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Is it time to kill the detection wizard? Emotional intelligence does not facilitate deception detection☆

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ABSTRACT

Being able to identify if someone is telling the truth or lying is essential in many social situations, for instance in police interrogations or employment interviews. Unfortunately, people are generally poor at lie detection. Some researchers have argued that a small category of individuals are detection *wizards* who can achieve substantially higher detection accuracy because they have high levels of emotional intelligence (EI) and are better able to identify non-verbal cues to deceit. These propositions have been popularized in the media and are appealing to some practitioners, but are based on very limited empirical evidence. We conducted three experimental studies to test these propositions, relying on different samples and using both trait and ability measures of EI. We measured deception detection using different approaches (in-person and video-based) and contexts (social interaction and job interview). One study measured skepticism, and another used eye-tracking technology to capture participants' reliance on non-verbal information. Results showed that high-EI individuals indeed rely more on non-verbal information. However, EI, skepticism, and the use of non-verbal cues are unrelated to deception detection. We thus argue that detection *wizards* are likely a myth, and it would be more productive to focus on evidence-based methods to improve deception detection.

1. Introduction

On her website, one expert of deception described herself as an "emotionally intelligent genius" who "can clearly articulate and explain the markers in human behavior that reveal the truth, lies, potential risks and other key information about people in minutes" (Ellory, n.d., para. 2). Another suggests that people can "learn to recognize the facial expressions, gestures and language of deception" (Meyer, n.d., para. 3). These examples illustrate two widely popular beliefs: (1) individuals with high levels of emotional intelligence (EI) can more accurately detect deception and (2) identifying non-verbal behaviors displayed by others is central to detecting deception.

These beliefs have their roots in the deception detection literature. For instance, the proposition that there is a small group of individuals exceptionally skilled at detecting deception was initially proposed by Ekman, O'Sullivan, and Frank (1999). These individuals were later labelled deception detection *wizards* (O'Sullivan & Ekman, 2004), and described as possessing an above-average capacity to read and understand others' emotions (e.g., through facial micro-expressions). O'Sullivan (2005) argued that *wizards* are highly emotionally intelligent. She further explained that *wizards* can more accurately observe emotions and interpret non-verbal behavior of others, and can use this information to better understand others, judge them, and detect deception. However, the very existence of *wizards* has been called into question (Bond, 2008; Bond & Uysal, 2007). Importantly, the proposition that high-EI wizards achieve higher deception detection because they can more accurately decipher non-verbal behavior has not been put to empirical test. It also contradicts the extensive literature showing that non-verbal behaviors are generally invalid cues to deception (DePaulo et al., 2003). In addition, recent findings suggest that EI can even be detrimental to deception detection because high-EI individuals tend to be overconfident in their ability to assess the sincerity of genuine versus lying pleaders, are more gullible, and ultimately do not outperform low-EI people at detection (Baker, ten Brinke, & Porter, 2013). However, one study alone is not sufficient to demonstrate that EI might actually not help detection. Moreover, it did not examine the mechanisms at play (i.e., the reliance – or not – on non-verbal cues).

In this research, we aim at demonstrating that high-EI individuals

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do indeed rely more on non-verbal cues when attempting to detect deception. However, we propose that neither EI nor using non-verbal information is associated with detection accuracy. To examine these null hypotheses, we follow the triangulation principle (Cortina & Folger, 1998), which involves examining the relationships of interest from several different angles. We thus conducted three independent experimental studies using different samples, designs, as well as domains and measures of EI. With this research, we argue that it is time to revisit the (unsubstantiated) proposition that EI helps with deception detection and, indirectly, the concept of detection *wizards*.

1.1. The "wizards" of deception detection

The issue of deception detection has been extensively studied in communication and social interactions (Bond & DePaulo, 2006; DePaulo, Charlton, Cooper, Lindsay, & Muhlenbruck, 1997; Levine, Kim, Park, & Hughes, 2006), in the legal or forensic context (Mann, Vrij, & Bull, 2004; Strömwall, Hartwig, & Granhag, 2006; Vrij, Mann, Kristen, & Fisher, 2007), and in personnel selection (Reinhard, Scharmach, & Müller, 2013; Roulin, Bangerter, & Levashina, 2015). The large majority of this research suggests that deception detection is a difficult task, and that people are not very effective lie detectors. For instance, meta-analytical findings show an average 54% accuracy in truth-lie detection, when chance level is 50% (Bond & DePaulo, 2006).

Despite the average, chance-like level, there is also evidence for some variance in detection accuracy, and thus some individuals outperforming others at detection. A group of researchers led by Paul Ekman attempted to identify exceptionally skilled deception detectors and uncover their unique characteristics. They initially showed that a group of U.S. secret service agents outperformed other professionals at a detection task (Ekman & O'Sullivan, 1991), and then replicated this pattern of results with other federal officers and clinical psychologists with a special interest in deception (Ekman et al., 1999). As mentioned, they ultimately labelled the category of rare individuals (estimated to be 1–2% of the population) with above-average deception detection abilities (i.e., achieving 80–90% accuracy) as detection *wizards* (O'Sullivan, 2005, 2007; O'Sullivan & Ekman, 2004).

One of the key characteristics of the deception *wizards* according to Ekman and colleagues was their reliance on non-verbal cues, and especially their capacity to spot facial micro-expressions that were not aligned with the emotional expression the person deceptively attempted to display (Ekman et al., 1999; Frank & Ekman, 1997; O'Sullivan & Ekman, 2004). The notion of *wizards* and their use of non-verbal cues to identify deceit is intuitively attractive, and has been extensively promoted in the media. For example, the TV series "Lie to Me" (which ran for three seasons on cable TV) was based on Ekman's work, and involved a *wizard* as a major character (Baum, 2009–2011). The view that non-verbal behaviors can be indicative of deceit has also been promoted in the criminal justice system. Police manuals commonly advise that attending to non-verbal behavior during interrogations will help police officers determine a suspect's honesty (Vrij, 2008).

There are, however, a number of issues associated with the *wizards*' argument. For instance, Bond (2008) has questioned the very existence of *wizards*, in part because participants were sometimes asked to score their own detection test or achieved high scores on some tests but not others. Moreover, only 29 *wizards* were found in a cumulated sample of over 12,000 participants, which could be explained by chance alone (Bond & Uysal, 2007). Beyond the *wizard* debate, deception research in general has failed to identify stable individual differences associated with detection abilities (Aamodt & Custer, 2006; Bond & DePaulo, 2008; Leach et al., 2009), and the rare studies finding significant differences reported small effects (e.g., Carter & Weber, 2010; Roulin, 2016).

1.2. Wizards, emotional intelligence, and deception detection

Proponents of deception *wizards* have argued multiple times that a key feature of skilled lie detectors could be high levels of EI. For instance, O'Sullivan (2003, p. 1317) suggested that "it seems reasonable to consider lie detection accuracy is one aspect of social/emotional intelligence. If this is the case, differences in emotional intelligence will affect lie detection ability". O'Sullivan and Ekman (2004, p. 282) portrayed *wizards* as having the ability to "describe people in a more complex fashion and with a thoroughness that others do not". And, O'Sullivan (2005, p. 248) suggested that "the expert lie detectors are extraordinarily emotionally intelligent people. They observe the emotions of others accurately. They are aware of their own emotional reactions to others and can use this information in understanding others, especially with respect to detecting deception." These arguments are also similar to Buller and Burgoon's (1996) interpersonal deception theory, and more precisely the proposition that individuals with higher emotional sensitivity (described as a general skill in deciphering non-verbal messages – and thus overlapping with the concept of EI) would be better at detecting deception.

Yet, besides the general arguments presented above, the theoretical and empirical foundations supporting the potential relationship between EI and deception detection are limited. Ekman and O'Sullivan's arguments are based on their own observation of *wizards* identified as part of their research. Yet, they did not empirically test the relationship between EI and deception detection. Moreover, while they use the concept of EI in their arguments, their work largely ignores the extensive literature on EI. Although the notion of EI can be dated back to the 60s and 80s (e.g., Leuner, 1966; Payne, 1985), the foundational work on EI was done by Salovey and Mayer (1990), and the concept was later popularized by Goleman (1995). It can be described as someone's capacity to accurately express and regulate one's emotion, appraise others' emotions, and use feelings to motivate, plan, and achieve daily activities (Fiori, 2009; Zeidner, Matthews, & Roberts, 2004). EI has been largely debated (and sometimes criticized) because of its broad theoretical definitions, as well as disagreements regarding its conceptualization and measurement (Fiori, 2009; Petrides, 2011). More precisely, some view EI as a trait (or a mix of traits and skills) that can be better measured via self-reports – just like personality (Goleman, 1995; Petrides, Pita, & Kokkinaki, 2007; Schutte et al., 1998), whereas others view it as an ability that should be assessed based on performance on a test - just like general intelligence (Fiori & Antonakis, 2011; MacCann & Roberts, 2008; Mayer, Caruso, & Salovey, 1999).

The trait EI perspective focuses on emotion-related dispositions and self-perceptions of emotional abilities, which recognizes the natural subjectivity of emotional experiences (Petrides, 2011; Petrides et al., 2007). Trait EI includes domains like emotion perception, expression, regulation, or management, but also encompasses self-esteem, empathy, or adaptability (Petrides, 2011). Within the trait EI domain, the arguments associated with the detection *wizards* overlap mostly with the emotion perception facet. The ability EI model is composed of four branches (Fiori, 2009; Mayer et al., 1999; Mayer, Salovey, Caruso, & Sitarenios, 2003; Salovey & Mayer, 1990): individual differences in perceptions and detections of emotions; the ability to integrate emotions into thought processes; the understanding of emotions and their causes, their effects, and the transitions among emotions; and the awareness and management of emotional reactions. Within the ability EI domain, the arguments associated with the detection *wizards* overlap mostly with the ability to perceive or detect others' emotions, as well as understanding their causes and effects (Fiori, 2009).

Trait EI and ability EI are differently related to personality and cognitive ability, and the two domains are assessed using different measures. Because self-perceptions are located at the lower levels of personality hierarchies, trait EI is strongly correlated with some personality traits (e.g., extraversion, neuroticism, and conscientiousness) but largely unrelated to cognitive ability (O'Connor & Little, 2003;