



Emotional knowledge – the missing link of emotional intelligence¹

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Abstract: The paper is of a review nature. It revisits the existing definitions of emotional intelligence and emotional knowledge. While the constructs of emotional intelligence and emotional knowledge have existed in parallel in the literature for quite some time, researchers studying emotional intelligence seem to take little, if any, note of emotional knowledge, and those focusing on emotional knowledge rarely relate it to emotional intelligence. It should be noted that the definitions of both emotional intelligence and emotional knowledge refer to emotional information processing, and a comparison of the elements of the two constructs and their operationalizations reveals significant similarities. Indeed, different researchers have included the same elements in the scope of either emotional intelligence or emotional knowledge. The paper indicates the need to clarify the relationship between the two constructs and determining the degree of their interdependence and autonomy. Based on the literature review, a new definition of emotional intelligence was proposed. Emotional intelligence has been defined as a set of abilities used to acquire emotional knowledge, that is, to assimilate and analyze emotional information, to incorporate it into one's cognitive system, as well as to efficiently apply it in understanding and solving emotional problems. The proposed definition emphasizes the cognitive nature of emotional intelligence. It does not go beyond the generally accepted understanding of abilities, in contrast to some models. The definition also clarifies the relationship between emotional abilities and emotional knowledge. Adoption of the proposed definition of emotional intelligence has several major ramifications for an understanding of the development of emotional intelligence, its role in human functioning, as well as the operationalization of the construct. All these issues are discussed in the last part of the article.

Keywords: development, emotional intelligence, emotional knowledge, functioning effectiveness, measurement

1. Defining emotional intelligence

Despite the unabated interest of both academics and psychology practitioners, many aspects of emotional intelligence (EI) remain unclear. Even such a fundamental issue as its definition is subject to debate between two opposing paradigms. Some authors, such as Bar-On and Goleman, define EI very broadly as “an array of noncognitive capabilities, competences, and skills that influence one’s ability to succeed in the coping with environmental demands and pressures” (Bar-On, 1997, p. 16) or a different kind of wisdom (Goleman, 2020). EI is understood by them as a conglomerate of various qualities contributing to effective human functioning. For instance, the EI components distinguished by Bar-On (1997) are interpersonal and

intrapersonal skills, adaptability, stress management, and general mood, while those listed by Goleman (2020) include self-awareness, self-regulation, social skills, empathy and motivation. As can be seen, the proposals of Bar-On and Goleman, labeled as “mixed models” by other scholars (see e.g. Sfetcu, 2023), go far beyond the traditional meaning of the term “intelligence.” As such, they are likely to stir controversy and have indeed come under sharp criticism (see e.g. Kanesan, Fauzan, 2019). This is little wonder as the incorporation of diverse abilities, traits, as well as other emotional and non-emotional qualities in one construct gives rise to questions as to its boundaries and the legitimacy of using the term “intelligence” to describe it (see Matczak, Knopp, 2013). Therefore, in the opinion of the present author, the models of

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Bar-On and Goleman, while undoubtedly useful in explaining effective human performance, do not in fact represent EI (or even emotional competence), but rather broadly defined social competence.

Proponents of the other research tradition view EI as a certain set of abilities (instrumental dispositions) enabling emotional information processing. Notable representatives of this approach, Mayer and Salovey (Mayer, Caruso, Salovey, 2016), listed the following emotional abilities: perception, appraisal, and expression of emotions, emotional facilitation of thinking, understanding and analyzing emotions, and regulating emotions, with each ability being further subdivided into more specific categories. This understanding of EI as a set of abilities is closer to the traditional way of defining intelligence and falls within the scope of an instrumental disposition.

Unfortunately, the avid interest in the EI construct has not been accompanied by sufficient efforts to broaden its theoretical underpinnings. The only major EI model meeting scientific criteria, proposed by Salovey and Mayer, has not been corroborated by empirical data, as some studies have produced two- or three-factor structures rather than a four-factor one. Also interrelationships between the various EI components remain obscure, and the autonomy of EI with respect to other constructs is yet to be established (see e.g. Matczak, Knopp, 2013).

Regrettably, a review of literature shows that researchers primarily focus on application studies, EI training, and vindication of its importance for different aspects of human functioning, paying much less attention to developing its theoretical foundations, such as a comprehensive definition or an accurate model. Indeed, the current theoretical status of the construct is far from clear. The following section presents a new definition of EI, which is largely based on the concept of emotional knowledge (EK), and discusses the implications of such an understanding of the construct for further studies.

2. Defining emotional knowledge

While the constructs of emotional intelligence (EI) and emotional knowledge (EK) have existed in parallel in the literature for quite some time, researchers

studying EI seem to take little, if any, note of EK, and those focusing on EK rarely relate it to EI. In light of the scarcity of information about the relationship between these two concepts, it seems necessary to elucidate their mutual position, and also to include EK in an understanding of EI and incorporate it in research on the latter.

The history of the concept of EK is somewhat longer than that of EI. The former first emerged in the psychological literature on emotional development in the 1970s (see Izard, 2001). A review of the latest works on EK shows that definitions of that construct, similarly to those of EI, are highly varied. Knowledge can be most broadly described as “information and understanding of a specific topic or of the world in general, usually acquired by existence or by learning; an awareness of the existence of something” (APA Dictionary of Psychology, 2023). This definition emphasizes two aspects: information and understanding, and it seems that EK should be defined in a similar way in reference to information concerning emotions. However, it seems that many authors investigating EK go far beyond such an interpretation. While Izard’s definition (1971) of EK as the result of the process of acquisition of emotional experiences and their incorporation into the cognitive system is consistent with the general conceptualization of knowledge, some scholars have largely departed from that line. For instance, EK has been characterized as “the capacity to understand emotion in facial expressions, behavioral cues, and social contexts” (Trentacosta, Fine, 2009, p. 1), “the capacity to identify and articulate feeling states in others” (Berzenski, Yates, 2013, p. 464), or “a multifaceted construct that includes skills such as labeling emotions, recognizing emotion expression in others, and correctly attributing emotion states to a particular situation” (Heinze, Miller, Seifer, Locke, 2015, p. 241), “ability to identify and label emotions” (Brock, Kim, Kelly, Mashburn, Grissmer, 2019, p. 179), construct “comprises two distinct dimensions, namely emotion recognition and emotion situation knowledge” (Conte, Ornaghi, Grazzani, Pepe, Cavioni, 2019, p. 2; see also Sette, Bassett, Baumgartner, Denham, 2015). Some of these definitions actually mention specific components of EK. While there is still an ongoing discussion as to the structure of

EK at different stages of human development, the generally accepted elements of EK, usually described in terms of abilities or skills, include: the recognition and comprehension of emotions, the identification of emotion-eliciting situations as well as of the causes and effects of emotions, the use of emotional language, the knowledge of emotion regulation strategies, and the knowledge of display rules (cf. Izard, 2001; Ornaghi, Brazzelli, Grazzani, Agliati, Lucarelli, 2016; Sette et al., 2015). These components are most often written about in terms of *abilities* or *skills* (in fact, the concept of „*ability*” also appears in some general definitions of emotional knowledge; see above). Based on the definitions mentioned earlier, it can be concluded that some researchers dealing with emotional knowledge are inclined to consider it in terms of abilities or skills.

It should be noted that the definitions of both EI and EK refer to emotional information processing, and a comparison of the elements of the two constructs and their operationalizations (discussed in the subsequent paragraph) reveals significant similarities. Indeed, different researchers have included the same elements in the scope of either EI or EK. Therefore, the question arises as to whether these constructs are entirely autonomous of each other, and, if not, then to what extent they overlap? It appears that the existing terminological confusion is attributable to the fact that many definitions of EK, overly departing from the general understanding of the term “knowledge,” foray into the domain of EI, while the definitions of EI do not appreciate the significance of EK.

3. Emotional intelligence vs. emotional knowledge

One of the few researchers who have explored the relationship between EK and EI is Izard (2001), who seems to treat EK and EI as competing concepts with the former more aptly describing the adaptive functions of emotions in light of the current state of research.

Regardless of what EK structure one adopts, it appears to be inextricably intertwined with EI defined as a set of abilities to process emotional information. The authors of the term “emotional intelligence,” Salovey and Mayer, have not given much attention to EK, suggesting that it is a set of

emotional information, with EI being the ability to apply it (Mayer, Salovey, Caruso, 2004). While this approach seems perfectly legitimate, for some reason Mayer and Salovey place EK only in the third branch of their EI model, that is, the ability to understand and label emotions (Mayer, Caruso, Salovey, 2016), which could be taken to imply that they refuse to acknowledge that the other emotional abilities are also underpinned by processing emotional knowledge.

In Poland, the relationship between EK and EI has been studied by Matczak and Piekarska (2011), who argue that EK is the “material” processed by EI, while EI contributes to the assimilation of emotional information, its analysis, and integration, and by the same token, to the acquisition of EK. Thus, according to them, EK is not only an input for EI, but also its output, which can be used as a reliable indicator for assessing the latter. Interestingly, similarly to Salovey and Mayer, Matczak and Piekarska consider EK mostly in the context of the third EI component of the ability model (the ability to understand emotions).

Notwithstanding, analysis of the literature on EK and EI, as well as on general intelligence, affords a perspective on EI that somewhat differs from the ability model and enables its closer integration with EK. In light of what is already known about EK and EI, it does not seem possible to separate the two constructs.

The approach to EI from the perspective of EK, which is postulated in this paper, stems from the tradition of research into general intelligence understood as the ability to learn and to use the acquired knowledge for adaptive purposes (see Sternberg, Detterman, 1986). Many definitions of general intelligence underline the aspect of learning, the acquisition of knowledge, and its use for adaptive purposes. For instance, Anderson (2006) defined intelligence as “that facet of mind underlying our capacity to think, to solve novel problems, to reason and to have knowledge of the world”. Also in the triarchic model of Sternberg (2000), the cognitive process subtheory contains a component of knowledge acquisition. Some concepts of intelligence practically equate intelligence with knowledge. An example is the theory of social intelligence by Cantor and Kihlstrom (1987).

If we analyze the ability model of EI and its components listed there, it turns out that they largely refer to EK. This applies not only to the previously mentioned third branch of the model, but also to all the others. The first component of EI described by Mayer and Salovey (Mayer, Caruso, Salovey, 2016) is the ability to perceive and express emotions. However, don't these abilities rely on emotional knowledge? After all, in order to notice and recognize a given emotion, first of all, it is necessary to be aware of its existence, and secondly, to know its expression. This is nothing else than emotional knowledge. Indeed, to express emotions in a way that can be understood by others, one needs to know emotion displays as well as the social rules and norms concerning emotional expression. Similarly, in order to name emotions, one has to know their linguistic labels. Also numerous studies show that emotional regulation would not be possible if the individual did not have adequate knowledge of the ways to cope with emotions (cf. Lucas-Molina, Quintanilla, Sarmento-Henrique, Martín Babarro, Giménez-Dasí, 2020). The least closely associated with EK seem to be the second branch of the model, namely, emotional facilitation of thinking. Nevertheless, it is rather clear that most of the emotional abilities postulated by Mayer and Salovey are based on the individual's awareness and knowledge of emotions. Thus, the assertion that EK belongs to only one component of EI, seems to be unsubstantiated.

Although the present work was largely inspired by the aforementioned paper by Matczak and Piekarska (2011), here the relationship between EI and EK is understood much more broadly, with the two concepts overlapping to a considerable degree. It is proposed that emotional intelligence is a set of abilities used to acquire emotional knowledge, that is, to assimilate and analyze emotional information, to incorporate it into one's cognitive system, as well as to efficiently apply it in understanding and solving emotional problems. At the same time, emotional knowledge is understood in line with the general knowledge definition given above (see APA Dictionary of Psychology, 2023). Thus, EK stands for awareness of emotions and

information about them. EK is not an ability or a set of abilities, although it is a prerequisite for them. On the other hand, the set of abilities known as EI contributes to the acquisition of EK, which it subsequently processes.

The proposed definition emphasizes the cognitive nature of EI. It does not go beyond the generally accepted understanding of abilities, in contrast to the mixed models. The definition also clarifies the relationship between emotional abilities and EK and has several major ramifications for an understanding of the development of EI, its role in human functioning, as well as the operationalization of the construct.

4. The development and structure of emotional intelligence

There is a general consensus among researchers that EI is not a monolithic construct, but rather a configuration of emotional abilities (in ability models) or of emotional abilities in conjunction with personality traits, competences, etc. (in mixed models). The EI definition proposed herein implies approaching its structure from the perspective of applying EK to emotional problems rather than from the viewpoint of EK structure alone, as EK is a very broad and somewhat nebulous construct without clear-cut boundaries between its various components. Knowledge about different aspects of emotions is not well differentiated, with blurred demarcation lines between its various segments. At the same time, EK is primarily of procedural nature: it manifests itself in solving emotional problems and determines the effectiveness of that process. Importantly, one EK component may be used to address different kinds of emotional problems, while different EK components may be applied to the same problem. Therefore, in considering EK, its procedural nature should take precedence over its structure. One should focus on types of emotional problems requiring different levels of EK and different methods of its deployment. Due to the great diversity of such problems, an exhaustive list cannot be provided, but the main types include: problems requiring an understanding

of emotional situations, labeling emotions, emotional regulation, recognition of emotional expression, comprehension of the function and significance of emotions in human actions, etc. (cf. Matczak, Knopp, 2013). Thus, for every emotional problem there is a corresponding ability which can be applied to cope with it, and so a classification of those abilities (which are EI components) cannot be complete, either.

In the opinion of the present author, it would be more important to identify developmental changes in the structure of EI rather than merely determine the number and nature of its components. There is a consensus among EI researchers that emotional intelligence is not an innate disposition and that it changes throughout one's lifetime (see e.g. Dolev, Leshem, 2017; Kuk, Guskowska, Gala-Kwiatkowska, 2019; Matczak, Knopp, 2019; Serrat, 2017; Zeidner, Matthews, Roberts, MacCann, 2003). However, the question as to the pathways and determinants of EI development remains open. Few empirical studies have explored the hierarchical structure of EI within the ability model, including the assumption that its branches can be further subdivided. Moreover, most research concerns EI in adults, with children receiving much less attention (e.g., Izard, 2001; Matczak, Knopp, 2013). Thus, it may be argued that EI research lacks a developmental perspective. It seems that initially one's knowledge of emotions is very incidental, fluid, and poorly specialized, and that with age it not only broadens, but also becomes more structured. Therefore, it may be expected that in children EI may have, e.g., a one-factor structure with more factors gradually developing over time, increasing the complexity of the construct.

The proposed definition linking EI to EK implies a certain way of understanding EI development. Humans are not born with EK, but, in accordance with Aristotle's notion, they are "*blank slates*" to be filled with EK. However, EK expands not only in terms of quantity, but also quality, as it gets incorporated into increasingly complex cognitive structures, becoming more structured and general. With age, EK may also be more effectively deployed, which is largely enabled by the process of gaining new emotional experiences. This entails a number of assumptions.

First, experiences are gained throughout one's lifetime, causing EI to evolve continuously. Obviously, in adulthood EI development is not as dynamic as in childhood, but further enhancement of emotional abilities is normal.

Second, EI levels may be expected to be positively correlated with the intensity and quality of emotional experience acquisition. It should be noted that one's emotional experiences are gained due to one's activities (mostly social and task-related, as these tend to elicit most emotions; see Matczak, Knopp, 2013), as part of what could be termed "development drive." Therefore, of the essence are those psychological qualities which motivate (or discourage) and drive (or inhibit) individuals with respect to acquiring emotional experiences. However, people do not exist in a vacuum as they always act in a certain context, including living conditions, culture, and the environment, which affect the intensity and quality of emotional experiences, and in this way shape EI development. Of particular importance is temperament, which determines how actively one seeks emotional experiences (high/low need for stimulation influences one's predisposition for certain types and intensity of experiences; see e.g. Strelau, 2016). The role of temperament in EI development has been noted by many researchers (see e.g., Matczak, Knopp, 2013, 2019; Sękowski, Berej, 2019; Zeidner et al., 2003).

Third, EI is affected not only by the intensity and quality of acquisition of emotional experiences, but also by the ability to assimilate and apply emotional knowledge. Especially important here are internal qualities, such as general intelligence (mostly fluid), which serves as a foundation for EI. It may be therefore argued that the effectiveness of application of one's emotional experiences varies depending on one's psychological makeup (see Matczak, Knopp, 2013).

Fourth, EI does not exist in isolation from other developmental aspects (in particular cognitive and linguistic; see Izard, 2001). Thus, certain levels of cognitive and linguistic abilities are prerequisite for reaching certain levels of emotional intelligence.

5. Measuring emotional intelligence

The assumption that EI is associated with the levels, structure, and application of emotional knowledge has serious ramifications for how it is operationalized. Indeed, there are two major conflicting operationalizations of this construct, represented by self-report questionnaires and performance tests, respectively (some other, experimental measures have also been developed, but have not gained wide acceptance). The former method is recommended for EI as defined by the mixed models, while the latter has been advocated for EI understood as a set of abilities (cf. Mayer, Caruso, Salovey, 2016).

Similarly to some other researchers, the present author believes that questionnaire instruments are not well suited for measuring any kind of intelligence whatsoever, irrespective of the definition adopted. First, such tools by nature produce a description of one's competences rather than abilities. They primarily concern *typical* rather than *maximal performance* as the respondents are asked how successful they are in everyday situations, and not how well they would perform given optimal motivation and conditions (for more on typical and maximal performance see, e.g. Petrides, Furnham, 2001). Second, being self-report instruments, questionnaires naturally draw on the subjective perspective of the respondents, and so in fact they do not even measure one's competences, but rather one's appraisal of them. In the case of EI, they evaluate one's perception of one's emotional competence; while that perception may be strongly correlated with EI, the two are not identical.

The above concerns notwithstanding, EI as defined in this paper does not lend itself to questionnaire measurement for yet other reasons. Human knowledge of any kind can be both of declarative and procedural nature (see, e.g. Cantor, Kihlstrom, 1987), and so it may be measured either by tasks referring directly to that knowledge (subjects replicate the required information) or by tasks in which subjects need to use that information to solve problems. The EI definition adopted herein strongly emphasizes the procedural nature of EK. To give an example, a test should evaluate not only whether a subject

knows the different aspects of anger display, but also whether he or she can deploy that knowledge to solve an emotion-related problem, such as recognizing anger in another person. Intelligence, as understood in this paper, primarily manifests itself in solving new, previously unknown problems, while self-report measures deal with known and typical situations.

Therefore, emotional intelligence should be measured by means of performance tests, just as traditional intelligence. This does not mean that one should discard the existing, quite successful, instruments. Analysis of those tests shows that they actually refer to emotional knowledge and its applications in solving emotional problems, and so they already measure the construct postulated herein. For instance, in the emotion recognition tasks included in the SIE-T test, the subject is shown a photograph of a person experiencing an emotion and asked to identify that emotion. Indeed, the completion of this task would not be possible without knowledge of emotion expression and its linguistic equivalents, and without appropriate application of that knowledge.

In this context, one should pay attention to yet another issue. As it was mentioned before, the definition of EI proposed in this paper affects the choice of determinants of its development. EK develops as a result of gaining emotional experiences by individuals finding themselves in different social and environmental conditions. By nature, EI is not and cannot be isolated from the cultural context, and so it must not be measured with culturally reduced tests. Obviously, it is true that some EI tests, have been adapted and successfully used across many countries. Indeed, a good instrument adaptation is characterized by the adjustment of its tasks to the local culture or by the removal of culturally confounding factors. However, it should be noted that despite the great popularity of the MSCEIT and its numerous adaptations, there are still insufficient data on the cultural invariance of its results. Therefore, one cannot conduct intercultural comparisons and it is not known whether the tasks are understood in the same way by members of different cultures. Second, one should bear in mind that culturally universal instruments can measure only that part of EI which is relatively independent of cultural factors,

without the possibility to operationalize the aspect of EI associated with a given cultural identity and culture-specific experiences. By striving to universalize EI (which is not necessarily empirically legitimate, as mentioned above) and divorce it from the cultural context, one runs the risk of missing insights into some of its main aspects, its complexity and diversity, as well as into culturally salient factors. Thus, the question arises as to whether one should entirely refrain from using culturally universal EI measures. In the opinion of the present author, this is not the case as some of them have been shown to be valid and reliable. However, EI measurement ought to be more sensitive to intercultural differences and culture-specific experiences shaping EI, as well as to its developmental paths, which calls for the development of tools that would take into account and emphasize the cultural context.

6. Emotional intelligence and human functioning

Claims made by some authors (see, e.g. Goleman, 2020) to the effect that EI is responsible for 80% of life success, or that it makes the greatest contribution to scholastic, professional, and interpersonal performance out of all human dispositions, are not borne out by the facts. While some significant correlations between EI and various indicators of performance effectiveness have been found (see e.g. Cajachagua Castro, Miranda Limachi, Chávez Sosa, Huancahuire-Vega, 2023; Drigas, Papoutsis, 2020; Guerra-Bustamante, León-Del-Barco, Yuste-Tosina, López-Ramos, Mendo-Lázaro, 2019; Jung, Yoon, 2016; MacCann, Jiang, Brown, Double, Bucich, Minbashian, 2020), they tend to be weaker than expected (see Matczak, Knopp, 2013).

The proposed definition of EI also has some implications for its relationship with the effectiveness of human functioning. In reference to the distinction

made by Petrides and Furnham (2001), EI appears to be an instrumental disposition determining maximal rather than typical performance. Within this paradigm, EI is a necessary, but not the only, prerequisite for effective functioning. Individuals with adequate EI and ability to apply it possess an effective instrument for coping with emotional distress. However, whether and how those individuals will in fact use that instrument depends on a range of other internal and external factors, such as motivation, personality traits, as well as the situations and conditions to which they are exposed. Consequently, although abilities to process emotional information are needed for effective functioning, they cannot guarantee it on their own. It follows from the above that expectations of very strong correlations between EI defined as the ability to acquire and deploy emotional knowledge in dealing with emotional problems and actual performance effectiveness is in principle unfounded.

Conclusion

Scientific endeavors are typically underpinned by theories verifiable by empirical studies. However, the great interest in the construct of EI and the considerable body of empirical investigations have not been accompanied by satisfactory theoretical efforts. Most researchers adhere to the few existing theoretical proposals, which either fail to meet the criteria of scientific rigor (as is the case with mixed models) or require refinement (as is the case with the ability model). While it may be worthwhile to subject the existing models to further empirical scrutiny, one should also seek new, improved and more complete theoretical concepts of EI. Analysis of the literature on EI shows that there are still more unknowns than knowns. The proposed definition of intelligence with its implications for an understanding of the development, role, and measurement of EI is hoped to provide a useful contribution to this field.

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