

## Trait Emotional Intelligence

### Moving Forward in the Field of EI

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Two constructs of emotional intelligence (EI) should be distinguished based on the measurement method used in the operationalization process (self-report, as in personality questionnaires, or maximum-performance, as in IQ tests; see Petrides & Furnham, 2000, 2001, 2003). *Trait EI* (or “trait emotional self-efficacy”) concerns emotion-related dispositions and self-perceptions measured via self-report, whereas *ability EI* (or “cognitive-emotional ability”) concerns emotion-related cognitive abilities that ought to be measured via maximum-performance tests. The conceptual differences between the two constructs are summarized in Petrides, Furnham, and Frederickson (2004; see also Table 6.1). These differences are directly reflected in empirical findings, which reveal very low, often nonsignificant, correlations between measures of trait EI and ability EI, thereby supporting an explicit distinction between the two constructs (Engelberg & Sjöberg, 2004; O’Connor & Little, 2003; Warwick & Nettelbeck, 2004). Findings that are fully in line with our theoretical position have also been reported by researchers who do not seem to espouse it (Brackett & Mayer, 2003; Zeidner, Shani-Zinovich, Matthews, & Roberts, 2005).

Along with others, we have maintained that the operationalization of ability EI is problematic because the subjectivity of emotional experience (e.g., Robinson & Clore, 2002; Watson, 2000) undermines the development of valid maximum-performance (IQ-like) tests. The heart of the problem concerns the inability to create items or tasks that can be scored according to truly objective criteria and that can cover the sampling domain of ability EI *comprehensively*. For example, the entire *intrapersonal* component of EI seems to be impervious to maximum-performance measurement because the information required to score as correct or incorrect answers to items like “I am aware of my emotions as I experience them” is available only to the individual who provides the answers. The use of alternative scoring procedures designed to create correct responses among a number

TABLE 6.1. Trait EI versus Ability EI.<sup>a</sup>

<i>Construct</i>	<i>Measurement</i>	<i>Conceptualization</i>	<i>Expected Relationship to g</i>	<i>Construct Validity</i>	<i>Measures</i>
Trait EI <sup>b</sup>	Self-report	Personality trait	Orthogonal Unimportant for construct validity	Consistent with models of differential psychology Discriminant and incremental validity vis-à-vis personality Concurrent and predictive validity with many criteria	TEIQue
Ability EI	Performance-based	Cognitive ability	Moderate-to-strong correlations Crucial for construct validity	Inconsistent with models of differential psychology Awkward scoring procedures Limited concurrent and predictive validity	MSCEIT

<sup>a</sup>Trait EI and ability EI are unrelated to “mixed” and “ability” models of EI. For more details, see text.

<sup>b</sup>Entries in this row refer specifically to the trait emotional intelligence (emotional self-efficacy) conceptualization and do not generalize to other models or to self-report measures other than the TEIQue. For more details, see text.

of equally logical alternatives leads to a host of conceptual, psychometric, and empirical problems that have been repeatedly discussed in the literature (e.g., Day & Carroll, 2004; Roberts, Zeidner, & Matthews, 2001). A succinct analysis from a scientific perspective of the implausibility of EI as a new cognitive ability is given in Brody (2004).

It has been pointed out that it is perfectly possible for trait EI and ability EI to “co-exist” (e.g., Tett, Fox, & Wang, 2005). We would agree that our view of them as different constructs implies that the operationalization of one does not have implications for the operationalization of the other. Indeed, it is irrelevant for our purposes whether ability EI will ever be accepted into the mainstream taxonomies of human cognitive abilities (Carroll, 1993). Nevertheless, our prediction is that this construct will eventually find its place along the ever-growing number of pseudo-intelligences (19 on last count; Furnham, 2005) on the fringes of scientific psychology (Deary, 2001; Gottfredson, 2003).

### How Should EI Be Conceptualized: As a Competence, a Skill, an Adaptive Outcome, a Set of Cultural Beliefs, or Some Other Construct?

Any new individual differences construct should be conceptualized in ways that are consistent with existing models of differential psychology. Constructs that contradict established knowledge in a field should be swiftly rejected or fundamentally transformed, unless the theories and data on which they are predicated justify a paradigmatic shift.

We believe that the developing conceptualization of EI as a personality trait (e.g., Petrides et al., 2004; Petrides, Niven, & Mouskounti, 2006) is the one that best fulfills the prerequisite of consistency. Note that trait EI is to be distinguished from other models associated with self-report questionnaires of EI, most of which are psychologically incomplete, incoherent, or both. Prime examples are all those models utilizing self-report questionnaires, but theorizing about abilities, capabilities, and competencies. At present, it is only through the perspective of trait EI theory that the results from self-report questionnaires can be linked to mainstream personality psychology.

Trait EI theory provides an example of how individual differences research can sift through and transform ideas, speculations, and opinions into psychological constructs that can be incorporated into its extant taxonomies. Of course, the resultant constructs may have little in common with the ideas they have sought to operationalize scientifically, as is the case with trait EI and the various notions of Bar-On (1997), Gardner (1983), Goleman (1995), Mayer and Salovey (1997), Thorndike (1920), and others. The trait EI (trait emotional self-efficacy) label helps distinguish this specific construct from other approaches in the field.

### Is the Concept of EI Compatible With Existing Theories of Emotion and of Cognitive Intelligence?

If one views EI as an abstract theoretical system (e.g., Greenspan, 1989), then it could be argued that it is, at least partially, compatible with certain approaches to the study

of emotion (for example, the dynamic systems approach of Lewis & Douglas, 1988). However, it should be stressed that EI, in most of its forms and guises, is hypothesized to encompass some form of emotion-related *individual differences*. Therefore, as already noted, any operationalization of the construct must be compatible, first and foremost, with existing theories of differential psychology. One explanation for the seeming muddle in the area of EI is that individuals with no significant presence in the scientific literature on differential psychology have suddenly emerged as “pioneers” and “experts” on all aspects of individual differences and psychometrics. The various conceptions of ability EI (e.g., Geher, Warner, & Brown, 2001; Mayer, Salovey, Caruso, & Sitarenios, 2003) are incompatible with existing theories and models of individual differences (see Brody, 2004). The problem that ability EI operationalizations face is as simple as it is fundamental: The subjectivity of emotional experience undermines the development of items or tasks that can be scored according to truly veridical criteria and that can cover the sampling domain of the construct in its entirety. The scoring procedures that ability EI tests utilize in order artificially to objectify emotional experience, thus making it amenable to IQ-type scoring, produce scores that are psychologically meaningless. It follows that correlating these scores with external criteria cannot shed any light on the nature and validity of this construct.

In contrast, the conceptualization of emotional intelligence as a personality trait at the lower levels of trait taxonomies (e.g., Petrides & Furnham, 2001; Petrides, Pita, & Kokkinaki, in press) is consistent with existing models of individual differences. Note that trait EI is explicitly hypothesized to lie outside the realm of human cognitive ability (Carroll, 1993). Hitherto, this hypothesis has been corroborated in many independent studies that have reported near-zero, or even negative, correlations between trait EI questionnaires and IQ tests (Derksen, Kramer, & Katzko, 2002; Newsome, Day, & Catano, 2000; Petrides, Frederickson, & Furnham, 2004; Saklofske, Austin, & Minski, 2003; Van der Zee, Thijs, & Schakel, 2002; Warwick & Nettelbeck, 2004).

As the theory and nomological network of the construct develop and expand, we have little doubt that links and commonalities with existing theories of emotion will become apparent. Indeed, we are hoping that trait EI theory will contribute toward bridging the gap between experimental and correlational accounts of emotion.

### What Are the Key Components, Facets, or Branches of EI?

The sampling domain of trait EI (see Table 6.2) was derived from a content analysis of early models of EI. The rationale was to include core elements common to more than a single model, but exclude peripheral elements appearing in only one specific conceptualization. This is analogous to procedures used in classical psychometric scale development, whereby the commonalities (shared core) of the various items comprising a scale are carried over into a total (internally consistent) score, with their random or unique components (noise) being canceled out in the process. The systematic nature of this method is to be contrasted with the haphazard procedures on which other models

TABLE 6.2. The adult sampling domain of trait emotional intelligence.

<i>Facets</i>	<i>High scorers perceive themselves as...</i>
Adaptability	flexible and willing to adapt to new conditions.
Assertiveness	forthright, frank, and willing to stand up for their rights.
Emotion expression	capable of communicating their feelings to others.
Emotion management (others)	capable of influencing other people's feelings.
Emotion perception (self and others)	clear about their own and other people's feelings.
Emotion regulation	capable of controlling their emotions.
Impulsiveness (low)	reflective and less likely to give in to their urges.
Relationship skills	capable of maintaining fulfilling personal relationships.
Self-esteem	successful and self-confident.
Self-motivation	driven and unlikely to give up in the face of adversity.
Social competence	accomplished networkers with superior social skills.
Stress management	capable of withstanding pressure and regulating stress.
Trait empathy	capable of taking someone else's perspective.
Trait happiness	cheerful and satisfied with their lives.
Trait optimism	confident and likely to "look on the bright side" of life.

are predicated, whereby the inclusion or exclusion of facets is typically the outcome of unstated or arbitrary decisions. Nevertheless, as we previously noted (Petrides & Furnham, 2001, p. 428):

It cannot be expected that there will be complete consensus as regards the appropriateness of the facets that have been included [in Table 6.2]. Asking what precisely should be part of a construct is like asking what sports should be in the Olympics; neither question can be answered objectively. Consequently, it is possible that some researchers may feel that certain changes need to be made to the above domain. Nevertheless, [Table 6.2] can be used as a guide for the development of comprehensive trait EI inventories. It must also be noted that the facets in this table should be expected to blend through relatively high correlations and therefore they may not be perceived as factors in a statistical sense.

More important, as the theory develops and the empirical base expands, it is inevitable that this sampling domain will have to be amended and adjusted to reflect theoretical and empirical developments. As Zuckerman (1996) pointed out, constructs are not engraved in stone, but chalked on slate and they evolve in response to data and facts.

### How Is EI Distinct From Existing Personality and Ability Constructs? Could a Multistratum Psychometric Model Integrate a Dimension or Dimensions of EI With Existing Personality and Ability Constructs?

Trait EI is hypothesized to occupy factor space at the lower levels of personality hierarchies (e.g., Petrides & Furnham, 2001; Petrides et al., in press). Consequently, it is not distinct from personality constructs, but part of them. In a directly relevant paper, De Raad (2005) located trait EI within the Big Five circumplex and concluded that it comprises rather scattered areas of the Big Five domain and correlates with at least four of the five basic personality dimensions. These results are fully in line with Petrides and Furnham (2001) and Petrides et al. (in press), who carried out similar analyses within hierarchical trait structures. At this point, it is worth emphasizing the capacity of trait EI theory, which views the construct as a lower order personality dimension, to provide an explanation for such findings. Indeed, this specific example illustrates the hollow foundations of labels and constructs like “EQ,” “self-report EI,” and so forth, whose inability to accommodate results like the foregoing has repeatedly led to erroneous conclusions about the construct’s alleged lack of discriminant validity.

A related criticism that has been leveled against the operationalization of EI as a personality trait is that it has little or no incremental validity over the basic personality dimensions (e.g., Davies, Stankov, & Roberts, 1998; MacCann, Roberts, Matthews, & Zeidner, 2004; Mayer, Salovey, & Caruso, 2000). There is a lot to be said about the concerted focus on incremental predictive validity, which often diverts attention from the more important issue of variance explanation (as distinct from variance prediction).<sup>1</sup> In any case, a strictly empirical examination of this criticism quickly leads to the conclusion that it is unfounded. There is an expanding body of evidence showing that trait EI has incremental validity vis-à-vis a wide range of criteria both over the Big Five (Extremera & Fernández-Berrocal, 2005; Furnham & Petrides, 2003; Palmer, Donaldson, & Stough, 2002; Saklofse et al., 2003; Van der Zee & Wabeke, 2004) as well as over the Giant Three personality frameworks (Petrides et al., 2004; Petrides et al., in press).

As regards the possibility of integrating a dimension, or dimensions, of EI within existing personality or ability taxonomies, we should like to stress three points. First, we submit that any EI “theory” or “model” that fails to explain how the construct fits within these taxonomies should be seriously questioned. There is a glut of “novel” constructs (usually involving new types of “intelligence,” such as emotional, personal, social, etc.) that ignore the structural maps of psychology and impede the accumulation of findings that is crucial to the development of the discipline (Eysenck, 1997). The findings from the trait EI research program suggest that the natural home of the growing number of pseudo-intelligences is within personality trait hierarchies.

Second, we would argue that our goal should be to integrate complete EI theories or models, as opposed to isolated facets or dimensions, into the taxonomies of individual differences. Especially as far as ability EI is concerned, it is tempting to try to reduce elaborate models to narrow and specific facets, such as “emotion recognition” or “emotion perception” that may be more amenable to objective testing (see Austin, 2005; Davies et al., 1998). There should be no doubt, however, that the mere relabeling of, say, “emotion perception” as “emotional intelligence” constitutes semantic wizardry, rather than scientific progress. Still, clear discrepancies between theoretical models and measurement vehicles are manifest even in those cases in which both are developed by the same individuals.

For example, Mayer and Salovey (1997) present a model comprising no fewer than 16 convoluted facets (e.g., “ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey”), which are then reduced to four simplistic dimensions in their test (Mayer et al., 2003). Of course, this is a secondary issue compared to the terminal problem of the lack of objectively correct responses in that model, but it does provide a useful illustration of a limitation that is very common in the literature.

The third point we would like to emphasize is that the operationalization of EI as a personality trait is specifically aimed at integrating the construct into the established trait taxonomies. This operationalization is consistent not only with the mainstream theories of personality, but also with the bulk of the available evidence from multiple studies in different domains. Thus, trait EI has consistently shown near-zero correlations with IQ tests (Derksen et al., 2002; Petrides et al., 2004), as expected given the general independence of personality and cognitive ability (Eysenck, 1994; Jensen, 1998) and consistently high correlations with the basic personality dimensions (Tett et al., 2005), as expected given its status as a lower order personality construct (Petrides & Furnham, 2001). Based on our analyses of over three dozen independent data sets using many different instruments, we would estimate that the variance overlap between trait EI and the Big Five is in the order of 65% (range 50%–80%). In light of these facts, any model that views the construct as anything other than a personality trait is problematic.

### How Does EI Change Over the Life Span, Quantitatively and Qualitatively?

At this stage, it is not possible to give a complete answer to this question due to a dearth of relevant data. A related and, from the perspective of trait EI theory, more pressing issue concerns the temporal stability of the construct. Conceptualizing EI as a personality trait implies that the constellation of emotion-related self-perceptions and dispositions it comprises is generally stable over time and across situations. Test-retest data over a 1-year period are consistent with the theory, showing global trait EI correlations of about .7–.8 (Petrides, 2001; see also Tett et al., 2005). Parker, Saklofske, Wood, Eastabrook, and Taylor (2005) reported a temporal stability for global trait EI scores in the order of .56. However, this lower value was based on a

3-year period and a sample that consisted exclusively of young adults. It should also be noted that none of the values reported above has been corrected for score unreliability.

For very long periods (e.g., during adulthood), it is possible only to state, but not test due to lack of appropriate data, a prediction stemming from trait EI theory, namely that scores should show some increase with age as people become less emotional and better socialized (Costa et al., 2000). On an earlier normative dataset of the Trait Emotional Intelligence Questionnaire Version 1.50 (TEIQue v. 1.50;  $N = 1152$ ; mean age = 31.58 years;  $SD = 11.56$ ), global trait EI scores correlated at  $r = .16$  with age. We have observed effects of similar size with the short form of the TEIQue (TEIQue-SF; Petrides & Furnham, 2006; see also Parker et al., 2005). However, these data do not extend into old age, which prohibits testing for theoretically plausible curvilinear effects (especially quadratic components). Furthermore, the data are cross-sectional and, as a result, they cannot provide clear answers in relation to developmental trajectories.

The part of the question concerning qualitative change is important from a theoretical as well as a practical perspective. The standard practice of adapting psychometric instruments that have been specifically developed with reference to adults for use with children and adolescents involves the fundamental, and virtually always untested, assumption that the construct concerned is developmentally invariant. It is true that even expert psychometricians have sometimes assumed that sampling domains and factor structures derived from adult samples and literatures can be automatically adapted for use with children. However, in light of the profound developmental personality changes during childhood and adolescence, this assumption is probably unwarranted.

We have been working toward the identification of the sampling domain of trait EI for children aged between 8 and 12 years. The early stages of this research suggest there are considerable qualitative differences from the current adult sampling domain. Consequently, the TEIQue measures for children should not simply consist of syntactically simplified items at the appropriate reading level, but, more important, they must be based on a conceptualization and sampling domain that are developmentally suitable for this particular age group. The way forward in this direction is to provide the field with a sampling domain derived from a comprehensive content analysis of the literature on children's temperament and socioemotional development, work that is currently undertaken within the trait EI research program.

Quantitative and qualitative changes in trait EI should be viewed as partial functions of socioemotional development (Abe & Izard, 1999) and of the broader development of the self (see Berk, 2001; Lewis, 2000; Saarni, 1999), both of which emerge from the interaction of maturational processes (Izard, 1991), cognitive development (Kagan, 1978), and social experiences (Dickson, Fogel, & Messinger, 1998). It remains to be seen whether, in terms of its long-term stability, trait EI is more similar to personality traits or to affective traits, which are comparatively more variable (Vaidya, Gray, Haig, & Watson, 2002).



## How Might EI Contribute to Adaptation to Real-World Social Environments?

Research that is broadly relevant to this question has revealed clear and replicable associations between trait EI and coping styles (positive with adaptive and negative with maladaptive styles). These associations have held up in the presence of the Giant Three and the Big Five personality dimensions and have also been replicated cross-culturally (Petrides et al., in press).

If we extended the scope of the question to include relationships between trait EI and criteria from the domains of educational, organizational, and child psychology, it is evident that a large empirical base has been emerging over the last few years. For example, it has been found that high trait EI scores are positively related to peer-rated sociability in children (Petrides, Sangareau, Furnham, & Frederickson, 2006), fulfilling interpersonal relationships (Schutte et al., 2001), social network size (Austin, Saklofske, & Egan, 2005), and job satisfaction in employed adults (Petrides & Furnham, 2006).

It needs to be registered, however, that trait EI theory does not view the construct as an ability of any kind. Consequently, it is possible, indeed likely, that there are contexts in which high trait emotional self-efficacy (trait EI) is potentially maladaptive. For example, in Petrides and Furnham (2003), participants with high trait EI scores showed greater mood deterioration following the presentation of a short distressing video segment compared to participants with low scores. Maladaptive effects are more likely to be observed in studies using objective data from laboratory or real-life settings, rather than in questionnaire studies based exclusively on self-report. Questionnaire studies almost invariably find that trait EI is positively correlated with socially desirable variables and negatively correlated with socially undesirable variables. Before results from such studies start to interact with a misunderstanding of trait EI theory to lead to erroneous conclusions (e.g., high scores are always desirable because they have generalized adaptive value), it is important to take into account concerns about item overlap, criterion contamination, and common method variance, all of which inflate the intercorrelations in self-report research.

### Proliferation of Questionnaires

Self-report questionnaires of EI continue to proliferate at a rate that has led to requests for a moratorium (Roberts, Schulze, Zeidner, & Matthews, 2005). From our perspective, these questionnaires are best understood as flawed measures of trait EI that share, or can be made to share, variance with the TEIQue.<sup>2</sup> In fact, this is the very reason that trait EI theory can offer a context for the interpretation of the results from these questionnaires. Indeed, it is only through the perspective of trait EI theory that these results can be linked to mainstream differential psychology research.

However, relying on trait EI theory to interpret results from various EI questionnaires can be problematic for several reasons. For example, it increases the likelihood of confounding trait EI theory with the promotional documentation accompanying these measures. The primary basis on which we recommend the TEIQue for use in research and applied settings is that it provides a direct gateway to trait EI theory.<sup>3</sup> The TEIQue

aims to capture comprehensively the affective aspects of personality, a goal that gives rise to a particular factor structure and, more important, a particular way of distributing and interpreting variance. The core advantages of trait EI theory, and of the TEIQue as its operationalization vehicle, are to be found at the level of conceptual content and explanatory power, more so than the level of predictive and incremental utility.

### Proliferation of Labels

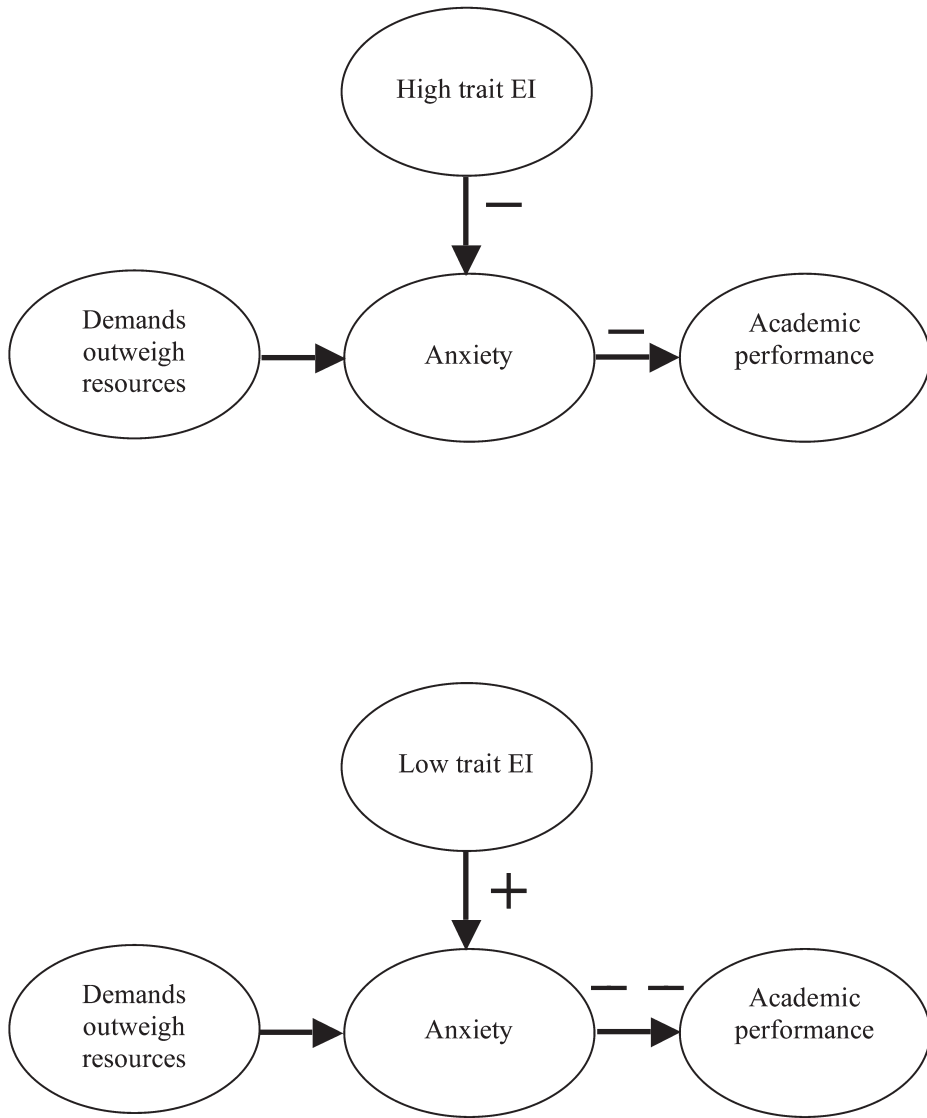
The distinction between trait EI (or “trait emotional self-efficacy”) and ability EI (or “cognitive-emotional ability”; Petrides & Furnham, 2000, 2001) is unrelated to Mayer et al.’s (2000) distinction between “ability” and “mixed” models of EI. Our differentiation is based on the method of measurement (self-report versus maximum-performance) and views the resultant constructs as qualitatively different. In contrast, Mayer et al. (2000) attempt to differentiate on the basis of whether a model “mixes” cognitive abilities with other characteristics. If it does, it is a “mixed” model, and if it does not, it is an “ability” model. This confusing differentiation is at odds both with the principles of psychological measurement as well as with all empirical data showing that trait EI measures tend to inter-correlate strongly, irrespective of whether they are based on “mixed” or “ability” models.

Without further belaboring the point, distinguishing between constructs is different from attempting to distinguish between models, and only the former distinction is psychologically meaningful and empirically valid. A corollary of this is that ability EI should not be confused with “ability models” and trait EI should not be confused with “mixed models,” as has been the case in the past (e.g., Lyons & Schneider, 2005).

Confusion may also arise from labels mirroring trait EI (e.g., “self-reported EI,” “perceived EI,” “characteristic EI,” “self-perceived EI”). These should not be confused with trait EI theory. That is not to say that research under these labels is not empirically useful. Indeed, the findings of these studies should be closely monitored for their relevance to trait EI theory. On the other hand, without the theoretical framework provided by the trait EI conceptualization, these findings cannot be properly linked to theories of individual differences and, consequently, they cannot be properly interpreted.

### The Future of Trait Emotional Intelligence

Trait EI theory is only now beginning to take shape, and it is essential that it be developed in ways that are consistent with established knowledge in psychology. Research will have to be undertaken at many different levels, both basic and applied. As regards basic research, it will be necessary to explore issues pertaining to the identification of the sociobiological bases of the construct (e.g., twin studies), its measurement (e.g., assessment in children), its developmental trajectories (e.g., longitudinal studies), and its universality (e.g., cross-cultural studies). With respect to applications and the areas in which trait EI may have a role to play, we believe they are as broad and diverse as the areas in which emotion-related individual differences are relevant (see Figure 6.1 for an example from the domain of education).



**Figure 6.1.** The moderating role of trait EI in academic performance. This figure illustrates how trait EI moderates the negative effect of low cognitive ability on academic performance. Low-ability students find themselves in an intellectually demanding environment that overtaxes them cognitively and emotionally. Those high on trait EI are better able to deal with the resultant stress and have larger social networks, both of which help reduce the negative impact of anxiety on performance. In contrast, those low on trait EI find it difficult to deal with stress and are more likely to experience deficits in social support, which compounds the negative impact of anxiety on performance. The process applies to low-cognitive-ability students only (see Petrides et al., 2004)

The ongoing operationalization of emotional intelligence as a personality trait is leading to a general explanatory construct that may open up new avenues of research in emotion-related individual differences and shed new light on existing debates. Early findings from studies in diverse domains, including experimental (Mikolajczak, Petrides, Luminet, & Coumans, 2007), decision making (Sevdalis, Petrides, & Harvey, in press), and child development psychology (Mavroveli, Petrides, Rieffe, & Bakker, in press) corroborate the promising prospects of this research.

### Notes

1. The distinction between prediction and explanation is fundamental from a scientific perspective (see, e.g., Scriven, 1959). Anyone can put together a bunch of questions and correlate them with whatever criterion happens to be available, and anyone does. For example, it is entirely possible to achieve predictive correlations of similar magnitude using a personality measure based on Eysenckian theory, one based on obsolete Jungian theory, and one taken from the latest issue of *Cosmo*. It is in the *interpretation* of the results, which requires the existence of a valid theory, that the differences between the instruments will emerge.

2. Needless to stress, the authors of these questionnaires would disagree with this assessment and argue that their instruments measure some type of emotional ability, “emotional intelligence,” or “EQ.” As Zeidner, Roberts, and Matthews (2004, p. 240) note, “the leading questionnaire developers are quite explicit that they seek to measure an ability that predicts objective behavior.” Setting aside the question of what constitutes a “leading questionnaire developer,” it should be reiterated that the notion that mental abilities can be assessed by self-reports is psychometrically invalid. As we note elsewhere in the chapter, practitioners and, especially, researchers using these questionnaires must make appeal to trait EI theory for psychologically meaningful interpretations of their results.

3. All TEIQue forms, versions, and adaptations are available, free of charge, for research purposes.

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