EMOTIONAL INTELLIGENCE AS AN INTELLECTUAL VIRTUE: THEORETICAL ANALYSIS AND EMPIRICAL ASSESSMENT

abstract

Virtue theory has long recognized the significance of emotion for cognition, yet little philosophical research has been dedicated to identifying an intellectual virtue related to emotion. Applying recent work in virtue epistemology reveals emotional intelligence (EI) to be an intellectual virtue, as analysis demonstrates EI's ability to enhance cognition. High EI persons better attend to epistemically-significant features of the environment, which could explain the significance of stakes for knowledge attribution. While testing did not confirm higher EI with stakes sensitivity (the hypothesis), study methods, including stakes vignettes, inadvertently caused the hypothesis to be disconfirmed.

keywords

emotional intelligence, virtue epistemology, experimental philosophy, stakes, knowledge attribution
It is not a fluke that Daniel Goleman’s *Emotional Intelligence* begins with an introduction entitled “Aristotle’s Challenge,” that itself, appropriately, opens with the philosopher’s words concerning “being angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way” (Goleman 1994: ix). Aristotle’s words reflect virtue theory’s traditional appreciation of emotion, and a recent volume advancing virtue epistemology, Robert C. Roberts and E. Jay Wood’s *Intellectual Virtues*, has much to add to this legacy of emotional analysis, particularly to improve theoretical and experimental research on emotional intelligence (EI), the focus of this paper. Section I is devoted to outlining emotional intelligence, in particular John Mayer and Peter Salovey’s four branch model, which defines EI as the ability to perceive, understand, utilize, and regulate emotion (Meyer and Salovey 1997: 399). After defending the Mayer-Salovey model and exploring the model through an excursus into emotional deception, Section II introduces *Intellectual Virtues* and its definition of virtue to argue that emotional intelligence is rightly considered an intellectual virtue, and how, as an intellectual virtue, emotional intelligence is related to epistemic success through emotion’s epistemically-relevant features and functions.

Section III reports a study that tested the significance of emotional intelligence as an intellectual virtue. Professional philosophers and non-philosophers disagree upon the significance of stakes for knowledge attribution, and emotional intelligence, with its ability to focus the mind upon epistemically-significant features of an individual’s environment, was hypothesized as a key factor in whether a participant was sensitive to changes in stakes and the resulting impact upon their attribution of knowledge. After correlating each participant’s response to low and high stakes versions of popular vignettes in the literature (BRIDGE, BANK, and PINE NUTS) and that participant’s emotional intelligence, results were mixed. Given the extreme length of the study and problems with the vignettes, one cannot disconfirm EI as an intellectual virtue based upon the empirical data. Emotional intelligence emerges from this paper as a novel virtue with a promising foundation based on a combination of theory and experiment.
While the term ‘emotional intelligence’ has been used since the mid-20th century, psychological research concerning the concept did not appear until the 1990s. Inspired by the work of John Mayer, Peter Salovey, and others, Daniel Goleman’s *Emotional Intelligence* was published in 1995 and became a best seller, prompting a flood of popular works and encouraging further academic research. Within the psychological community, the nascent field of emotional intelligence has split between ability and skill based models. Ability based models are devoted solely to measuring mental abilities, such as recognition and knowledge, regarding emotion and emotion’s interaction with cognition; mixed models take a broader view of emotional intelligence, consider emotional intelligence as a single entity that has intellectual, social, and motivational aspects (Schulze and Roberts 2005: 399-405).

Which model of emotional intelligence is best? An ability model, particularly the four branch Mayer and Salovey model, has several distinct advantages. Ability models focus on the ‘intelligence’ of emotional intelligence, directing their attention to those emotion-related aspects of cognition omitted by traditional views of intelligence. Mixed models tend to see emotional intelligence as a wide range of skills and abilities that extend far beyond ordinary and technical definitions of intelligence, muddying the meaning of ‘intelligence.’ By focusing on the interaction between emotion and cognition—emotional perception, regulation, and reasoning—research is far more fruitful: comparisons with traditional intelligence can be directly ascertained, complicated questions regarding emotions and their impact on behaviors and skills can be avoided, and fruitful tests measuring emotional intelligence can be constructed. While the focused study of emotional intelligence is only in its second decade, evidence leads many to believe that Mayer and Salovey’s model, and ability models generally, has the greatest evidential support among models of emotional intelligence, which has made it the favorite of both supporters and critics of emotional intelligence (Schulze and Roberts 2005: 31-51, 309-342; Matthews, G., Zeidner, M., and Roberts 2002: 31-79, 511-551). Therefore, it seems that if we want to utilize a technical definition of emotional intelligence, then the work of Mayer and Salovey should be given primacy.

Mayer and Salovey’s understanding of emotional intelligence is broken down into four branches or levels of skills or abilities. First, there is the perception and expression of emotion, as one identifies and expresses emotions subjectively and in extra-personal contexts, whether in others, a piece of art, or an animal. Second, emotion is assimilated into thought. A person is able to weigh diverging emotions, consider when emotions seem inappropriate in a context, and directly attend to and compare emotions—say, examining one’s subjective fear or excitement regarding two different events. Understanding and reasoning about emotions, the third skill, allows us to cognitively interact with emotions by labeling emotions and recognizing the difference between phenomenologically similar feelings (such as anticipation and nervousness), appreciating how emotions can change (from extreme fear to relief after the resolution of a frightening episode), and grasping the connection between our emotions and various contexts. The final level of emotional intelligence, its apogee, involves the reflective regulation and management of emotions. This includes being able to monitor one’s own emotions and promote emotion and intellectual growth, as well as helping to regulate another’s emotions (Mayer and Salovey 1997: 396-417).

A brief excursus concerning emotional deception will help to further explain the model and

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2. Roberts and Woods would emphasize that perception is a form of acquaintance, where one is either in immediate cognitive contact with something or has had such contact and still retains that information through memory, understanding, or another ability (Roberts and Wood 2007: 50-51).
highlight the importance of emotional intelligence. Emotions routinely deceive: irrational fears, especially those that persist even after we grasp reasons for not being afraid, exist as unpleasant reminders that emotions routinely trick us into holding false beliefs. However, if we have emotional intelligence, then we can anticipate the myriad of ways emotions can lead us astray and, through various methods, discourage its disruption of rationality. Such emotional subterfuge is not necessarily difficult to detect, if time and effort is made to understand our own psychologies. Gaining an initial perception of our emotions and their dispositions to distort might come from meditation, where individual emotions could be felt and analyzed; reading literature, where we could see how others’ emotions lead to harmful effects and appreciate how emotionally mature characters recognized their emotions; or journaling, where one writes out what one is feeling, considers the emotion in question, and then reassesses one’s emotional experiences. A person could also read books like *Emotional Intelligence* to further enhance their understanding of emotions; they could take tests, such as Mayer and Salovey’s Multifactor Emotional Intelligence Scale Study (MSCEIT), to see how well he can recognize and analyze emotions. Once emotions are perceived, we can then begin to express them, which will promote further perception of emotion in ourselves and others, allowing us to recognize and overcome emotions’ occasional invisibility. This initial step would allow us to appreciate emotional deception, but it would be further work that would be refined as emotional analysis and understanding (the third level of Mayer and Salovey’s model), that would substantially reduce and correct emotional deception. Such refining would be especially critical to remove emotional triggers, and include an appreciation of how emotions can change, an investigation into the causes and results of certain emotional reactions, an exploration of the differences and similarities in emotions, and a realization of how moods, feelings, and emotions are connected. With such emotional analysis and understanding in place, a person can finally focus on how to regulate emotions—what management skills are necessary to reduce the impact of harmful emotions, how to encourage helpful feelings, and how to stay open to emotional experiences in ways that encourage intellectual and emotional growth (Mayer, Salovey, and Caruso 2000a: 400-401).

In *Intellectual Virtues*, Roberts and Wood propose that virtue is, “...an acquired based of excellent functioning in some generically human sphere of activity that is challenging and important” (Roberts and Wood 2007: 59). Salovey and Meyer’s definition of emotional intelligence “...as the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion in thought, and regulate emotion in the self and others” (Meyer and Salovey 1997: 399-401) is an intellectual virtue in the eyes of Roberts and Wood. An initial doubt might derive from Salovey and Meyer’s assertion that emotional intelligence is an ability, not excellent functioning, although, given Salovey and Mayer’s philosophically non-technical, fairly loose use of ‘ability,’ this definition of emotional intelligence as an ability could probably be expanded to include excellent functioning as well. Additionally, Roberts and Wood assert that many virtues are dispositions of the will, including emotions; further, as shown in the above discussion regarding emotional deception, emotional intelligence would be a virtue, since it is a disposition that “...correct(s) for proneness to dysfunction and error in certain common situations” (Roberts and Wood 2007: 59). One might also argue that emotional intelligence is a particular faculty—the innate or natural “powers” possessed by every human being—whose maturation, development, and perfection has made it into a state of virtue (Roberts and Wood 2007: 59). For a variety of reasons, emotional intelligence would appear to count as a virtue for Roberts and Wood. With this in mind, the rest of the definition is easily achieved: emotional intelligence is certainly an acquired, not inherited or innate, base of functioning; it is not used only in a specialized, remote context but rather on
a wide variety of occasions; and it is certainly challenging to acquire and critical to possess. Emotional intelligence fulfills other characteristics Roberts and Wood find in virtues—virtues are correctives for human defections, the product of a formation in human excellence or “education for life” (Roberts and Wood 2007: 69, 165). Thus, it seems as if Roberts and Wood would include emotional intelligence as a “disposition of intellectual excellence” that is necessary to correct the “…perennial set of deficiencies which in every generation need to be corrected” (Roberts and Wood 2007: 22).

It is clear that Roberts and Wood appreciate the importance of emotions, and *Intellectual Virtues*, in chapters on practices and practical wisdom, further explores the value of emotional intelligence. Roberts and Wood emphasize that good reading requires an appreciation and appropriation of emotions associated with Derridaian and Gadmerian reading styles—a sense of creativity and joy balanced with a concern for respect and diligence (Roberts and Wood 2007: 123-133). Public debate requires generosity to appreciate another’s position, meekness to encourage a free and welcoming discussion, and friendliness to enjoy protracted disagreements over fundamental issues (Roberts and Wood 2007: 134-140). Teaching requires patience with students’ sometimes offbeat questions, harshness to overcome intellectual sloth, and honesty to represent all positions fairly; a student needs to be open to learn new things and enthusiastic to discover new truths. Intellectual practices require emotional regulation and promotion, critical aspects of emotional intelligence.

These facts would be included in practical wisdom, Aristotle’s *phronesis*, the intellectual side of virtue that focuses reason and judgment on these matters of practice. Practical wisdom is both deliberative, the active planning of a solution, and perceptive, passively taking in a context and its relevant facts. Perceiving, assimilating, understanding, and regulating emotions—the four skills of the Mayer-Salovey model—are critical to both the deliberative and perceptive powers of practical wisdom, as Roberts and Wood’s example of the college president demonstrates. During apartheid, a college president wants to show solidarity with South African blacks by hosting an open debate concerning the appropriateness of divesting university funds from South Africa as a manner of promoting justice. Practical wisdom allows him to perceive that his students might be angered by such debate; that a difficult debate is critical for intellectual honesty; and that his own proclivity for intellectual cowardice has kept him from acting in accord with his love of knowledge in the past. Practical wisdom also allows the president to take active control of his emotions through self-management strategies, to empathize with certain portions of the college community, and how to make an open debate an inviting, non-threatening place to voice opinions. Without emotional intelligence, practical wisdom may be blind to helping the president appropriately perceive and act in this situation.

Beyond its impact upon practical rationality, emotional intelligence indirectly impacts belief and knowledge through its regulation and management of emotions, which, according to Georg Brun and Dominique Kuenzle, are highlighted by five epistemically-relevant features and functions (Brun and Kuenzle 2008: 16-22). First, emotions provide enhanced motivational force for epistemological study: surprise, doubt, and puzzlement promote further reflection on epistemological questions, encourage rigorous research, and force us to focus on troubling issues and arguments. Without emotions such as doubt, many philosophical projects, from Socratic ignorance to Cartesian skepticism, may never have been initiated. Second, emotions help us determine salience and relevance. Philosophy takes place within a sphere of limitation: the beings that conduct philosophical investigation cannot pursue every line of inquiry,
question, or objection; emotions are spotlights that, encompassing our attitudes, concerns, and beliefs, focus debate on what is significant and pertinent. Third, emotions offer access to facts and beliefs, either in a unique—that is, it is solely because of emotions that we have such epistemic access—or dispensable manner, where other states could provide such access. Emotions could also contribute in non-propositional ways to knowledge and understanding. This fourth feature would include the arrangement of categories and other forms of cognitive organization, as well as standards of inquiry and warrant. Finally, emotion allows for epistemic efficiency: emotion certainly makes it easier to perform certain epistemic tasks, as intuitive thinking that relies upon emotion allows for quick, accurate responses to various environments.

3. Testing Emotional Intelligence as an Intellectual Virtue

Simply identifying emotional intelligence as a virtue and considering its general significance for epistemology falls short of assessing whether EI actually functions as a virtue to resolve a genuine epistemic controversy. This section discusses a study that tested the significance of emotional intelligence as a key cause of sensitivity to stakes effects on knowledge attribution. Until the late 1980s, philosophers investigating the conditions for knowledge attribution presumed that such conditions are based upon truth-relevant factors, those elements which are able to increase or lower the likelihood of the subject’s belief that p is true – e.g. justification, reliability, and evidence. In the last few decades, several researchers started to inquire whether features of the conversational context and truth-irrelevant factors, such as the subject’s error possibilities and other practical interests, might affect knowledge attributions as well. Contextualists (DeRose 2009) argued for a controversial thesis: in certain conversational contexts, particularly in those situations where error possibilities have been raised, it may no longer be true that an individual knows, even if that individual knew in contexts when those error possibilities had not been raised. Responding to the contextualist challenge included Jason Stanley (Sripada and Stanley 2012), who argued that practical interests matter as an epistemic fact about a situation. According to Stanley’s interest-relative invariantism (IRI), whether we should attribute knowledge in a given situation is not based on the conversation context, as suggested by contextualists; rather, “the truth conditions of a sentence like ‘S knows that p’ fluctuate according to what is at stake for the subject” (Buckwalter 2010: 396).

Previous experiments have revealed a surprising insensitivity on the part of ordinary subjects to stakes in various experiments attempting to confirm contextualism or IRI4. If emotional intelligence is a virtue and hones the epistemic advantages of emotions, then EI could provide the kind of epistemically-significant sensitivity towards stakes that has yet to be discovered. Emotions aid individuals in determining the salience and relevance of reasons and evidence. Emotion is uniquely connected with action, as emotions provide motivation through both fast responses to immediate stimuli and slow responses to quotidian issues via engrained moods, propensities, and regulation. The raising and lowering of stakes would be of great significance for practical rationality, which, as discussed in Section II, requires emotional intelligence. This sensitivity to changes in stakes would appear in testing through a number of different features of the high EI individual. The emotionally-intelligent person would have an enhanced ability to use emotional perception, regulation, and reasoning to better motivate themselves to analyze and answer confusing vignettes, providing researchers with determined, engaged participants. The emotionally intelligent person is also more empathic, which will make it easier for that individual to insert themselves into a vignette and determine the impact of

4 See Buckwalter and Schaffer (2013) for a history of the experimental literature on stakes.
stakes on that individual’s epistemic situation. Finally, emotions allow for more ready access to intuitions and intuitive responses that are being tested in experimental philosophy. The study aimed to uncover what kind of individual differences exist in responses to widely discussed epistemological cases between participants who score highly on tests of emotional intelligence versus participants with low scores on such tests. The main hypothesis was that high EI subjects demonstrate a higher sensitivity to the impact of stakes on evidential standards than low EI subjects.

Sixty undergraduate students at a public university participated in the study in exchange for extra credit in one of their courses. Students were predominantly Anglo-American, with roughly equal proportions of male and female students and an average age of twenty. Each student spent between forty-five to sixty minutes completing the test materials, which were given in different sequences to eliminate ordering effects. The study materials consisted of two elements, the first being Mayer and Salovey’s Multifactor Emotional Intelligence Scale Study (MSCEIT), the one hundred forty-one item test composed by Mayer and Salovey to measure emotional intelligence.

The second part of the study materials featured three sets of vignettes: BRIDGE, BANK, and PINE NUTS. Each participant received three vignettes, one from each set, in which the protagonist is in either in high or low stakes. The simplest set of vignettes, BRIDGE, came from Feltz and Zarpentine (2010). The low stakes vignette is as follows:

John is driving a truck along a dirt road toward a remote mountain village so that he can study the culture of the people that live there. He comes across a rickety wooden bridge over a shallow ditch. John thinks to himself, “The bridge should be stable enough to support the weight of my truck.” He then drives the truck onto the bridge and makes it safely over to the other side.

Stakes were raised in another variant of BRIDGE by increasing the height of the bridge (in high stakes, the bridge spanned a thousand foot gorge), and then amplified in a third version by increasing the bridge’s height and changing John’s goal (John hauls essential medicine over a gorge to aid a remote village, where desperately ill orphans suffer from life-threatening diseases). After each vignette, with 1 being ‘Strongly Disagree’ and 7 being ‘Strongly Agree’, participants were asked: “Please indicate the extent to which you agree or disagree with the following claim: ‘John knew that the rickety wooden bridge would be stable enough to support his truck’.”

Participants also received a variant of BANK from Buckwalter (2010). Here is the low stakes version:

Sylvie and Bruno are driving home from work on a Friday afternoon. They plan to stop at the bank to deposit their paychecks, but as they drive past the bank they notice that the lines inside are very long. Although they generally like to deposit their paychecks as soon as possible, it is not especially important in this case that they be deposited right away. Bruno tells Sylvie, “I was just here last week and I know that the bank will be open on Saturday.” Instead, Bruno suggests that they drive straight home and return to deposit their paychecks on Saturday. When they return to the bank on Saturday, it is open for business.

Stakes were first raised in a second version of BANK by adding skeptical doubts (Sylvie suggests that banks typically are closed on the weekend, and that this bank had been closed on Saturday in the past). The final version raised stakes through adding Sylvie’s skeptical...
doubts as well as including the possibility of financial peril: if Bruno cannot deposit his check on time, he will be in a precarious position with his creditors. After each vignette, with 1 being ‘Strongly Disagree’ and 7 being ‘Strongly Agree’, participants were asked: 'Please indicate to what extent you agree or disagree that Bruno’s assertion, ‘I know the bank will be open on Saturday,’ is true’.

Finally, the study presented a variant of PINE NUTS from Sripada and Stanley (2012). Participants received the following as the low stakes version of PINE NUTS:

Hannah likes the taste of most foods and is not a very picky eater. One evening, Hannah and her sister Sarah are at a brand new restaurant that has just opened up. Hannah orders a plate of noodles. When her food is brought to the table, Hannah notices something that looks like nuts sprinkled on her noodles and wonders what it is. Sarah says, “The noodles may be topped with pine nuts.” Hannah notes that the menu says her dish does not contain pine nuts. Based on this, Hannah forms the belief that her noodles are not topped with pine nuts.

The two additional adaptations of the vignette raised stakes by increasing Hannah’s allergic reaction to eating pine nuts (from dry mouth to a deadly reaction from eating a single nut). After each vignette, with 1 being ‘Strongly Disagree’ and 7 being ‘Strongly Agree’, participants were asked two questions, to directly assay the connection between evidence and knowledge predication:

1) “What is the strength of Hannah’s evidence that her noodles are not topped with pine nuts?”
2) “Suppose it turns out that her noodles are not topped with pine nuts. Please rate how strongly you agree or disagree with the following sentence: ‘Hannah knows her noodles are not topped with pine nuts.’”

For each contrasting pair of thought experiments, participant responses to these thought experiments were correlated with that participant’s emotional intelligence scores. Participants with certain ranges of scores were grouped together and statistical tests performed to determine if the mean responses given by each group differed significantly from one another. Effect sizes were measured and compared.

From the results of our study, we were unable to confirm or deny our hypothesis, that a participant’s emotional intelligence determined whether the subject was sensitive to the impact of stakes on evidential standards for knowledge predication. Certain groups of EI aptitude scored on the stakes vignettes as predicted by our hypothesis, but this pattern confirming our hypothesis’s prediction did not occur across the ranges of high and low EI and resulting changes in stakes. Our results did not allow us to reject the null hypothesis, the hypothesis that there is no relationship between EI and sensitivity to the impact of stakes on evidential standards for knowledge. Furthermore, we were unable to establish a link between EI and sensitivity to stakes based on the significance of goals, the addition of skeptical hypotheses, and the connection between evidence and knowledge attribution. Unfortunately, this study cannot provide confirmation or disconfirmation to the contextualist or interest-relative invariantist intuitions that motivated the studies by Feltz and Zarpentine, Buckwalter, and Sripada and Stanley.
What accounts for the uneven results? Two explanations appear plausible and should be considered in future work. First, mental fatigue impacted participants, who—in one sitting—completed the lengthy MSCEIT and worked through a number of torturous vignettes. A person of high emotional intelligence, an individual who could manage their emotions to promote dedication and interest, would find themselves exhausted, providing mistaken answers, after such a lengthy battery of tests. If researchers want to use the MSCEIT in future work, they should allow participants to finish the test in one session and return for additional testing on a different day. The second explanation is that the construction of the vignettes confounded the study’s attempt to compare EI and sensitivity to stakes. Buckwalter’s experiments on bank cases—as well as all the studies that follow Buckwalter—repeat, without alteration, DeRose’s thought experiments from the late 1990s, a decade before online banking and ATMs. The standard study participant, an undergraduate student, lives with these modern banking convinces, allowing money to be deposited unencumbered by long bank lines. Students are likely bamboozled as to why an individual would worry about bank lines when money can be deposited via an ATM, and as a result, they may be responding based on intuitions completely unrelated to the situation, stakes, and standards of evidence.

The vignettes in the stakes literature are written to test specific hypotheses but are not composed with an eye towards presenting a realistic portrait of how humans actually interact and live—the focus of an empathetic, emotionally intelligent person. In the high stakes bank case, the vignette strains credulity: Bruno’s claim that he had visited the bank the previous week could be rebutted by Sylvie rattling off skeptical hypotheses—banks can change their hours and typically close on weekends—but without her responding specifically to Bruno (i.e. providing him with an estimate when in the past the bank had different weekend hours), it seems like Bruno and Sylvie are talking past one another. An emotionally-intelligent individual, using their ability to empathetically place themselves in the situation to evaluate Bruno’s assertion, would find it difficult to make sense of whether Sylvie has actually provided evidence that increases the stakes.

Sripada and Stanley state that they are concerned that providing such detail would artificially focus participants’ attention on stakes (Sripada and Stanley 2012: 6-9). While simpler vignettes could be constructed to nullify this concern (see BRIDGE as an example), Sripada and Stanley also worry that given high stakes, participants may attribute knowledge simply because higher stakes tend to encourage additional evidence-gathering practices, outside those mentioned in the vignette, by individuals open to severe risks (Sripada and Stanley 2012: 9-11). It is for this reason that the authors crafted the “ignorant” version of PINE NUTS utilized in this study. However, the “ignorant” high stakes situation, in which Hannah does not have a belief about her severe allergy, is dubious. In a world where pine nuts can kill, are used by restaurants and listed in menus, and can be readily perceived by non-experts, we expect Hannah to be in a position, regardless of her additional attempts to gain evidence, to have a belief about her allergy. A world with all the features mentioned in the previous sentence, and where restaurants did not protect their customers from deadly allergies caused by genetics, out of fear from the law and social sanction, is a very different world from our own. Most importantly, such a counterfactual world would strain the high EI participant from being able to empathize with the epistemic situation of the protagonist.

This concluding section highlighted the ways in which experimental artifacts—the vignettes used to assay the relationship between emotional intelligence and stakes—distorted the results of our study. Beginning with psychology, a feature of the psyche was identified that has been described by Roberts and Wood as a virtue. Emotional intelligence, while an original addition to the field of epistemology, has the benefit of being empirically grounded and tested based on philosophically-significant criteria. If research into the virtues is to bear fruit and reply to the
critiques of John Doris (who challenges the existence of such character traits in [Doris 2002]), then virtue theorists need to become familiar with empirical research, including experimental design. Simply knowing the latest science on character is not enough—philosophers need to be creative, looking to provide analysis based upon a variety of evidence and evidence-gathering techniques. This paper stands as a signpost pointing towards the fecundity of emotional intelligence and the significance of experimental philosophy for those who tread in Aristotle’s footsteps.

REFERENCES