
Introduction

The jury is still out as to whether or not there is a scientifically meaningful concept of emotional intelligence.

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Historical and Sociocultural Context of Emotional Intelligence

What is the secret of human happiness and fulfillment? Philosophers, prophets, and other sages have debated this question since ancient times without arriving at a satisfactory resolution. The advance of psychology in the last century has raised the hope of a scientific answer. Perhaps, systematic, empirical study of human success and failure will tell us how we should live. Recently psychologists have proposed that understanding the emotions of oneself and others is the key to a satisfying life. Those people who are self-aware and sensitive to others manage their affairs with wisdom and grace, even in adverse circumstances. On the other hand, those who are “emotionally illiterate” blunder their way through lives marked by misunderstandings, frustrations, and failed relationships. A scientific understanding of this emotional intelligence may allow us to train our emotional skills so that we can live more fulfilling and productive lives. In this book, we examine this emerging science and assess critically the likelihood that it offers a genuine path toward personal and social development, as opposed to a myth of self-actualization unsupported by empirical evidence.

Emotional intelligence (EI) is a relatively new and growing area of behavioral investigation, having matured recently with the aid of lavish international media attention. EI refers to the competence to identify and express emotions, understand emotions, assimilate emotions in thought, and regulate both positive and negative emotions in the self and in others. The construct has received widespread, international

attention, both within secular and academic circles, ever since its inception in the 1980s. Subsequently, researchers have purportedly made important strides toward understanding its nature, components, determinants, developmental track, and modes of modification.

Although first mentioned in the psychological literature nearly two decades ago, it is only in the past five years or so that emotional intelligence has received widespread public attention. Daniel Goleman's book on the topic appeared on the *New York Times* Best-Sellers List in 1995, the same year in which a *Time Magazine* article was devoted to detailed exposition of the topic (Gibbs, 1995). More recently, the influential e-zine *Salon* devoted a lengthy article to discussion of its application (both potentially and realized) in the work force. Moreover, the last year or so has witnessed a plethora of trade texts dealing with self-help and management practices, assessment, and other practical applications implicit to the concept of emotional intelligence.

Few fields of psychological investigation appear to have touched so many disparate areas of human endeavor, since its inception, as has emotional intelligence. Seemingly acknowledging this fact, the American Dialect Society selected it among the most useful new words or phrases of the late 1990s (American Dialect Society, 1999; see also Mayer, Salovey & Caruso, 2000). Indeed, for a concept that up until 1995 had received short shrift, the impression that the subdiscipline devoted to the study of emotional intelligence is a pivotal area of contemporary psychology appears difficult to dispute. Thus, emotional intelligence has been touted as a panacea for modern business (Druskat & Wolff, 2001) and the essential but often neglected ingredient in the practice of nursing (Bellack, Morjikian, Barger et al., 2001), law (Silver, 1999), medicine (Carrothers, Gregory & Gallagher, 2000), and engineering (Marshall, 2001). In some commentators' eyes, emotional intelligence even provides the medium by which educational reform can and finally will reach its full potential, across primary, secondary, and tertiary levels of schooling (e.g., Arnold, 2000; Bodine & Crawford, 2000; Hargreaves, 2000; Ormsbee, 2000).

Popular interest notwithstanding, scientific investigation of a clearly identified construct of emotional intelligence is sparse. Although several measures have been (or are currently being) designed for its assessment, it remains uncertain whether there is anything to emotional intelligence that psychologists working within the fields of personality, intelligence, and applied psychological research do not know already. Moreover, the media hype and vast number of trade texts devoted to the topic often

subsume findings from these fields in a faddish sort of way, rather than deal directly with the topic as defined by its chief exponents. This approach has arguably led to obfuscation, misunderstanding, and wildly outlandish claims.

The popularity of emotional intelligence

The idea that people differ in EI has prospered because of a number of converging factors, including contemporary cultural trends and orientations. To begin with, EI has been the target of widespread interest owing to the increasing personal importance attributed to emotion management for people in modern society. It is believed that EI can be trained and improved in various social contexts (educational, occupational, and interpersonal) and that personal and societal benefits will follow from investment in programs to increase EI. There is currently a growing impetus towards the provision of personal, educational, and workplace interventions that purport to increase EI.

Furthermore, EI has been commonly claimed to play an important role in modern society by determining real-life outcomes above and beyond the contribution of general intellectual ability and personality factors (e.g., Goleman, 1995; Saarni, 1999). Thus, EI is claimed to be positively related to academic achievement, occupational success and satisfaction, and emotional health and adjustment (Elias, Zins, Weissberg, Frey et al., 1997). EI, in fact, has been claimed to be even more important than intellectual intelligence in achieving success in life (Goleman, 1995).

A subtext in the claimed importance of EI to success in modern society is that the benefits of general (cognitive) intelligence are overstated, and emotional intelligence may often be more important than conventional IQ. Accordingly, EQ has become fashionable in part because it seems to reduce the predominance and importance typically accorded to intellectual intelligence. A possible related factor underlying the popularity of the EI construct is antagonism (warranted or unwarranted) toward the concept of intellectual intelligence and its measurement. Substantial numbers of people are antagonistic to intelligence tests, perhaps because many have been subjected to the misuse and misinterpretation of the results of IQ tests. There is sometimes even antipathy to people with high IQs in Western society, exemplified by the way that television programs relentlessly mock academically gifted children as nerds lacking elementary social skills, quite at variance with reality (see Zeidner & Matthews, 2000). Goleman (1995) himself makes considerable

play of anecdotal accounts of how high-IQ adults may be socially inept. Thus, many people resent the excessive import attributed to scholastic IQ in modern society (Epstein, 1998). From grade school on, people with high IQ tend to be viewed negatively, particularly if they are studious and highly successful at school, university, and work. As a result, any view that deflates the importance of IQ finds a receptive audience, and there is excessive enthusiasm for questionable views about the nature of other attributes that are labeled as forms of intelligence, including EI (Epstein, 1998).

Thus, the appeal of EI reflects both positive and negative cultural mores. On the positive side, the construct emphasizes the value of nonintellectual abilities and attributes for success in living, including emotional understanding, awareness, regulation, adaptive coping, and adaptive adjustment. EI has driven home the notion that, while the road to success in everyday life is determined partly by intellectual ability, there are a host of other contributing factors, including social competencies, emotional adjustment, emotional sensitivity, practical intelligence, and motivation. EI also focuses attention on character and aspects of self-control, such as the ability to delay gratification, tolerate frustration, and regulate impulses (ego strength). On the negative side, writings on EI place greater emphasis on the importance of emotional abilities than on intellectual intelligence—an outcome that is congenial to the personal profiles and worldviews of many.

Emotional intelligence: a rebuttal to The Bell Curve?

Another attractive feature of EI, and a plausible reason for the immediate acceptance and widespread and often uncritical embracing of the construct, is that it countered the pessimism contained in Richard Herrnstein and Charles Murray's (1994) book, *The Bell Curve*. In contrast, EI offers hope for a more utopian, classless society, unconstrained by biological heritage. Herrnstein and Murray's (1994) monumental, though contentious, work is a lengthy tome combining a review of the intelligence field with implications for informing public policy on class in the United States. This book argued for the importance of intelligence in understanding social class in modern societies. Intelligence was touted as the best predictor of success in various spheres of life, including educational, occupational, and social contexts. The authors implied that individuals who were born into economically and educationally advantaged family backgrounds also inherited higher intelligence when compared to their lower-class counterparts. This differential distribution of

intelligence in sociocultural groups was claimed to determine, in large part, the differential chances of various social groups for educational and occupational success. The approach espoused by the authors conveyed a rather pessimistic message for an egalitarian society and offered little hope for the future of those individuals destined to be born into lower-class families or those coming from ethnic-minority backgrounds.

When Goleman published his best-selling book *Emotional Intelligence*, the author implied that it served as an egalitarian rebuttal to Herrnstein and Murray's arguments, which were widely seen as supporting the entrenchment of a cognitive elite (Goleman, 1995, p. 34). In contradistinction to IQ, EI was believed to offer much hope for individuals characterized by low levels of cognitive ability. The appeal of the EI construct lies in part in the view that the competencies underlying EI can be learned, and this offers a more optimistic message for society's future than the views presented in *The Bell Curve*. In contrast to general intelligence, which was differentially distributed across sociocultural groups, EI was assumed to be more equally distributed, thus holding considerable hope for a more egalitarian society. Furthermore, whereas general ability was viewed as a rather stable and immutable psychological trait, and relatively impervious to environmental experience and training, EI was believed to be more amenable to intervention and learning (Goleman, 1995). From this perspective, the cultural value of emotional intelligence was egalitarian, for anyone could learn and cultivate it. For the skeptical, however, it suggested a dumbed-down picture of the future, in which reason and critical thinking no longer mattered and people were sized-up by their emotional expressiveness. In this context, emotional intelligence was suggestive of a kinder, gentler, intelligence—an intelligence anyone can have.

Diminishing the great divide between rational thought and emotions

Furthermore, EI has gained prominence because it represents additional present-day cultural values (Salovey, Woolery & Mayer, 2001). The hybrid term "emotional intelligence," combining emotion and intelligence, could well be considered an oxymoron by some. This assertion follows from the fact that emotions commonly convey the idea of irrational passions, whereas intelligence is best characterized by a high degree of reasonableness and rational thought. Indeed, the relationship between intellect and emotion has traditionally been viewed as one involving a conflict between two different psychological forces. Throughout Western history, reason has generally been valued over blind passion, as

illustrated in a quotation from Marcus Aurelius, who was influenced by Stoic philosophy:

Let no emotions of the flesh, be they of pain or of pleasure, affect the supreme and sovereign portion of the soul [i.e., reason]. See that it never becomes involved with them: it must limit itself to its own domain, and keep the feelings confined to their proper sphere. (Meditations, V, 26)

Currently, the pendulum has swung toward a view that the intellect has been over-valued, at the expense of emotions, leading to lack of self-understanding and impoverished shallow social relationships. Thus, the interest generated by the EI construct is part of the current zeitgeist of modern Western society, which is increasingly recognizing the importance of emotions. Indeed, the battle between heralding the importance of emotions and denying their important role is a longstanding one in Western thought (see Salovey, Woolery & Mayer, 2001, for an extensive historical discussion). Seemingly, philosophers and psychologists have relied on a glorified analytic intelligence throughout much of Western history (Salovey, Bedell, Detweiler & Mayer, 2000). A contrasting zeitgeist, is suggested by talk-show host Oprah Winfrey (who is evidently no Stoic):¹

Never again will I do anything for anyone that I do not feel directly from my heart. I will not attend a meeting, make a phone-call, write a letter, sponsor or participate in any activity in which every fiber of my being does not resound yes. I will act with the intent to be true to myself.

To paraphrase, emotion provides the ultimate validation of action: if it doesn't feel good, don't do it. There is no place here for the use of reason to guide action in the face of doubts and misgivings, or to examine one's emotional reactions critically and analytically.

The past few years have seen a flight from the rigors of intellect, coupled with a renewed appreciation of the emotional side of one's persona and the legitimization of emotional expressiveness. The 1960s ushered in a period of social turmoil, which upset Western assumptions about the primacy of the intellect, generating both critical thought and a decade-long emotional rebellion against the forces of rationalism. There was growing awareness of the failings and injustices of society, such as prejudice and discrimination toward sociocultural minority groups, international hostilities and war, environmental pollution, and inequitable treatment of women. These problems highlighted unmet emotional needs that seemed interwoven into the very fabric of society. The sixties generation witnessed the rise of the civil-rights

movement, student activism in opposition to the Vietnam War, new social movements (hippies and yuppies), and the rise of the women's-rights movement. Uncontrollable feelings of anger, contempt, anxiety, and depression against society's injustice could no longer be interpreted as an irrational defect in human nature, but rather had to be interpreted as a consequence of, and a message about, a faulty and oppressive society. The feelings of these oppressed groups were signals of how various groups of people were (mis)treated before society could or would correct inequities. In this context, EI refers to social justice, and a resolution of the long war fought between emotion and rationality throughout human history.

Conceptions of Emotional Intelligence

The sometimes wildly extravagant claims with respect to the usefulness of EI raise an important series of issues that challenged us throughout the writing of this book. What does a given researcher mean when she uses the term "emotional intelligence"? To what extent is the concept of EI used consistently by its various proponents? Does EI ever denote a logically coherent scientific construct? Given the ease with which the definition of EI may be shaped to fit different interests and areas of application, EI may be *the* most protean of all known psychological constructs. Thus construed, researchers promoting EI may build a virtual Tower of Babel. Each claim, then, would likely be unsubstantiated in the face of new evidence; misunderstandings would constantly perpetuate themselves; and little scientific progress toward understanding its nature, consequences, or determinants would occur. We note, even at this early stage, that protean definitions of EI are easily located in the research literature (see Roberts, 2001), perhaps in reflection of "some aspects of present-day zeitgeists" (Mayer, Salovey et al., 2000, p. 97). Nevertheless, EI remains a viable field of scientific study, and several contemporary researchers have attempted to develop validated tests for assessment of EI (e.g., Bar-On, 1997; Mayer, Caruso & Salovey, 2000). Beyond test development, there remains an urgent need for the application of strict, logical principles in formulating the scientific boundaries and delimiting conditions of EI (see Davies, Stankov & Roberts, 1998; Roberts, Zeidner & Matthews, 2001).

In the passages that follow, we provide an overview of concepts and models underlying EI, which we discuss throughout the present book in more elaborate detail. This approach sets the stage for appreciating

both scientific and sensationalized claims (often of mythological proportions) surrounding contemporary conceptualizations of EI. Before this undertaking, however, some introduction to the historical background in which EI has emerged would seem prudent.

The origins of emotional intelligence

The history of research into human intelligence has raised a number of concepts that bear more than passing semblance to EI, including most especially the concept of social intelligence, which we take up in chapters 2 and 3. However, the first formal mention of emotional intelligence appears to derive from a German article entitled (and we translate here) “Emotional Intelligence and Emancipation,” published in the journal *Praxis der Kinderpsychologie und Kinderpsychiatrie*, by Leuner in 1966. The article describes adult women who, because of hypothesized low emotional intelligence, reject their social roles. In the article, Leuner suggests that the women’s difficulties stem from being separated at an early age from their mothers. The treatment used by the author to improve deficits in EI appear extreme and ill contrived by today’s standards—the women were administered the hallucinogenic drug LSD-25 while undergoing psychotherapy (see Mayer, Salovey et al., 2000).

The first time that the term “emotional intelligence” appears to be used in an English treatise is in an unpublished doctoral dissertation by Payne (1986). Parenthetically, given widespread interest in EI, Payne may well go on to be one of the most cited authors never to have made it through the peer-review process. In something of a visionary statement, Payne advocated the fostering of EI in schools by liberating emotional experience through therapy. Much of Payne’s thesis is polemic in nature. For example, he also foreshadows an age where emotion and intelligence are integrated into the educational system, and governments are responsive to the feelings of the individual (see also Mayer, Salovey, et al., 2000). Early references to EI generated little interest. Indeed, it is only in very recent years that scientific articles on the topic have appeared in any number (see figure 1.1).

Daniel Goleman and the popularization of emotional intelligence

In a strict historical account of EI, one might turn at this point to discuss the ability models of Jack Mayer, Peter Salovey, and colleagues, since they were the first to publish scientific articles in peer-reviewed journals. Another researcher, whose work is discussed subsequently, Reuven Bar-On, claims to have used a related concept—emotional quotient—still

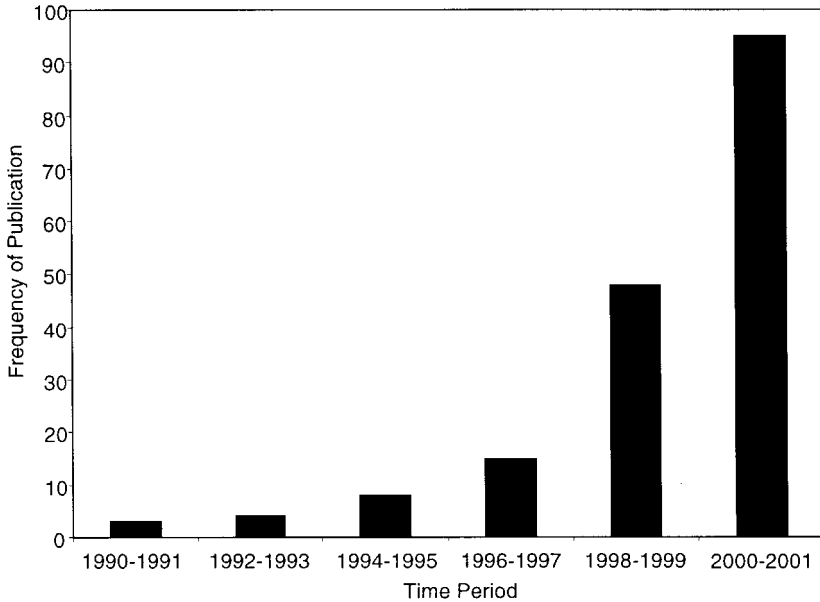


Figure 1.1

Frequency distribution of EI publications from 1990 to 2001.

earlier, but this was in an unpublished doctoral dissertation that has proven difficult to track down (see Bar-On, 2000). Even so, Daniel Goleman (1995, 1998, 2001) has clearly been the most influential in bringing this concept to the masses. Because his impact on the field has assumed epic proportions (see Gibbs, 1995), it is to consideration of his conceptualization of EI that we now turn.

Goleman's (1995) definition of emotional intelligence is sweeping and open to the criticism that it is overinclusive. Consider, for example, the definition that in many ways introduces the original (and most controversial) aspects of his best-selling book. "Emotional intelligence [includes] abilities such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathize and to hope" (Goleman, 1995, p. 34).

Goleman invokes qualities here that the trained psychologist would recognize as longstanding concerns of the field of personology, or the study of personality traits (see Maddi, 1996; Matthews & Deary, 1998). He seems also to refer to Judeo-Christian ethical values, a Pandora's box

that the scientist should perhaps forbear to open. Seemingly acknowledging this fact, after leading the reader through various ramifications of the aforementioned definition, Goleman (1995) pronounces, almost defiantly, “There is an old-fashioned word for the body of skills that emotional intelligence represents: character” (1995, p. 34). A question then immediately springs to mind (and we return to it at a number of points in the present book): Is EI simply an old wine, which has been well marketed in a new bottle? Interestingly, over a century of research has also shown that the relationship between personality and intelligence is modest at best (see, e.g., Ackerman & Heggestad, 1997). If this is the case, Goleman’s definition necessarily *precludes* thinking about EI, as akin to traditional forms of human cognitive abilities. Indeed, Goleman almost seems to define EI by exclusion—that is, EI represents all those positive qualities that are *not* IQ. Consequently, we suggest that a natural tension exists between his definition and several others that have been offered in the literature.

Another point of critical interest concerning Goleman’s definition of EI is the extent that traits, which themselves might be thought of as functionally independent, are all assumed to cluster together to define this one construct called EI. The implication is, after all, that EI constitutes a general factor representing individual differences in the efficiency of handling emotionally laden information. If it is a general factor, then the personal qualities composing it should correlate positively and moderately with each other (see Roberts, Zeidner, et al., 2001; also chapter 5 below). However, consider hope and impulse control. It seems illogical to assume that these are in any way related. Thus, one can hope and still control one’s impulses, or one can hope and have poor impulse control—that is, hope and impulse control appear unrelated and it is questionable whether they form part of the same, unitary construct.

Ultimately, Goleman’s conceptualization of EI rests on other aspects of what is known today of cognition, personality, motivation, emotions, neurobiology, and intelligence, rather than on this (problematic) definition in isolation. For this reason, some commentators refer to it as a “mixed model” of EI, in that it captures diverse psychological phenomena that embody both cognitive and noncognitive processes (see, e.g., Mayer, Caruso, et al., 2000). Goleman (2001) rejects this characterization, claiming that EI is pure ability, although, somewhat confusingly, he elsewhere seems to suggest that personality traits “drive” emotional competencies (Boyatzis, Goleman & Rhee, 2000). Goleman appears will-

ing to make strong claims with little (or scant) empirical backing. Consider, for example, Goleman's (1998, p. 34) frequently cited claim that EI has higher predictive validity for performance in the workplace than traditional measures of intelligence (e.g., Druskat & Wolff, 2001). (Subsequently, Goleman, 2001, has argued that EI is most predictive within a specific job category or profession.) There is no published study actually indicative of this trend, and the commissioned, unpublished investigation that Goleman (1998) cites in support of this claim does not actually include any measures of EI (see chapter 12). At a conceptual level, Goleman relies on varied models gleaned from established areas of psychology, especially those relating to the neuroscience of emotion. However, his treatment of these models is uncritical, and he appears unaware that results from animal studies may not generalize to humans. Many distinguished emotion theorists (e.g., Lazarus, 1991, 1999) believe that emotion is only indirectly linked to brain systems, and psychological accounts have greater explanatory power. We return to these issues in chapters 7 and 8.

In recent times, Goleman (1998, 2001; see also Boyatzis et al., 2000) has attempted to deflect some of the aforementioned criticisms of his model and has even suggested that it meets "criteria for a 'pure' (ability) model" (2001, p. 14). He suggests that the competencies associated with EI relate to four domains, defined by whether competence relates to (1) self versus other, or (2) recognition versus regulation. The two aspects of self-competence are thus self-awareness and self-management, and competence with others breaks down into social awareness and relationship management. A questionnaire measure, the Emotional Competence Inventory (ECI) assesses 20 aspects of competence from an organizational perspective, with generally good reliability (see Boyatzis et al., 2000). Theoretically, the competencies are clustered into four groups similar to the domains described by Goleman (2001). However, a table provided by Boyatzis et al. (2000) suggests that empirical studies fail to confirm the theoretical grouping, and results also appear to differ from study to study. Little of this research has appeared in the peer-reviewed psychological literature, and we are unable to evaluate whether it meets accepted psychometric standards. Goleman's empirical research, in collaboration with Boyatzis and others, seems to lag that of other researchers on the assessment of EI, though it may represent a promising future development.

There are further issues regarding Goleman's attempts to conceptualize EI that appear problematic. Consider, for example, the following

quote, where, in a linguistic sleight of hand that fails to match either data or theory (not to mention accepted standards of logical inference), he commingles personality, ability, and motivational constructs to explain why EI rightfully constitutes a legitimate form of intelligence:

I would agree with Mayer and Salovey's (2000) critique that a "warm and outgoing nature" is not an EI competency. It could be a personality trait. However, it might also be a reflection of a specific set of EI abilities—chiefly, the ability to relate positively to others, which are products of the empathy and social-skills clusters of competence. Likewise, optimism, while it can be seen as a personality trait, also refers to specific behaviors that contribute to the competence I label "achievement drive." (Goleman, 2001, p. 4)

These comments fail to clarify how EI relates to existing psychological constructs. Goleman (2001) also attempts to distinguish EI as a potential for learning practical skills from emotional competence as the extent to which that potential has been translated into effective on-the-job capabilities. The ECI then assesses competence rather than EI, for which Goleman fails to provide an independent measure. Goleman has little to say on several major issues. For example, are the dimensions of EI the same as those of emotional competence? What is the magnitude of correlation between potential and actual competence? What are the learning processes that translate potential into competence? To what extent do individual differences in competence reflect learning history rather than potential? A figure provided by Boyatzis et al. (2000) confuses the issue further, by showing competence as directly driven, through causal paths, by neurological, motivational, and value-based antecedents, with no reference to potential or EI at all. In discussing this figure, Boyatzis et al. claim, "These causal links do not imply determinism but forms of association and disposition" (2000, p. 359). Causality can, of course, be a philosophically difficult concept, but the statement here seems less than lucid.

One final comment on Goleman's conceptualization of EI is in order. It has been suggested that his model of EI simply represents a journalist distilling scientific information for the consumption of the populist, rather than a legitimate scientific theory (see Mayer, Salovey, et al., 2000). Goleman states otherwise, as have the vast majority of scientists who now work within the area of EI (in our experience, peer-reviewed publications on EI invariably cite Goleman's name). Consider, for example, Goleman's preface to his second book: "I've also gone back to my professional roots as an academic psychologist, conducting an ex-

haustive review of research. . . . And I've performed or commissioned several new scientific analyses of data" (1998, p. 5).

For us, Goleman's work is of interest primarily as a source of ideas. His conceptualization of EI and its biological and psychological roots appears at present to be too open-ended and loosely specified to constitute a good scientific theory, although in the future it may develop to the point of being empirically testable.

Reuven Bar-On and the operationalization of emotional intelligence

While Goleman's name is rightfully associated with the popularization of EI, equally influential has been the work of Reuven Bar-On (1997, 2000), who has constructed the first commercially available operational index for the assessment of EI. Notably, Bar-On's conceptualization of EI is not that far removed from Goleman's, in that he appears to invoke clusters of established personality traits. Thus, Bar-On characterizes EI as "an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures" (1997, p. 14). (It is a little unclear what it means for a skill to be noncognitive: see Anderson, 1996.) The self-report instrument designed to assess each of these underlying components, the Emotional Quotient Inventory (EQ-i), provides the medium for understanding his model of EI more fully. Bar-On's research (1997, 2000) has been directed almost exclusively toward validating this instrument against other criteria.

The EQ-i assesses five broad subtypes of EI. Each of these higher-order components is measured by various subcomponents defined by pools of items, and the subcomponents are subsequently summed together to create each higher-order construct. The first is *intrapersonal intelligence*, which is composed of emotional self-awareness, assertiveness, self-regard, self-actualization, and independence. The second is *interpersonal intelligence*, which comprises empathy, interpersonal relationship, and social responsibility. The third higher-order construct of the EQ-i is *adaptability*, which divides into problem solving, reality testing, and flexibility. Fourth is *stress management*, which comprises stress tolerance and impulse control. Finally, the EQ-i contains measures of *general mood*, which is composed of happiness and optimism. In a twist likely to confuse users of his instrument, Bar-On (2000) has recently argued that this final component should be viewed as a "facilitator" of EI, rather than a higher-order construct that provides understanding of EI.

Bar-On (1997, 2000) reports a series of validation studies that are quite impressive in scope. The EQ-i has been normed in a large, diversified North American sample ($N = 3,831$), and the scales seem to be statistically reliable in North American and other samples worldwide. It has been correlated with a wide range of existing personality and other theoretically relevant constructs, such as coping. There is also some evidence, from single studies, that the EQ-i predicts other criteria, such as academic success in university students, presence of clinical disorders, and response to a treatment for alcoholism. The predictive validity of the EQ-i seems promising, but there is the potential problem of overlap with extant personality constructs. The reader familiar with psychological assessment may at this point have noticed concepts (indeed, measures) that closely resemble those of well-established personality questionnaires. For example, the widely used California Psychological Inventory (CPI) includes scales measuring, among other personality constructs, responsibility, tolerance, empathy, flexibility, self-control, intellectual efficiency, psychological mindedness, self-acceptance, and social presence (Hogan, 1987). Hence, it is not clear whether the EQ-i measures any construct that is not already captured in existing personality measures (see Davies et al., 1998; Mayer, Salovey, et al., 2000; Newsome, Day & Catano, 2001). Predictive validity may simply be a consequence of the EQ-i functioning as a proxy measure of personality. Relabeling products that vary little in content is common in the world of marketing, but it is not the proper stuff of psychological science. On the other hand, the EQ-i may indeed be measuring qualities beyond personality as currently understood. In chapter 5 we will look in more detail at Bar-On's operationalization of EI, and the extent to which data suggest that it measures something more than existing personality constructs.

Putting the intelligence into emotional intelligence: The Mayer-Salovey-Caruso conceptualization of EI

While Goleman appears to have popularized the concept of EI, he freely admits in his first, best-selling book that the work of Jack Mayer, Peter Salovey, and colleagues (among them David Caruso) has been most influential in its scientific genesis. Indeed, these researchers were not only the first to publish extensive accounts of EI in peer-reviewed psychological journals (Mayer, DiPaolo & Salovey, 1990; Salovey & Mayer, 1990), they also remain the most prolific protagonists of EI in the scientific literature (see, e.g., Mayer, Caruso & Salovey, 1999, 2000; Mayer & Cobb,

2000; Mayer & Geher, 1996; Mayer & Salovey, 1993, 1995, 1997; Mayer, Salovey & Caruso, 2000a, 2000b; Salovey, Bedell, Deitweiler & Mayer, 1999, 2001; Salovey, Mayer, Goldman, Turvey & Palfai, 1995).

Arguing that other conceptions of EI are misleading, these researchers suggest that their specific “use of the term stresses the concept of an intelligence that processes and benefits from emotions. From this perspective, EI is composed of mental abilities, skills, or capacities” (Mayer, Salovey, et al., 2000b, p. 105). In support of this derivation, they have developed an extensive conceptual model and several operational indices. It is to their conceptualization of EI that we now turn.

A major assumption of the Mayer-Salovey-Caruso model is that EI should resemble other forms of ability in terms of concepts, assessment vehicles, developmental trajectories, lawful phenomena associated with patterns of interrelationships with other measures, and further empirical instantiations. Essentially, under this framework, EI represents an intelligent system for the processing of emotional information, and as such, it should resemble central parts of traditional, well-established intelligence systems. According to Mayer and Mitchell (1998), an intelligence system consists of a capacity for inputting information and a capacity for processing information, through both immediate manipulation of symbols and reference to expert knowledge. EI cuts across the cognitive and emotional systems and is at one time unitary and multidimensional, being subdivisible into four branches. The first branch, *emotional perception/identification*, involves perceiving and encoding information from the emotional system. The second branch, *emotional facilitation of thought*, involves further processing of emotion to improve cognitive processes with a view to complex problem solving. The third branch, *emotional understanding*, is in some ways the obverse of the second: it concerns cognitive processing of emotion. The fourth and final branch, *emotion management*, concerns the control and regulation of emotions in the self and others (Mayer, Salovey, et al., 2000). Inside a systems theory account, this final branch likely entails additional aspects, including metacognitive and other response mechanisms that translate intelligent processes into action.

The theoretical underpinnings surrounding each of these branches are quite complex and we return to them at several points in this book. For example, such a system implies a hierarchical structure, where emotion management would be closer to a general factor of EI than lower-level processes like emotion perception. Nevertheless, without any measurement operations, principles, and procedures for assessing these

branches, these constructs would remain theoretical abstractions with little utility. To allay this criticism, Mayer, Caruso, and Salovey (1999) have embarked on an ambitious undertaking: to derive a measure that objectively captures salient features of each of the four branches. To combat the problems that are endemic to self-reported EI, they suggest that performance-based measures, akin to those found in the intelligence literature, are requisite if EI is to be considered a legitimate form of intelligence. The end-result is the Multifactor Emotional Intelligence Scale (MEIS), to which, because it is so pivotal to empirical understanding of EI, our attention now turns. (A revised but basically similar measure, the Mayer-Salovey-Caruso Emotional Intelligence Test [MSCEIT]—see Mayer, Caruso, et al., 2000—has yet to be used extensively in research.)

The MEIS contains 12 subscales, with anywhere from 2 to 4 of these measures providing a particular branch score, and a linear composite of all 12 subtests providing a global index of general EI (see chapter 5). Each of the actual subtests contains stimuli that yield, according to its creators, objective indices of performance (Mayer, Caruso, et al., 2000). These stimuli include pictures of faces, passages of music, abstract designs, short stories/vignettes, and clusters of trait terms, all of which are rated for emotional valence, most generally on a five-point rating scale. For example, in one of the subtests devoted to emotional perception/identification, complex, abstract figures are rated for the level of happiness, fear, sadness, and so forth that they convey to the respondent. Three different scores are derived: (a) *consensus*, where the individual receives credit for an item on the basis of the proportion of all previous individuals answering in that particular fashion; (b) *expert*, where the individual is given credit for an item on the basis of proportions provided by a small panel of experts; and (c) *target*, where the respondent is given a score on the basis of observed correspondence with the emotional intentions of the person creating the item. Note that because only a small number of subtests provide conditions appropriate for target scoring, it is seldom discussed in the literature (see, e.g., Carriochi et al., 1999; Mayer, Caruso, et al., 2000; Roberts, Zeidner, et al., 2001).

Having thus operationalized the Mayer-Salovey-Caruso model, a pivotal feature of the MEIS is that it allows multivariate, empirical studies to be conducted in order to ascertain whether a strict ability conceptualization of EI is scientifically tenable. Mayer, Caruso, et al. (1999, 2000) claim to have established a number of conditions under which EI paral-

els traditional, psychometric intelligence. Specifically, they demonstrate, first and foremost, that the vast majority of the scales composing the MEIS are reliable, i.e., measure the underlying concepts consistently (see further discussion of reliability below). Second, they claim “findings with the MEIS are supportive of the four-branch model of intelligence. . . . There is an overall emotional intelligence that can be broken down into several subsidiary groups of skills” (Mayer, Caruso, et al., 2001, p. 333). This finding is consequential because, in the intelligence literature, established cognitive abilities correlate together to reveal similar stratified clusters of constructs (see, e.g., Carroll, 1993; Horn, 1999; Roberts & Stankov, 1999; see also chapter 3). Third, data collected by Mayer and colleagues reveals that the MEIS correlates with other ability measures, but not too highly so as to suggest that it is merely repackaging older intelligence constructs (compare self-reported EI and personality). This condition is crucial to the claim that EI is a form of intelligence: in what is often considered a lawful phenomenon, all forms of cognitive ability correlate positively with one another (see, e.g., Guttman, 1992). Fourth, adults outperform adolescents on the MEIS (Mayer, Caruso, et al., 1999)—a finding that, it is claimed, parallels data obtained with all traditional intelligence measures. Finally, the authors present some data demonstrating the predictive validity of the MEIS (i.e., that it modestly predicts other criteria, such as self-rated empathy and parental warmth).

The Mayer-Salovey-Caruso model is to be applauded for its attempt to measure EI as a construct distinct from existing personality dimensions, and for the sophistication of its account of what it means to be emotionally intelligent. However, the difficulties of such an enterprise are considerable. It must be established that the test has good measurement properties—that it measures some underlying construct accurately, and that subtests are properly distinguished. There is a special problem for tests of EI in that the researcher must decide how items are to be scored (i.e., which answers are correct and which are wrong). Often, the emotionally intelligent response to a real-life problem is unclear, or depends on the exact circumstances. We have recently published a large-scale study of the MEIS that suggests some measurement problems in this regard (Roberts, Zeidner, et al., 2001). At this early stage of research, there is also rather little evidence on predictive validity. In addition, there are conceptual issues concerning how well the components of EI described by Mayer, Salovey, and colleagues relate to what is already understood about intelligence and emotional functioning. The MEIS

and MSCEIT deserve a special status as the most original and intriguing tests of emotional intelligence yet devised. We will examine their status as psychological tests in chapter 5, and we refer to the underlying conceptualization of EI provided by Mayer, Salovey, Caruso, and colleagues throughout the book.

Other conceptualizations of emotional intelligence

Since the success of Goleman's book, there has been a proliferation of academic books, doctoral dissertations, websites, scientific articles, and further popular accounts dealing with EI. To do all of these ideas justice inside the present volume would require, even at this early stage of concept development, more pages than any self-respecting publisher would allot. Our impression is that many of these works are of little scientific value and create the impression that the authors are merely jumping on the EI bandwagon. There are also several self-published books, with at least one instance where the author has been quoted as discovering the very concept of EI itself (see *The Age*, March 11, 2000)!

In chapter 5 we review various other conceptualizations or empirical findings that have made it through the peer-review process or have scientific credibility from other sources. For example, Cooper (1996) has recently conceptualized emotional intelligence as comprising emotional awareness of self and others, interpersonal connections, resilience, creativity, compassion, and intuition (to name but a few abilities) and developed an operational index: the EQ Map. Indeed, it is worth noting that many alternative conceptualizations of EI are tied to a proliferation of instruments that have recently been developed (e.g., Schutte, Malouff, Hall, Haggerty, et al., 1998). We also address, at various points in the book, some concepts that predate EI but are conceptually linked to it, such as empathy and alexithymia (i.e., diminished verbal expression of emotion).

Summary

A basic problem in developing conceptualizations of EI is that psychology already has some understanding of both intelligence and personality traits linked to emotional functioning. A theme we will develop is that existing conceptualizations of EI tend to neglect what is already known about the two main ingredients of EI: emotions and intelligence. To rectify this imbalance, coverage of these two critical psychological constructs constitutes a major undertaking of the present volume. In addition, the onus is on proponents of EI to show that the wine and the

bottles are new: To what extent is EI independent of established psychological constructs and processes? We have already indicated possible overlap with personality traits, and we will review both empirical and conceptual literature relevant to this assertion in subsequent chapters (chapters 5 and 9). The possible redundancy of EI with respect to existing constructs is not merely of theoretical importance; it also impacts directly upon various proposed applications of EI. Extensive research has demonstrated how psychological constructs like intelligence and personality impinge, for example, on education, work, and quality of life.

At this point in our exposition, a mission statement would appear in order. We have seen that writings on EI are a confusing mixture of unsubstantiated opinion and hyperbolic claims, together with serious, but still preliminary, research grounded in psychological theory and careful test development. Rather than uncritically accept what advocates of EI have given us thus far, much of which appears to be of mythical status, we aim throughout this book to separate science from pseudoscience, fact from fiction, unfettered speculation from contemporary psychological theories and real data.

Applying such standards, we may find that there is a basis for a compelling, scientifically valid model of EI. On the other hand, if scientific standards suggest otherwise, we may be forced to conclude that EI does not exist. Intermediate positions are also possible; for example, there may be distinct abilities for emotion-regulation, which, in turn, are likely to be of less import than IQ. To realize our mission, we review and critically appraise information from a broader array of psychological disciplines pertinent to the concept of EI than has been attempted up until the present point in the brief history of this concept. In addition to research on EI measures such as the MEIS, we will also focus on conventional intelligence (IQ), biological and cognitive models of emotion, personality theory, and applied efforts to improve emotional functioning in clinical, occupational, and educational settings. In the next section we introduce principles that the concept of EI should adhere to if it is to lead to good science.

A Research Agenda for Emotional Intelligence

Emotional intelligence and individual differences

It is often said (e.g., Revelle, 1995) that there are three aspects of human nature: how all people are alike, how some people are alike, and how all people are unique. Thus, we could see EI as any of the following:

1. A general quality of human beings, that is, a faculty for handling emotional encounters possessed by every normal person
2. A quantitative spectrum of individual differences in EI, such that people can be rank-ordered in terms of how much EI they possess
3. A qualitative, fine-grained account of how the individual person manages emotion, which provides no direct basis for comparison between people

In this book we will be concerned primarily with the second option, EI as an individual difference construct. The third option is important at a case-study level, for example, in clinical psychology, but studies of idiographic emotional function cannot support a science based on general nomothetic principles. Identifying a general faculty of EI is scientifically important, and there may be specific biological and psychological systems that support emotion regulation. Studies of abnormality may contribute to isolating such systems; for example, the finding that damage to the frontal lobes of the brain leads to impairments in emotion regulation (Bechara, Tranel & Damasio, 2000) implies a role for this brain area in all persons. At this time, though, it is difficult to construct a coherent account akin to the psychology of other basic faculties, such as, say, perception, motivation, or emotion itself. There are two significant barriers to such a generalized account of EI. First, EI is believed to have some inertia or resistance to change. We have no validated experimental procedures for raising or lowering EI, while leaving other faculties unchanged. By comparison, we can readily change motivation, through incentives, or emotion, through mood induction, for example. Thus, the primary raw material for studying EI is at present the differences between people, rather than their commonalities. Second, there is convincing evidence that other faculties have a universal quality derived from either inherited biology or commonalities in learned adaptations to the universal problems faced by all humans, such as seeking food, shelter, and companionship. For example, although there are important cultural differences in causes and consequences of emotion, it appears that emotions have similar personal meanings, and elicit similar response tendencies, in all cultures (e.g., Scherer & Wallbott, 1994). It is unclear whether there are similar universals of EI, in that much of what constitutes appropriate behavior during interpersonal reaction is culturally determined.

Indeed, a focus on individual differences may contribute to understanding EI in the more generalized sense. Research on conventional

intelligence is instructive. “Intelligence” is notoriously hard to define, and there is still no good general definition of what it means for some autonomous system (whether human, animal, or artificial) to possess intelligence (see, e.g., Sternberg, 2000). However, research on individual differences in intelligence, though initially lacking conceptual clarity, succeeded in identifying a measurable quality that relates to other important qualities of the person, such as their educational and occupational success. Studies of the biological and psychological correlates of intelligence provide a network of interrelationships that tell us about the nature of what is being measured. The essence of this *operational definition* of intelligence is that understanding proceeds through measurement. Reliable measurement of some quality of the person is the necessary precursor to defining that quality in terms of its relationships with other constructs. Conventional intelligence tests (IQ tests) have sufficient power to predict other personal qualities that we can say that they define an important attribute of the person that relates to intelligence, as popularly understood. Rocket scientists obtain high scores on the tests; intellectually challenged people, having substantially impaired cognitive skills in everyday life, do not.

None of this is to say that intelligence is *only* what is measured by IQ tests. It is frequently argued that there are additional intelligences, such as musical intelligence, that do not relate to IQ (Gardner, 1983). There have also been attempts to operationalize social intelligence, which may overlap with EI (see chapter 3). Some authors (e.g., Carroll, 1993) see different varieties of intelligence hierarchically, with general intelligence as superordinate to other more specialized forms, whereas others, such as Howard Gardner, would give multiple intelligences equal weight.

In sum, it may be impossible to capture all the various facets of intelligence. Just as it is impossible to prove a negative statement, so too it may never be possible to draw a line under established dimensions of intelligence and definitively state that there are no more to be found. However, the systematic search for reliable and significant dimensions provides the most promising technique for understanding constructs of intelligence, potentially including EI. Within such an approach, we need three contexts for understanding the concept of emotional intelligence:

- A psychometric context that concerns operationalization and measurement of EI
- A theoretical context that links measurements of EI to psychological processes

- An applied context that describes how emotionally intelligent behavior may be trained, facilitated, or otherwise influenced in the service of real-world problems

It is to preliminary discussion of these three contexts, which would help to provide a viable model of EI, that our attention now shifts.

The psychometric context

Logically, it might seem that theory should precede measurement. However, in common with many individual difference constructs, including IQ, the road to understanding EI has started from attempts to develop a satisfactory operational definition of the construct. That is, researchers have begun with some initial description or *conceptualization* of the qualities associated with EI and attempted to develop reliable and valid tests for these qualities. Broadly, EI may be conceptualized as a spectrum of levels of ability, perhaps following a normal bell curve, as IQ does. We need tests of EI that pick out the emotional geniuses and the emotionally challenged at the ends of the spectrum, and discriminate different levels of ordinary EI in the middle part of the range. Developing such tests places EI within the sphere of *differential psychology* (i.e., the psychology of individual differences).

The major tool of differential psychology is *psychometrics*, measurement of the mind and/or its constituent mental processes (derived from the combination of two Greek words “psyche” and “metre”). Statistical techniques (many of which were developed by the early differential psychologists, such as Galton, Spearman, and Pearson) provide the psychometrician with an impressive array of procedures for understanding individual differences. One of the subtleties of this field is that we can test whether an instrument is an accurate measuring device without knowing exactly what it is that is being measured. Measurement accuracy is referred to as *reliability* or internal consistency. For example, for a test made of multiple items, scores on the different items should be intercorrelated if they relate to some common underlying quality. Similarly, different tests of EI should be highly correlated, just as two thermometers should show similar temperature readings; if not, one or both must be a poor instrument. Only when reliability is established—that is, the test measures some quality accurately—can we ask what is being measured. This latter process relates to the notion of *validity*: a test for EI should predict criterion variables, such as real-life outcomes believed to reflect EI, including measures of life success and satisfaction.

Further progress requires a brief digression to introduce the single most important statistic of differential psychology, the *correlation coefficient*. One of the most important issues that the psychometrician is called upon to solve is determining the degree that psychological tests are linearly associated. Various measures of statistical association and dependence are available (Carroll, 1961), although far and away the most frequently used measure is the Pearson correlation coefficient (denoted r). This coefficient provides an indication of the degree to which two variables assess the same thing (i.e., the same underlying individual-differences construct). A value of 1.00 indicates perfect correlation (i.e., identity), and a value of -1.00 indicates that the two variables are entirely opposite qualities. Between these limits, the correlation coefficient indicates the degree to which there is similarity or overlap in the individual-differences constructs under investigation (Carroll, 1993), with a zero value indicating that there is no linear association at all. Correlations must be calculated and interpreted with caution; they are subject to various biases and open to different interpretations (see Cronbach, 1990).

Existing differential psychology offers a blueprint for identifying intelligence-related constructs through test development and statistical analyses in which calculations of various correlations feature prominently. In chapter 2 we discuss this blueprint at length, along with the statistical and conceptual instruments that can guide us through uncharted territories, to discover whether indeed there is any substance to EI.

The theoretical context

To understand what is being measured with a given test of a psychological construct, we require a theory. For the most part, existing EI “theory” is primarily structural and descriptive in nature. That is, the theory is little more than a list of qualities deemed central, and does not go much beyond the initial conceptualization. Structural approaches of this kind were very prevalent in early studies of differential psychology. In recent work, however, such approaches are often criticized for providing description rather than explanation. Understanding EI in more depth entails identifying psychological processes that control the outcome of emotionally significant encounters. Perhaps the emotionally intelligent person has a brain that handles signals of threat and challenge more effectively than the brain of someone low in EI. Alternatively, EI might relate to the information-processing routines that encode

emotional information and analyze its implications for response (i.e., to efficient “emotional software”). Goleman (2001) provides a somewhat speculative account of links between neocortical and limbic systems of the brain that may support EI. Salovey et al. (1999), on the other hand, relate EI to cognitive processes such as coping and rumination. However, process accounts of EI are in their infancy and, in our view, fail to make sufficient contact with existing theory. Furthermore, accounts of what it means to be emotionally intelligent at any given time require supplementation with developmental accounts of how emotional competence is acquired in childhood.

We will explore a possible conceptualization of EI as an index of the person’s overall *adaptive competence* in encounters that provoke emotion (Matthews & Zeidner, 2000). Perhaps the emotionally intelligent person is someone who sizes up encounters quickly and accurately, and chooses a strategy for dealing with the encounter that is effective in maximizing personal gains, while maintaining good relationships with the other persons involved. Such a definition has several potential advantages. First, it distinguishes EI, as an underlying latent ability, from the outcomes of emotional events. If EI is no more than a running index of success or failure, the concept has no explanatory power. Second, the definition relates EI to handling personally significant events, rather than to some abstract quality detached from the external world. Third, it highlights EI as a moderator of process and change. The emotionally intelligent person is not just successfully adapted but *adaptable*, in the sense of being competent to deal with new challenges. The cognitive and biological processes that control adaptation may operate differently in high- and low-EI persons, and are of prime interest in theory development. Theory should also explain factors controlling long-term developmental changes in EI. Fourth, it links EI to the person in his role as an active agent, attempting to take charge of situations and deal with them proactively as well as reactively. One of the essential elements of theory is how the person controls and regulates emotional events.

At the same time, there are also significant difficulties in developing a conceptualization of this kind, notably that individual differences in adaptability may be as hard to conceptualize and assess as EI itself (see Matthews & Zeidner, 2000). In attempting to relate EI to adaptation, we will review the adaptive processes specified by existing biological and cognitive models. The fundamental question is whether there are individual differences in some configuration of adaptive processes that might be identified with EI. Conversely, we might find that individuals differ

more in style of adaptation than in overall efficiency. Different persons may be better at satisfying different adaptive goals. For example, one person might find fulfillment through career success, and another person through raising children, and their competencies in handling emotion might reflect these different orientations.

The applied context

A central element underlying EI is the impetus to improve emotional functioning in real life. Individuals may enjoy happier, more fulfilled lives if they have better awareness and control of their own emotions and those of others. Organizations benefit from the increased productivity, teamwork, and organizational commitment of emotionally intelligent persons. Society, in general, gains from alleviation of problems that may result from poor emotion-management skills, such as violent crime, drug abuse, and some forms of mental illness. Goleman looks forward “to a day when education will routinely include inculcating essential human competencies such as self-awareness, self-control and empathy, and the arts of listening, resolving conflicts, and cooperation” (1995, p. xiv).

As in the case of theory, there is a considerable body of existing knowledge that is not always adequately acknowledged by proponents of EI. Clinical psychology offers a plethora of therapeutic techniques for improved emotion management, especially in the fields of anxiety and mood disorders. For example, cognitive-behavioral therapies aim to correct faulty cognitions that generate negative emotions inappropriate to the person’s actual life circumstances. Occupational psychology offers stress-management techniques and programs for motivational enhancement. Dealing with the emotional problems of students has been a central part of educational and school psychology since the beginnings of these disciplines. Again, we must ask what research on EI can add to these efforts, other than a cheerleading function that raises a flag for the importance of emotion in real life. There are two tentative answers. First, “emotional dysregulation” may define a specific set of problems that have not been sufficiently recognized in existing practice. Emotion dysregulation may be distinct from other sources of emotional problems, such as oversensitivity to threat (in clinical anxiety) or poor social skills (in occupational psychology). Writers such as Goleman (1995) tend to cluster together different sources of emotional dysfunction, but perhaps a more differentiated view would pay practical dividends. Second, practitioners in applied fields may have been improving EI without

realizing it. Perhaps a common element overarches good clinical, occupational, and educational practices, which, in turn, raises EI. If so, an explicit understanding of EI as a focus for real-world interventions may improve existing practice and suggest new techniques for hitherto intractable problems.

Summary

In sum, we have argued that the research needed to build a science of EI has three pillars: reliable and valid measurement, process-based theory, and practical application. It would be a mistake to construct any of these supports without considering the very extensive theoretical and applied research already dealing with emotional aptitudes and competencies. Thus, it needs to be demonstrated that tests of EI measure something new, i.e., that EI is distinct from existing dimensions of individual differences. Similarly, a theoretical account of EI must differentiate the biological and cognitive processes supporting emotional competence from those processes that are known to underpin existing personality, emotional, and intelligence dimensions. Finally, claims concerning the importance of EI in applied domains also hinge on a demonstration that is distinct from concepts, procedures, and techniques that are more fully understood.

Chapter Synthesis and Preview

We have seen that current conceptions of EI have both strengths and weaknesses. On the positive side, there are promising descriptive accounts of attributes of EI, such as self-awareness, empathy, and effective coping skills. Inside the academic community, we sense a genuine excitement surrounding the possibility that psychologists may have overlooked or underestimated a major personal quality. Educationalists also appear much enamored with the EI concept, since it raises the possibility of using emotional skills as tools for tackling social problems such as violence, drug addiction, and social alienation. There are also various measures of EI and its constituent attributes that have sufficient reliability and validity to justify their use as research instruments, notably the MEIS/MSCIEIT (Mayer, Salovey, et al., 2000) and the EQ-i (Bar-On, 1997).

On the negative side, there are significant problems in the conceptualization and assessment of EI. We cannot even be sure that different measures of EI are assessing the same underlying construct. The per-

sonal attribute that is the target of measurement efforts is hazily defined, largely in terms of everyday “implicit” qualities, rather than constructs explicitly derived from psychological theory. Distinguishing EI from intelligence, personality, and emotion itself also presents serious conceptual and empirical problems.

Earlier in the introduction we tendered a mission statement—that this book would attempt to separate the scientific aspects of EI from those that appear more ephemeral, market-driven, and pseudoscientific. The research agenda that we have outlined serves to provide us with both general principles and a logical structure to achieve this goal. In the remainder of the first part of this book we draw together some of these basic conceptual and assessment issues. Our aims include clarifying the underlying psychology of emotion and intelligence, reviewing the success of empirical studies of EI to date, and identifying some possible developmental antecedents. In the second part we move on to a detailed evaluation of the status of EI as an index of individual differences in emotional adaptation, covering biological and cognitive processes in emotion, stress and coping processes, and personality theory. In the third part we look at whether research on EI adds to existing practical techniques for enhancement of emotional functioning in clinical, occupational, and educational arenas. Our conclusions reflect an integration of our analyses of issues pertaining to measurement, theory, and application.

Prior to embarking upon our journey of critically evaluating these relevant literatures, we try to attune the reader more fully to major issues, concepts, terminology, and procedures embedded inside our attempt to develop a scientific account of EI. In what we see as a companion chapter to this introduction, we will focus upon the standards one might expect of theory, research, and practice in the area, taking pains carefully to delineate all assumptions. Psychometric and philosophical concepts will be clearly laid out, and some overarching principles explained. In short, while the context of EI has been set in the present chapter, chapter 2 will introduce the scientific frames of reference that are essential to a full appreciation of the content, scope, and vision of the current volume.