very negatively with measures of negativity such as neuroticism and the Beck Depression Inventory. So it is likely telling us that more positive people make better recruiters for the Air Force. That is, the study is likely

replicating Martin Seligman's well-known finding that optimism predicts success among salespeople. Future studies with such self-report measures will need to control for overall levels of pleasant–unpleasant affect, introversion–extroversion, optimism and the like to be clearly interpreted.

If one now turns to the ability conception of EI, the implications appear clearer, stronger, and less subject to alternative explanation. First, the ability conception identifies a new ability trait, with little overlap with any traits of any sort in the past. As a new trait, EI may predict important outcomes that have been unpredictable (or less predictable) before. For example, it appears that higher EI predicts lower levels of violence and other problem behaviors. This occurs even after the effects of intelligence, gender, and self-reported empathy are statistically controlled for (e.g., [8]). If this is the case, it will have important pragmatic uses.

Even more importantly, however, may be the theoretical and cultural implications. If emotions convey information, and if there are rules for processing that information, then the "interruption" and "bother" of emotion are neither; rather, emotions will often convey important information. Put another way, if EI satisfies traditional standards for an intelligence then that is a persuasive reason to discuss emotions and the information they convey.

On an individual level, the existence of EI means that among some of those called "bleeding-hearts" or "hopeless romantics," sophisticated information processing is going on. Recognizing this sort of ability-based EI legitimizes its discussion at an organizational level—in schools, businesses, and other institutions that heretofore have been indifferent or even hostile to feeling life. After all, if emotions convey information, then dismissing such information is done at the organization's risk. Finally, on a societal level, the ability conception of EI marks a transcendence between two opposites: the stoic's idea that emotions are unreliable guides to life and the romantic's position that one should follow one's heart. It may be that the concept of EI marks a turning point in the long battle between the head and the heart. Perhaps those two warring parties can, through EI, attain a higher level of understanding and live at peace more often.

2
CHAPTER

Joseph Ciarrochi
Amy Chan
Peter Caputi
Richard Roberts

Measuring Emotional Intelligence

EI: Fact or Fiction?

Many people believe that emotional intelligence (EI) is important to everyday life (e.g., [69], [78], [92], [106]). It seems reasonable to assume that people who are poor at dealing with emotions will have worse relationships, poor mental health, and less career success. For example, if you cannot control your anger in the workplace, you might upset your coworkers, alienate your boss, and maybe even lose your job. Similarly, if you do not know what other people are feeling, you may have trouble establishing meaningful social interactions, becoming romantically involved, or maintaining a close circle of friends.

These intuitions seem reasonable, but they are not sufficient to prove that EI is important, either practically or scientifically. Indeed, some researchers and philosophers are beginning to argue against the value of EI. Some say that we have simply given a new name to an old concept. Perhaps EI is what the philosophers have termed wisdom [54]. Maybe it is nothing more than temperament [72]. It is even possible that EI does not exist, but rather is an invention of the mass media or big business.

How can we address these issues and determine the value of EI? We must start by examining how EI is assessed. If we cannot adequately measure EI, then we must admit that it might not exist as a meaningful scien-

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