

THE ROLE OF EMOTIONAL INTELLIGENCE IN THE JUDGMENTAL
ACCURACY OF NEUROTICISM

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ABSTRACT

THE ROLE OF EMOTIONAL INTELLIGENCE IN THE JUDGMENTAL ACCURACY OF NEUROTICISM

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Recently there has been increased interest in using employment interviews to judge personality (Christiansen, 2005; Powell & Goffin, 2009). However, not all personality traits are accurately detected. Previous research has demonstrated that Neuroticism is a trait that is difficult to correctly identify (Lippa & Dietz, 2000; Powell & Goffin, 2009; Watson, 1989). Neuroticism differs from the other Big Five traits because it is more affective in nature. It is proposed that those that are superior at detecting emotions in others will be better at judging Neuroticism in others. The purpose of the current research is to examine the relationship between emotional intelligence (specifically accuracy at detecting emotions) and accuracy in making personality judgments. A significant relation was found between emotional intelligence and accuracy in detecting Neuroticism. Implications for research and practice are discussed.

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The Role of Emotional Intelligence in the Judgmental Accuracy of Neuroticism

Research has shown that an employee's personality is an important factor that relates to both individual and organizational outcomes (Mount, Barrick & Strauss, 1994). This finding has been incorporated into practitioners' selection practices. For example, the Society for Human Resource Management reported that more than 40% of Fortune 100 companies are using personality measures to evaluate job applicants (Erickson, 2004). In this context, personality is typically measured using paper and pencil measures; however, there has been increased interest in using employment interviews to judge personality (Christiansen, 2005; Powell & Goffin, 2009). Several studies have found that employment interviewers can provide valid ratings of personality traits (Motowidlo, Burnett et. al, 1996, Mount, Barrick & Strauss, 1994). However, not all personality traits are accurately detected. Previous research has demonstrated that Neuroticism is a trait that has been difficult to correctly identify (Lippa & Dietz, 2000; Powell & Goffin, 2009; Watson, 1989). This finding is concerning because Neuroticism is related to important outcomes such as turnover (Barrick & Mount, 1996; Barrick & Zimmerman, 2009; Salgado, 2002) and low job satisfaction (Judge & Bono 2001; Judge, Heller & Mount, 2002). A question worth pursuing is why Neuroticism is such a challenging trait to detect.

Although interviewers can provide valid ratings of personality, people differ in their ability to accurately judge personality traits in job applicants. Individual differences such as the judges' general mental ability and their knowledge of personality have been examined as predictors of precise personality judgements (Christiansen et al. 2005).

Despite this knowledge of factors that predict judgemental accuracy in general, there is a lack of knowledge regarding what contributes to the detection of Neuroticism specifically. One individual difference variable which may predict accuracy in Neuroticism ratings is emotional intelligence (EI). Emotional intelligence, which is defined as “the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotions and regulate emotion in the self and others” (Mayer, Salovey & Caruso, 2000, p.82) is an ability that has shown to be beneficial in the workplace (Cote & Miners, 2006; Rosete & Ciarrochi, 2005). This ability has not been examined as a predictor of accurate personality assessment in others. This study will examine the role that emotional intelligence plays in detecting Neuroticism in interview candidates.

The Five Factor Model of Personality

The Five-Factor Model (FFM) of personality is a factor structure that efficiently describes personality and has been identified in many studies using many different types of personality tests and samples (Goldberg, 1991). The Five-Factor model proposes that personality traits can generally be organized into five broad factors, including: Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism. Openness involves an active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, and intellectual curiosity. The trait of Conscientiousness is defined as being achievement oriented, dependable and orderly (Costa & McCrae, 1992). Those who are Extraverted are friendly, cheerful, gregarious, assertive, and seek out excitement. Agreeableness involves trust, morality, cooperation, modesty and sympathy.

Of the FFM traits, Neuroticism is associated with the most undesirable qualities. Neuroticism represents the tendency to experience negative affects such as fear, hostility, and depression (Goldberg, 1990). Neurotic individuals are prone to anxiety, which manifests itself in a tendency to be fearful of novel situations and a susceptibility to feelings of dependence and helplessness (Wiggins, 1996). Neuroticism has been conceptualized as consisting of six facets including anxiety, anger, depression, self-consciousness, impulsivity and vulnerability (Costa & McCrae, 1985). Those high in Neuroticism tend to overreact to unpleasant events, such as frustrations or problems, and take longer to return to a normal state after being upset. Neurotic individuals are also easily irritated and complain about even the smallest transgressions (Eysenck, 1990; Eysenck & Eysenck, 1985).

Several of the FFM factors have been found to relate to important organizational outcomes such as job performance. For example, Barrick, Mount and Judge (2001) analyzed fifteen meta-analyses that investigated the relation between the FFM and job performance and found that Conscientiousness was a valid predictor of performance ($\rho = .27$) in all occupations that were included. Neuroticism was found to be a valid predictor of work performance as well ($\rho = -.13$). Extraversion, Openness to Experience and Agreeableness also predicted success in certain occupations and for specific work criteria. Their study also demonstrated that personality is related to other work outcomes. Conscientiousness was related to teamwork ($\rho = .27$) and training performance ($\rho = .27$). Personality has also been linked to leadership ability. Judge, Bono, Ilies and Gerhardt, (2002) conducted a meta-analysis which demonstrated a relation between leadership and Neuroticism ($\rho = -.24$), Extraversion ($\rho = .31$), Openness ($\rho = .24$) and Conscientiousness

($\rho = .28$). This meta-analytic evidence supports the fact that personality is measured in selection contexts, and predicts positive organizational outcomes.

In addition to these positive effects, Neuroticism is the one FFM trait that has been shown to relate to undesirable outcomes. In addition to negatively correlating with work performance and leadership, Neuroticism has also been shown to predict negative workplace outcomes (Barick & Mount, 1996; Judge, Martocchio & Thoresen, 1997). For example, meta-analyses have demonstrated that there is a relationship between Neuroticism and low job satisfaction (Judge & Bono 2001; Judge, Heller & Mount, 2002). Judge et al., (2002) revealed that Neuroticism was the best of the Big Five traits in predicting job satisfaction ($\rho = -.29$). Judge and Bono (2001) found a similar relationship between Neuroticism and job satisfaction ($\rho = -.24$).

It has been suggested that this relationship exists because neurotic individuals are more likely to choose situations in which they experience negative affect which results in low levels of job satisfaction. (Diener, Larsen, & Emmons, 1984; Judge & Bono, 2001; Magnus, Diener, Fujita, & Pavot, 1993). Research has also shown that individuals predisposed to experience negative emotions (or those who are Neurotic) are less likely to respond favourably to situations designed to induce positive affect than are those who tend to experience positive emotions (Larsen & Ketelaar, 1991).

An alternative way to explain the relation between Neuroticism and low job satisfaction is self-concordance theory. This theory asserts that individuals who pursue goals for autonomous reasons, such as for the intrinsic pleasure produced by pursuit of the goal, are better adjusted than those who pursue goals for extrinsic reasons (Sheldon & Elliot, 1999). Elliot and Sheldon (1998) found that Neuroticism is related to the pursuit of

goals for extrinsic reasons, and suggested that individuals who are low on this trait should be happier in their work.

Additional studies have found that Neuroticism predicts turnover intentions (Smith & Canger, 2004; Zimmerman, 2008). Zimmerman (2008) conducted a meta-analysis which revealed that of the Big Five traits, Neuroticism had the strongest correlation with intention to quit ($\rho = .29$). Neuroticism has been linked to actual job turnover as well. Using a sample of long haul semi-truck drivers, Barrick and Mount (1996) found that Neuroticism was related to employees voluntarily leaving their jobs within 6 months ($\rho = .23$). Barrick and Zimmerman (2009) also found that Neuroticism predicted which applicants remained in their jobs six months after hire for a sample of employees at a large financial company ($\rho = -.27$). Salgado (2002) also conducted a meta-analysis which explored the relation between personality traits and turnover. That study revealed that Neuroticism was the strongest predictor of turnover of the Big Five traits ($\rho = .25$).

Cote (2005) posited that those who experience negative emotions, such as sadness and anger, are less likely to receive social support from co-workers and more likely to experience interpersonal conflict, thereby increasing their stress levels and intentions to quit (Spector & Jex, 1998). These studies have demonstrated that of the Big Five personality traits it is mainly Neuroticism that is associated with these negative workplace outcomes of low job satisfaction and turnover, and therefore Neuroticism is an important trait to assess accurately in job applicants.

Detecting Personality in Others

In the majority of the studies linking personality and organizational outcomes (e.g. Barrick et al., 2001; Judge & Bono 2001; Judge et al., 2002; Salgado, 2002; Zimmerman, 2008), personality has been most commonly assessed using self-report measures (Hough & Ones, 2001). In addition to the validity of self-report measures of personality, there is also evidence that interviewer ratings of personality may have high validity in predicting job performance. Mount, Barrick and Strauss (1994) examined the validity of observer ratings and self-ratings of personality in a sample of sales representatives. Results revealed that supervisor ($\rho = .37$), co-worker ($\rho = .34$) and customer ratings ($\rho = .38$) of the Big Five traits were even more strongly related to performance than were employees' self ratings ($\rho = .09$). Motowidlo et al. (1996) extended this line of research by exploring how observers' ratings of personality predict managerial job performance. In their study, a sample of undergraduate students read transcripts of candidates' interviews. The students' ratings of Extraversion significantly correlated with job performance as rated by supervisors ($r = .30, p < .05$). These results suggest that observer judgments of personality based on the content of answers to interview questions can predict job performance.

There is evidence that the use of employment interviews to assess an applicant's personality may be viewed more positively than are self-report measures. Smither, Reilly, Milsap, Pearlman and Stoffey (1993) examined managers' perceptions of fourteen selection tools' relevance to candidate selection. Their results revealed that 69% of the managers believed that interviews were relevant to making selection decisions

while only 35.3% believed that written personality tests were pertinent. In a meta-analysis of applicant reactions to selection tools, Hausknecht, Day and Thomas (2004) found that applicants view interviews ($M = 3.70$, $SD = .94$) as being more fair than personality tests ($M = 2.83$, $SD = 1.01$) when rated on a 5-point fairness scale. These studies demonstrate that interviews are viewed positively by both managers and job applicants, and thus if personality could be measured in an interview, that may be a promising method for personality assessment in selection contexts.

Though research on detecting personality in job interviews suggests promising results, not all judges are equally accurate in personality detection. For example, Christiansen et al. (2005) recruited undergraduate students who viewed videotapes of individuals responding to employment interview questions. Their results indicated that participants who were high in Openness to Experience ($r = .23$) and General Mental Ability ($r = .13$) were superior at making accurate judgments of personality. Letzring (2008) has also examined which qualities make good judges of personality. In that study undergraduates made personality judgments based on video clips of interpersonal interactions. Judgmental accuracy was related to judges' social skills ($r = .20$), agreeableness ($r = .24$) and adjustment ($r = .20$). These studies demonstrate that various individual differences of judges contribute to accurate detection of personality.

One model that explains why certain individual differences relate to accurate detection of personality traits is Funder's (1995, 1999) Realistic Accuracy Model (RAM). The RAM asserts that four processes must occur in order for personality to be accurately detected. First, the target's personality trait produces a relevant behavioural effect in a context or contexts. Second, this behaviour must be available to the observer and the

observer must be present. Third, the relevant and available behaviour must be detected by the judge. An observer may not complete this stage if they are inattentive, unperceptive or distracted. This process may also not occur if the behaviour itself is difficult to see (e.g. a micro facial expression). Fourth, the behaviour must be correctly utilized by the judge.

There is a strong likelihood of error in this stage as the observer may believe that a behaviour is indicative of one trait when it really reflects a different one, or nothing at all. For example, Neurotic individuals are prone to anger. An observer must first detect that the target has displayed a behavioural manifestation of anger. The observer must then utilize this information and associate it with the correct personality trait. Those observers who have abilities such as high social skills (Letzring, 2008) or General Mental Ability (Christiansen et al., 2005) may be less likely to make errors during the third and fourth stages of this process because they are better at detecting and utilizing behavioural cues.

Funder (1999) also proposed that in order to accurately detect and utilize personality-related cues, judges must possess knowledge about personality in order accurately utilize personality-related cues during step 4 of the RAM. Based on this reasoning, another construct that may be related to judgmental accuracy is *dispositional intelligence*, which is defined as “knowledge about personality and how it is revealed in behaviour” (Christiansen et al., 2005). Two studies have looked at dispositional intelligence as a predictor of judgmental accuracy. Christiansen et al. (2005) found that the dispositional intelligence of judges was significantly related to judgmental accuracy ($r = .41$). In another study, Powell & Goffin (2009) found that providing a training program on detecting and utilizing personality-related cues lead to more accurate ratings

of personality traits, but did not improve participants' scores on dispositional intelligence scores as compared to a group not receiving such training ($t = .43, p = .77$). The authors suggested that a mechanism other than dispositional intelligence was responsible for the increase in accurate judgments. Dispositional intelligence appears to be fairly stable and may be difficult to train in a short time period. These studies indicate that there is a need for additional research examining how dispositional intelligence relates to judgmental accuracy of personality.

While there are differences in judges' ability to detect personality, different personality traits also vary in the degree to which they are accurately detected. Multiple studies have demonstrated that Neuroticism is a particularly difficult trait to detect. For example, Barrick, Patton and Haugland (2000) investigated whether interviewers can assess Big Five personality traits during an interview. The judges were Human Resource practitioners who conducted interviews with undergraduate business students. The interviewers' judgements were compared to the students' self-ratings. The practitioners were able to accurately assess Extraversion ($r = .47$), Agreeableness ($r = .27$), Conscientiousness ($r = .28$), and Openness to Experiences ($r = .42$) but were less effective at detecting Neuroticism ($r = -.17$).

Powell and Goffin (2009) found that accurately detecting Neuroticism was the least amenable trait to training. In that study, a sample of students participated in a personality accuracy training program where they learned about personality traits, practiced making use of personality-related cues and received feedback about their ratings. Participants who received the training were significantly more accurate at detecting facets of Conscientiousness ($d = -.34$) and Extraversion ($d = -.34$) as compared

to a control group. However, the training program did not help improve participants' ability to detect Neuroticism ($d = .01$). Thus, it appears that, of the FFM traits, Neuroticism is the most difficult trait to judge accurately. The primary purpose of the present study is to determine if there is an individual difference variable that predicts accurate detection of Neuroticism in interview candidates.

Neuroticism and Affect

Neuroticism differs from the other four FFM traits in a way that may make it difficult to detect. Pytlik Zillig, Hemenover and Dienstbier (2002) noted that personality measures consist of items that measure behaviours, cognitions, and affect. Traits differ in the extent to which they are made up of these different components. For example, Extraversion mostly consists of behaviours, including items such as "I talk to a lot of different people at parties" and "I make friends easily." In contrast, Openness is a fairly cognitive trait, which is represented by items such as "I like to solve complex problems" and "I believe that there is no absolute right or wrong." Neuroticism appeared to be the most affective trait, because it includes items such as "I worry about things" and "I am often in a bad mood." The authors selected four different Big Five inventories and asked judges to rate the extent to which affect, behaviour and cognition were represented in each item. Judges rated Neuroticism as significantly higher in affect as compared to the other four traits. Because Neuroticism is highly affective, it may be more difficult to judge in other people as compared to more behavioural traits, such as Extraversion. Affective traits may be more difficult to detect than behavioural traits because they are less visible to observers.

The concept that Neuroticism is an affective trait has been a topic of interest to other researchers as well. Several studies have examined the correlation between Neuroticism and negative emotion. These studies typically show that there are moderate positive correlations between Neuroticism and Negative Affectivity, ranging from $r = .29$ to $.63$ (Costa & McCrae, 1980; Meyer & Shack, 1989; Williams, 1981). Other researchers believe that negative emotion is such an integral part of Neuroticism that they treat Neuroticism and Negative Affectivity as interchangeable concepts (Adler & Matthews, 1994; George, 1996; Judge, Bono, & Locke, 2000; Moyle, 1995; Watson & Clark, 1984; Watson & Clark, 1997). Although researchers vary in terms of seeing Neuroticism and Negative Affectivity as either related or interchangeable, there is consensus that Neuroticism is a highly emotional trait.

Because Neuroticism is a highly affective trait, those who are good at detecting and utilizing emotions may also be more accurate judges of this trait. Funder (1999) proposed that in order to accurately detect and utilize personality-related cues, judges must possess knowledge about personality. Because Neuroticism is an affective trait, those who have the ability to detect emotional cues may be superior at detecting this trait. One construct that involves the idea of detecting emotions is *emotional intelligence* (EI), which is “the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotions and regulate emotion in the self and others” (Mayer, Salovey & Caruso, 2000). Although this definition is fairly well accepted, there is disagreement in the literature about how EI is best conceptualized and measured.

Models of Emotional Intelligence

Emotional intelligence has been conceptualized differently by various researchers. Three different perspectives on EI include: 1) the specific ability approach, 2) the mixed model approach and 3) the integrative model approach. Each of these perspectives will be briefly outlined in the following paragraphs.

One approach to EI is the specific ability approach. The specific ability approach views individual mental capacities as being fundamental to EI. These capacities include emotional perception and identification (Nowicki & Duke, 1994; Matsumoto, LeRoux & Wilson-Cohn et al., 2000) use of emotional information in thinking (Mandler, 1975), reasoning about emotions (Roseman, 1984) and emotion management (Gross, 1998; Lazarus, 1994). Measures associated with this approach include the Diagnostic Analysis of Nonverbal Accuracy Scales (DANVA and DANVA-2; Nowicki & Duke, 1994) and the Emotional Stroop test (Richards, French & Johnson, 1992). Emotional intelligence will not be examined from this point of view because those perspectives do not focus on a complete definition of EI.

An alternate way to conceptualize emotional intelligence is the mixed-model approach. This approach uses broad definitions, which include a combination of emotion-related qualities as well as additional abilities (Bar-On, 1997, Petrides & Furnham, 2003). These additional abilities include qualities such as assertiveness, self-regard, self-actualization (Bar-On, 1997), trustworthiness, innovation (Goleman, 1998), low impulsivity (Petrides & Furnham, 2003), creative thinking and flexibility (Tett, Fox & Wang, 2005). This approach lacks a focus on emotional-related competencies. These models also include little or no reasoning as to why certain traits are included and others

are not (Mayer, Salovey & Caruso, 2008). Measures associated with this approach include the Emotional Quotient Inventory (EQ-i; Bar-On, 1997) and the Self-Report Emotional Intelligence Test (SREIT; Schutte, Malouff, Hall, et al. 1998). A limitation of these tests is that they are in self-report format, which does not measure a participant's true ability but their perceptions of their ability. The EQ-i and SREIT lack discriminant validity as they share substantial variance with psychological well being ($r = .58 - .70$) and Five Factor Model personality traits ($r = .52 - .75$) (Bracket & Mayer, 2003).

A third way to conceptualize emotional intelligence is the integrative-model approach. Integrative models of EI join several specific emotional competencies to create an overall view of the emotional intelligence. There are two models that fall under the umbrella of this approach. The first is Izard's Emotional Knowledge approach, in which Izard (2001) focuses on emotional perception and understanding. These skills are viewed as developing in childhood. As skills progress in one area of EI (e.g. perceiving emotions) the other emotional intelligence skills will develop as well. Izard, Fine, Schultz, Mostow, Ackerman and Youngstrom's (2001) Emotional Knowledge Test (EKT) was built around this approach. This study will not focus on this approach to Emotional Intelligence because it is targeted at younger age groups.

The second integrative-model approach is the Four- Branch model of Emotional Intelligence (Mayer & Salovey, 1997, Salovey & Mayer, 1990). The model views EI as consisting of abilities, which include: accurately perceiving emotion, using emotions to facilitate thought, understanding emotion and managing emotion. Each ability has its own developmental trajectory which begins with easy skills and progressing to more sophisticated ones. For example, perceiving emotions tends to begin with the ability to

perceive basic emotions in faces and voice tones and may progress to the accurate perception of emotional blends and to the detection of micro-expressions in the face (Mayer, Salovey & Caruso, 2008). Individual differences exist in each of the four abilities. The Mayer-Salovey-Caruso Emotional Intelligence Scale (Mayer et al. 2002, Mayer et al. 2003) is a widely used measure that was built around this approach. This approach to emotional intelligence is superior model as it considers a range of emotional abilities. It also does not consider an eclectic mix of traits that are distinct from emotional abilities. The current study will examine whether EI from the Four- Branch Model perspective relates to accurate detection of Neuroticism.

The Present Study

The primary purpose of the present study was to examine the relation between emotional intelligence and accuracy in detecting Neuroticism in employment interviews. The RAM proposes that observers who are able to detect and utilize behavioural cues will make more accurate judgments of personality (Funder, 1995, 1999). Observers who are better at detecting and utilizing emotional cues (i.e., higher in Emotional Intelligence) may be superior at detecting Neuroticism because of its highly affective nature. Accuracy in detecting Extraversion was also examined to determine whether the detection of Neuroticism differs from the detection of a more behavioural trait. The following hypotheses were made based on the main objectives of this study.

Hypothesis 1a: Those with higher levels of emotional intelligence will be more accurate in their judgments of Neuroticism.

The EI subscale of “accurately perceiving emotion” pertains directly to accurate detection of emotion. Therefore, it is expected that those with higher scores on this ability will be more accurate in their judgments of Neuroticism.

Hypothesis 1b: It is expected that those with higher scores on the ability to perceive emotion will be more accurate in their judgements of Neuroticism.

The full emotional intelligence subscale measures several abilities pertaining to emotion while the emotion recognition subscale measures a specific ability. Emotion recognition is therefore expected to significantly predicted accurate judgements beyond the additional three EI branches because it pertains directly to perceiving others.

Hypothesis 2: It is expected that the “ability to perceive emotions” will significantly contribute above and beyond the other three branches of EI in the prediction of accurate judgments of Neuroticism.

Past research has demonstrated that Extraversion is more easily detected than Neuroticism (Barrick et al., 2000; Powell & Goffin, 2009). One way that these two traits differ is that Neuroticism is an emotional trait while Extraversion is more behavioural, and behaviour is typically easier to assess in others. The finding that judges could more accurately detect Extraversion than Neuroticism is expected to be replicated in this study, which leads to Hypothesis 3:

Hypothesis 3: Judges will be more accurate in rating Extraversion than in rating Neuroticism.

The RAM proposes that observers who are able to detect and utilize behavioural cues will make more accurate judgments of personality (Funder, 1995, 1999). Those who are better at utilizing emotions are therefore likely to be superior at detecting Neuroticism

because of the trait's emotional nature. Those who are high in EI would not be superior at detecting Extraversion because these emotional abilities would not help to detect a behavioural trait. This argument suggests that detection of these two personality traits operate differently.

Hypothesis 4: The relation between EI and accuracy in rating Neuroticism will be higher than the relation between EI and accuracy in rating Extraversion.

Another individual difference that has been looked at in relation to accuracy is dispositional intelligence. Research has demonstrated that dispositional intelligence is related to accurate personality detection in interviews (Christiansen et al., 2005; Powell & Goffin, 2009). However, it is unknown whether this trait is related to the accuracy of rating specific traits. Therefore, it is expected that it will be related to accuracy in rating both an affective and a behavioural trait.

Hypothesis 5a: Dispositional intelligence will be related to accuracy in detecting Neuroticism.

Hypothesis 5b: Dispositional intelligence will be related to accuracy in detecting Extraversion.

The principal purpose of the current research is to examine the relation between emotional intelligence and accuracy in detecting Neuroticism in employment interviews. Those who are higher in EI were predicted to be more accurate in judging Neuroticism, which is a highly emotional trait. Participants in this study completed measures of emotional intelligence and dispositional intelligence. Participants also watched videos of four interview candidates and assessed their personality.

Method

Participants

Seventy-six participants (20 male, 56 female) were recruited from the University of Guelph. Fifty-seven participants were recruited from the Introductory Psychology Research Pool and received course credit for their participation. Nineteen students were recruited through their undergraduate psychology courses and received ten dollars for participating in the study. The participants ranged from 18-33 years old with an average age of 19.45 (SD = 2.09). Within the sample 27.4% of participants majored in Psychology and 47.6% were in their first year of university. Participants had an average of 26.62 (SD = 21.69) months of part-time work experience and a mean of 5.53 (SD = 9.42) months of full time work experience. Only six participants had experience conducting interviews and had conducted an average of 5.83 (SD = 2.44) interviews.

Materials

Stimuli. Four video clips of mock employment interviews were used in this study. The interview videos were originally developed for a prior study and were 15-20 minutes in length, and consisted of six interview questions. For the current study, the videos were edited to two questions, for a total length of approximately 5 minutes. Within the interview, candidates were asked two questions that were relevant to revealing their levels of Neuroticism (“We’ve all had times when the pressure at work or school is extremely high. Tell me about a time when you had several competing deadlines on important projects that you needed to complete successfully” and “Changes in life can be very stressful. Tell me about a time when your job responsibilities suddenly changed a great deal.”). These two questions were selected for the current study, as they were the

most relevant to revealing candidates' levels of Neuroticism. Each of the four video clips, therefore, contained the same two interview questions.

The targets in the videos were senior female undergraduate students who were practicing their interview skills. The interview candidates received a monetary incentive (\$30) and feedback on their interview skills in exchange for their participation. The interviewees completed the Neuroticism and Extraversion subscales of the NEO-FFI (Form S) after completing their mock employment interview. Details of the NEO-FFI are described below in the measures section.

Measures. *Self ratings.* As described above, interview candidates completed a self-report measure of their personalities which served as one source of “true scores.” Neuroticism and Extraversion of the targets were measured by the NEO- Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992), which is a widely used measure of personality. Each personality scale of the NEO-FFI consists of 12 descriptive statements including items such as “I often get angry at the way people treat me” which measures Neuroticism and “I like to have a lot of people around me” which reflects Extraversion. Participants used a 5-point Likert scale to indicate how much they agree that the description is true of them (ranging from, 0 = *strongly disagree*, to 4 = *strongly agree*). The responses from each of the 12 items from the NEO-FFI were totaled to create a personality trait score. This was completed for both Neuroticism and Extraversion. There was variability in targets' self-ratings of Neuroticism and Extraversion, where scores below 7 indicate very low levels of Neuroticism while scores above 31 reflect high levels of the trait. Scores under 20 reflect very low levels of Extraversion while scores higher than 38 reflect very high levels of the trait (Costa & McCrae, 1992). The targets'

self-ratings of Neuroticism range from 3 to 38 while their Extraversion ratings range from 26 to 44. The internal consistencies for interview candidates' ratings on the NEO-FFI are .96 for Neuroticism and .83 for Extraversion.

Expert ratings. Five graduate students in the industrial/organizational psychology program at the University of Guelph acted as expert raters who also made judgements of the targets' personality. These scores were a second source of interview candidates' "true scores" of personality. For this purpose, the NEO-FFI (Form R) which phrases the items from an observer's perspective was used. McCrae, Martin and Costa (2005) reported strong internal consistencies ranging from 0.88 to 0.93 for Form R. Robins, Fraley, Roberts, and Trzesniewski (2001) reported two-week retest reliability of the NEO-FFI ranging from 0.86 to 0.90.

Expert ratings were used as a second source of true scores because researchers have argued that a superior method is to include more than one source of true scores because the agreement between different sources can be seen as a replication of the results (Block & Block, 1980; Funder, 1999). The expert raters watched the same four video clips as the participants and filled out the NEO form R. Experts could watch the videos as many times as they liked and were able to take notes while watching the videos (neither of which the study participants did). The ICC (two way mixed; absolute agreement; McGraw & Wong, 1996) of the expert raters when looking at the Extraversion and Neuroticism scales separately in each of the four videos ranged from .43 to .90. When averaging across all items and all interviews, the expert raters had a substantial overall ICC of .77 (Landis & Koch, 1977).

Participant ratings of personality. Like the expert raters, the study participants also used the NEO-FFI (Form R) to complete their personality ratings. The internal consistencies for the Neuroticism ranged from .78 to .85 with an average of .79. On the Extraversion scale, internal consistencies ranged from .66 to .86 with an average of .77.

Emotional Intelligence. Emotional intelligence of the study participants was measured with the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey & Caruso, 2002; Mayer, Salovey, Caruso & Sitarenios, 2003). The test consists of 141 items which make up eight tasks. There are two tasks for each of the four components of the Four-Branch Model of Emotional Intelligence. Emotional perception is measured by asking participants to identify emotions in faces and landscapes. Emotional facilitation is assessed by asking participants to identify which emotions promote which kinds of thoughts and activities. Emotional understanding is measured by examining how emotions blend together (e.g. “Which two emotions together are closest to contempt: a) sadness and fear or b) anger and disgust?”). Emotion management is measured by presenting test takers with vignettes describing a social situation and asking them how emotions might be managed in the situation. The MSCEIT yields a total score, two area scores (Experiential and Strategic), four branch scores and eight task scores.

There are two different ways to analyze the MSCEIT. In the general consensus scoring method each one of a respondent’s answers is scored against the proportion of the sample that endorsed the same MSCEIT answer. The expert consensus scoring method is the same as the former technique except that each of the respondent’s scores is evaluated against the criterion formed by an expert group. Expert norms were obtained from a sample of twenty-one members from the International Society Research on Emotions

(ISRE). These individuals have extensive experience studying how emotions are conveyed in facial expressions, emotional language, the conscious experience of emotion and emotion regulation. The expert scoring method was used for this study.

Research has demonstrated that the MSCEIT is a reliable measure. The split-half reliability coefficient for the overall MSCEIT ranges from .91 to .93 (Mayer, Caruso et al., 2003). The internal consistency reliabilities of the four branch scores for both methods of scoring range from .76. to .91. Brackett and Mayer (2003) reported a test-retest reliability of the MSCEIT over a three-week interval of 0.86.

The MSCEIT also possesses construct validity. All tasks are positively intercorrelated using both scoring methods and range from .17 to .59 but with many correlations in the .30s. These correlations demonstrate that a common construct is being measured by distinctive subscales. The MSCEIT is also significantly correlated with other EI measures including the SREIT ($r = .18$ $p = .01$) and the EQ-i ($r = .21$ $p = .01$). The low correlations with other EI measures most likely occur due to the fact that the MSCEIT is an ability based measure of EI while the SREIT and EQ-i are self report instruments.

The MSCEIT has also proven to have discriminant validity. The MSCEIT was the most distinct from personality and well-being ($R_s < .28$) as compared to several other measures of EI. (Brackett & Mayer, 2003). Most emotional intelligence tests focus on a specific ability of EI. For example, there are several tests which measure emotional perception (Nowicki & Carton, 1993; Matsumoto et al., 2000). The advantage of the MSCEIT is that it measures a more global definition of EI which allows a focus on specific abilities while also addressing the broader construct of Emotional Intelligence.

All four branches of Mayer and Salovey's (1990) model as well as overall EI were measured in the current study.

Dispositional intelligence. Christiansen et al.'s (2005) 46-item multiple choice Interpersonal Judgement Inventory was used to measure dispositional intelligence of study participants. This measure requires participants to link personality constructs to observed behaviours. For example, participants were provided with a statement such as "Annie is very sympathetic and has a high concern for others. Which of the following is she least likely to be?" The respondents then indicated whether Annie was least likely to be compliant, humble, generous or gregarious. Christiansen et al. (2005) reported an internal consistency of .82 for their measure. The internal consistency of the Interpersonal Judgement Inventory for the current study was .81.

Procedure

Participants were tested in small groups of 2-12 people. Participants first filled out a short demographic questionnaire, the MSCEIT and the dispositional intelligence measure during the testing session. These measures took approximately 45 minutes to complete. Participants then watched a 5-minute video of an interview. After watching this clip, participants recorded their perceptions of the target's personality on the NEO-FFI form R. The participants repeated this process for each of the four videos. The process of rating the candidates' personalities took approximately 5 minutes for each video clip. The participants were then thanked for their involvement and were debriefed. This procedure took approximately 1 and a half hours to complete.

Measuring Accuracy

Research that involves judgemental accuracy requires that observer ratings be compared to the actual level of a trait that is possessed by the target. This actual level or “true score” of a trait is contrasted with the observer rating to determine how well observers are able to detect personality in others (Funder 1999). Studies involving personality judgements have conceptualized a target’s true level of a trait differently. The majority of this research uses the target’s own personality ratings as a comparison or “true score” to determine how accurate others are at detecting traits (Blackman & Funder, 1998; Christiansen et al., 2005; Lippa & Dietz 2000; Vogt & Colvin, 2003).

Various researchers (e.g. Block & Block, 1980; Funder, 1999) have argued that a superior method is to include more than one source of true score because the agreement between different sources can be seen as a replication of the results. In addition to self-ratings, researchers have used partner (Borkenau & Liebler, 1993), friend, parent (Carney, Colvin & Hall, 2007) interviewer (Barrick, Patton & Haugland, 2000) and expert ratings (Letzring, Wells & Funder, 2006) as a source of true scores. In the present study therefore, two sources of “true scores” will be used, both self-ratings and ratings from a panel of experts in personality will be used as sources of true scores.

In addition to the choice of different sources of true scores, various statistical methods are also available to analyze judgmental accuracy. One way to operationalize accuracy is through difference scores, which involves examining the squared difference (or absolute distance) between the rater’s score and the “true score” (Cronbach & Gleser, 1953). This method is referred to as root mean square errors because the difference score is squared in order to eliminate the negative sign and then the square root is taken in

order to return to the original unit. Several researchers have noted methodological weaknesses associated with the use of difference scores. These weaknesses include lower reliability and conceptual ambiguity (Edwards, 2001). The root mean square error approach will be used in the present study; however, because of these limitations, an alternative procedure will be used to supplement this approach.

Based on the problems associated with difference scores, several researchers have created alternative methods to this approach. Edwards (1995) proposed an alternative procedure which involves the use of multivariate analyses that treat the dependent component measures jointly. The congruence measures (i.e., the observer rating and the “true score”) remain distinct in this method. Edwards (1995) specifies that this procedure was developed for situations where the two variables composing the congruence measures (i.e., the judge’s rating and the “true score”) are dependent on the predictors that are being examined, what he calls endogenous. This situation does not apply to the current study. Because each rater in the study rated the same four interviewees, the “true scores” for each interviewee are a constant; that is, the true scores are the same for each participant in the study, thus, the true scores are exogenous. Because the true scores are constant, they are not determined by predictors. Therefore, Edwards’ (1995) approach is not reasonable to apply to the current research.

An alternative approach to measuring congruence between two sets of scores is to assess the correlation between the raters’ scores and the true scores. This was the approach taken by Schmid Mast et al. (2011). To measure how well participants assessed each dimension of personality, they calculated a correlation for each participant that examined the relation between his or her ratings of the targets on a specific dimension

and the target applicants' ratings of themselves for that specific dimension. If this technique was applied to this study the resulting n would only be four, because the correlation would be across the four targets. That is, the correlation would tell us how well each participant rank-ordered the four targets on a given personality trait. Another downside to using correlational techniques is that certain information is lost with this method. This technique does not provide information regarding the distance between participants' ratings and the true scores of personality, only whether the pattern of high scores and low scores was similar. Therefore, this technique was not used in this study.

Another method of measuring accuracy which has been used to examine the congruence between ratings is Cronbach's (1955) accuracy component scores (e.g., Jelly & Goffin, 2001; Sheppard et al., 2011; Sulsky & Balzer, 1988). Cronbach derived four independent components of accuracy which include: *elevation accuracy* (EL) which indicates the accuracy of the grand mean of the participant's ratings (averaged across targets and items). This measures the participant's tendency to consistently rate targets too high or too low compared to the true scores. *Differential elevation accuracy* (DE) assesses participants' accuracy in rank-ordering targets on the basis of their aggregated scores (aggregated across items), controlling for overall elevation. *Stereotype accuracy* (SA) indicates accuracy of the mean item ratings assigned by participants, and averaged across targets, controlling for elevation. *Differential accuracy* (DA) measures whether participants are able to identify patterns of high and low scores across the various items and across targets, again controlling for elevation. Cronbach's method is superior to examining only the squared differences between the two component measures because the tendency of participants to use the high or low end of a scale is controlled. This

method also includes more detail as to how accurate participants are at making judgments of others and solves the conceptual ambiguity problem associated with mean root square errors. This approach will be used in addition to root mean square errors.

Results

Descriptive statistics were calculated for emotional intelligence, dispositional intelligence and participant ratings of personality on the NEO-FFI (see Table 1). The means were 98.56 (SD = 14.49) for emotional intelligence and 32.72 (SD = 6.27) for dispositional intelligence. The range of participants' ratings of interview candidates' personality ranged from 14.62 to 35.73.

Two sources of true scores, self and expert ratings were used to calculate accuracy. Correlations between these two sources of true scores were calculated two ways in order to examine their similarity. The correlations across targets between self and expert ratings were $r = .25$ for Neuroticism and $r = .79$ for Extraversion (see Table 2). The correlations between expert and self-ratings were also calculated for each individual target at the item level. The average of these ratings were $r = .34$ for Neuroticism and $r = .12$ for Extraversion. The similarity of these ratings varied by both target personality trait.

To measure accuracy, root mean square errors were first calculated. Participants' ratings were compared to a "true score" of the targets' personality (i.e., the targets' self-ratings as well as the expert ratings). The targets' scale totals for Neuroticism and Extraversion were first subtracted from the "true score" scale totals, yielding eight difference scores [2(Neuroticism and Extraversion) x 4 (interview candidates)]. These values were squared and then square rooted in order for all of the difference scores to

have positive values. For example, if participant one's total for Neuroticism for target one was 23, and the target's self-rating was 33, the difference of these two values would be calculated (e.g. $33 - 23 = 10$).

A second participant that rated a Neuroticism total of 25 for candidate one would have a better accuracy score (e.g. $25 - 23 = 2$) because there is a smaller discrepancy between the second participant's rating and the true score. The average of the four difference scores (one for each target) served as the accuracy score for each participant. This was done separately for Extraversion and Neuroticism. Smaller numbers are representative of more accurate scores; zero would be a perfect accuracy score. Therefore, negative correlations between accuracy and other variables indicate a positive relation with accuracy.

Cronbach's (1955) accuracy component scores were used as an additional method to analyze accuracy. Cronbach's method consists of four independent accuracy scores consisting of: a) elevation (E), the differential grand mean; b) differential elevation (DE), the differential main effect of rates; c) stereotype accuracy (SA), the differential main effect of items; and d) differential accuracy (DA), the Differential Ratee x Items interaction. The squared component scores can be expressed by the following formulas, where smaller values indicate greater accuracy:

$$a) \quad E^2 = (\bar{x}_{..} - \bar{t}_{..})^2$$

$$b) \quad DE^2 = 1/n \sum_i [(\bar{x}_{i.} - \bar{x}_{..}) - (\bar{t}_i - \bar{t}_{..})]^2,$$

$$c) \quad SA^2 = 1/k \sum_j [(\bar{x}_{.j} - \bar{x}_{..}) - (\bar{t}_{.j} - \bar{t}_{..})]^2,$$

$$d) \quad DA^2 = 1/kn \sum_{ij} [(x_{ij} - \bar{x}_i - \bar{x}_j + \bar{x}_{..}) - (t_{ij} - \bar{t}_i - \bar{t}_j + \bar{t}_{..})]^2$$

Cardy and Dobbins (1994) stated that DA scores provide the most detailed level of accuracy and recommend that researchers examine DA when examining the rating process. Murphy and Cleveland (1995) explain that DE may be the most important component of accuracy scores because it assesses how well observed scores reflect the rank-ordering of rates. Therefore, there was a focus on the DE and DA components in the analysis.

Hypothesis 1a proposed that those with higher levels of emotional intelligence would be more accurate in their judgments of Neuroticism. When root mean square errors were used to measure accuracy, the correlation between EI and accuracy of Neuroticism was significant when self-ratings were used as true scores ($r = -.27, p < .05$) but not when expert ratings were used as true scores ($r = -.02, ns$) (see Table 3). Therefore, Hypothesis 1a was supported when the self-ratings were true scores and root mean square errors were used.

Hypothesis 1a was also tested using Cronbach's accuracy component scores. The correlation between EI and differential elevation was not significant when self-ratings ($r = -.02, ns$) (see Table 4) or expert ratings ($r = -.03, ns$) (see Table 5) were used as true scores. However, the correlation between EI and differential accuracy was significant when both self-ratings ($r = -.25, p < .05$) and expert ratings ($r = -.27, p < .05$) were used as true scores. Hypothesis 1a was partially supported using this method.

Hypothesis 1b stated that those with higher scores on the "perceiving emotions" subscale would be more accurate in their judgments of Neuroticism. When root mean square errors were used to measure accuracy, the correlation between "perceiving emotions" and accuracy in detecting Neuroticism was not significant ($r = -.15, ns$) with

self-ratings were used as true scores. The correlation was also not significant when expert ratings were used as the true scores ($r = .02, ns$). Therefore, Hypothesis 1b was not supported.

Hypothesis 1b was also tested using Cronbach's accuracy component scores. The correlation between "perceiving emotions" and differential elevation was not significant when self-ratings ($r = .01, ns$) or expert ratings ($r = -.01, ns$) were used as true scores. The correlation between "perceiving emotions" and differential accuracy was significant when expert ratings were used as a source of true scores ($r = -.28, p < .05$) but not when self-ratings were used as true scores ($r = -.16, ns$). Hypothesis 1b was therefore partially supported.

Hypothesis 2 proposed that the ability to perceive emotions would significantly contribute above and beyond the other three branches of EI in the prediction of accurate judgments of Neuroticism. A hierarchical regression was conducted with the using, understanding and managing emotions branches entered as the first step and the perceiving emotions branch entered second (see Table 6). When the root mean square errors approach was used, the addition of perceiving emotions did not contribute significantly to the prediction of accurate Neuroticism judgments when self ($\Delta R^2 = .00 F [1, 71] = .00, ns$) or expert ratings ($\Delta R^2 = .00 F [1, 71] = .04, ns$) were used as true scores. Therefore, Hypothesis 2 was not supported.

Hypothesis 2 was also tested using Cronbach's accuracy component scores. When differential elevation was used as a measure of accuracy, the addition of perceiving emotions did not significantly contribute to accurate judgments of Neuroticism when self ($\Delta R^2 = .00 F [1, 71] = .07, ns$) or expert ratings ($\Delta R^2 = .00 F [1, 71] = .00, ns$) were used

as true scores. When differential accuracy was used as a measure of precision the addition of perceiving emotions also did not significantly contribute to the dependent variable when self ($\Delta R^2 = .00$ $F [1, 71] = .00$, *ns*) or expert ($\Delta R^2 = .02$ $F [1, 71] = 1.48$, *ns*) ratings were used as true levels of personality. Therefore, Hypothesis 2 was also not supported when Cronbach's scores were used.

Hypothesis 3 proposed that judges would be more accurate in rating Extraversion than in rating Neuroticism. A one-way repeated measures ANOVA revealed that participants were significantly better at detecting Extraversion ($M = 6.35$, $SD = 2.47$) than Neuroticism ($M = 10.35$, $SD = 2.42$) ($F(1, 75) = 87.05$, $p = .000$) (see Table 7) when root mean square errors were used to measure accuracy and self ratings were used as the true scores. Participants were also significantly better at detecting Extraversion ($M = 5.06$, $SD = 2.04$) than Neuroticism ($M = 6.07$, $SD = 2.16$) when ratings were compared to expert ratings of personality ($F (1, 75) = 11.24$, $p = .001$). Therefore, Hypothesis 3 was supported.

Hypothesis 4 stated that the relation between EI and accuracy in rating Neuroticism would be higher than the relation between EI and accuracy in rating Extraversion. When self-ratings were used as true scores, the correlation between EI and accuracy in rating Neuroticism ($r = -.27$, $p < .05$) was stronger than the relation between EI and accuracy in rating Extraversion ($r = .21$, *ns*) when the root mean square errors method was used to measure accuracy ($t (73) = -2.7$, $p < .05$). However, when expert ratings were used as true scores, the correlation between EI and accuracy in rating Neuroticism ($r = -.02$, *ns*) was not stronger than the relation between EI and accuracy in rating extraversion ($r = -.04$, *ns*) ($t (73) = .11$, *ns*). Hypothesis 4 was supported when

interview candidates' self-ratings of personality were used as true scores and root mean square errors was used to measure accuracy.

Cronbach's accuracy component scores were also used in the analysis of Hypothesis 4. The correlation between EI and differential elevation (Neuroticism) ($r = -.01, ns$) was not stronger than the relation between EI and differential elevation (Extraversion) ($r = -.04, ns$) when self-ratings were used as the true scores ($t(73) = .19, ns$). The correlation between EI and differential elevation (Neuroticism) ($r = -.03, ns$) was also not stronger than the relation between EI and differential elevation (Extraversion) ($r = -.10, ns$) when expert ratings were used as the true scores ($t(73) = .52, ns$). The correlation between EI and detection of Neuroticism ($r = -.25, p < .05$) was not significantly stronger than the relation between EI and detection of Extraversion ($r = -.24, p < .05$) when differential accuracy was used as a measure of precision and self-ratings were used as true score ($t(73) = -.08, ns$). The relation between EI and detection of Neuroticism ($r = -.27, p < .05$) was also not significantly stronger than the relation between EI and Extraversion ($r = -.24, p < .05$) when differential accuracy was used as a measure of accuracy and expert ratings were used as true scores ($t(73) = -.28, ns$). Therefore, Hypothesis 4 was not supported when Cronbach's accuracy component scores were used to measure agreement.

Hypothesis 5a proposed that dispositional intelligence would be related to accuracy in detecting Neuroticism. When root mean square errors were used to calculate accuracy, dispositional intelligence was not significantly related to accurate detection of Neuroticism ($r = -.12, ns$) when self-ratings were used as true scores. Dispositional intelligence was also not related to accuracy of detecting Neuroticism ($r = .01, ns$) when

expert ratings were used as the true scores. Therefore, Hypothesis 5a was not supported when root mean squares were used to calculate accuracy.

Cronbach's accuracy scores were also used to test Hypothesis 5a. Dispositional intelligence was not significantly related to differential elevation when self ($r = .11, ns$) or expert ratings ($r = .03, ns$) were used as true scores. However, dispositional intelligence was related to differential accuracy when self ($r = -.25, p < .05$) and expert ratings ($r = -.24, p < .05$) were used as true scores. Therefore, Hypothesis 5a was partially supported when Cronbach's accuracy scores were used to measure precision.

Hypothesis 5b proposed that dispositional intelligence would be related to accuracy in detecting Extraversion. When the mean root square error method was used, dispositional intelligence was not significantly related to accurate detection of Extraversion when self ($r = .19, ns$) or expert ratings were used as true scores ($r = -.11, ns$). Therefore, Hypothesis 5b was not supported when mean root square errors were used to operationalize accuracy.

Hypothesis 5b was also tested using Cronbach's accuracy scores. Dispositional intelligence was not significantly related to differential elevation when self ($r = -.11, ns$) or expert ratings ($r = -.19, ns$) were used as true scores. However dispositional intelligence was significantly related to differential accuracy when self ($r = -.24, p < .05$) and expert ratings ($r = -.24, p < .05$) were used as true scores. Therefore, Hypothesis 5b was partially supported when Cronbach's accuracy scores were used to measure precision. A summary of the main hypotheses can be found in Table 8.

Table 1

Descriptive statistics for emotional intelligence, dispositional intelligence and participant ratings of personality

	Mean (SD)	Skewness (SE)	Kurtosis (SE)
Emotional Intelligence	98.56 (14.49)	-.06 (.28)	-.17 (.55)
Dispositional Intelligence	32.72 (6.27)	-.44 (.28)	-.73(.55)
Candidate 1 (Neuroticism)	24.32 (7.59)	-.06 (.28)	-.34 (.55)
Candidate 1 (Extraversion)	23.18 (5.90)	-.50 (.28)	-.56 (.55)
Candidate 2 (Neuroticism)	17.75 (5.50)	.40 (.28)	.85 (.55)
Candidate 2 (Extraversion)	35.72 (3.92)	-.01 (.28)	-.70 (.55)
Candidate 3 (Neuroticism)	14.62 (5.43)	.01 (.28)	.32 (.55)
Candidate 3 (Extraversion)	29.86 (6.26)	-.85 (.28)	1.43 (.55)
Candidate 4 (Neuroticism)	18.36 (5.53)	.08 (.28)	-.52 (.55)
Candidate 4 (Extraversion)	26.36 (5.50)	-.06 (.28)	.88 (.55)

Note. $N = 76$.

Table 2

Correlations between expert and self-ratings of personality

	Neuroticism	Extraversion
Across targets ($n = 4$)	.25	.79
Within Targets ($n = 12$):		
Target 1	.04	.58
Target 2	.47	.00
Target 3	.64*	-.29
Target 4	.22	.20
Average of 4 targets	.34	.12

Note. * $p < .05$ (all ps are two-tailed)

Table 3

Simple correlations of emotional intelligence, dispositional intelligence and root mean square errors accuracy ratings

	<i>M</i>	<i>SD</i>	1	1a.	1b.	1c.	1d.	2.	3.	4.	5.	6.
1. Emotional intelligence	98.56	14.49	-									
a. Perceiving emotions	102.38	15.41	.82**	-								
b. Using emotions	100.37	14.57	.66**	.45**	-							
c. Understanding emotions	95.95	13.73	.70**	.36**	.27*	-						
d. Managing emotions	98.87	12.81	.55**	.28*	.33**	.16	-					
2. Dispositional intelligence	32.72	6.27	.53**	.38**	.25*	.63**	.09	-				
3. Accuracy in detecting Neuroticism (self)	14.00	3.19	-.27*	-.15	-.30**	-.22	-.17	-.12	-			
4. Accuracy in detecting Extraversion (self)	7.83	2.43	.21	.17	.11	.12	.16	.19	-.27*	-		
5. Accuracy in detecting Neuroticism (expert)	6.07	2.16	-.02	.02	.01	.03	-.12	-.01	-.07	-.20	-	
6. Accuracy in detecting Extraversion (expert)	5.06	2.04	-.04	-.01	-.11	-.06	.01	-.11	-.08	.39**	.22	-

Note. $N = 76$.

* $p < .05$ ** $p < .01$ (all ps are two-tailed)

Table 4

Simple correlations of emotional intelligence, dispositional intelligence and accuracy ratings using self ratings as true scores and Cronbach's accuracy component scores.

	Emotional intelligence	Perceiving emotions	Using emotions	Understanding emotions	Managing emotions	Dispositional Intelligence
Elevation (Neuroticism)	.35**	.29*	.38**	.21	.10	.28*
Differential elevation (Neuroticism)	-.01	.01	-.05	.02	-.02	.11
Stereotype accuracy(Neuroticism)	-.03	-.11	-.01	-.10	.17	-.11
Differential accuracy(Neuroticism)	-.25*	-.16	-.27*	-.27*	-.05	-.25*
Elevation (Extraversion)	-.15	-.15	-.13	-.05	-.08	-.15
Differential elevation (Extraversion)	-.04	-.04	-.15	.02	.05	-.11
Stereotype accuracy (Extraversion)	-.18	-.21	-.10	-.12	-.06	-.12
Differential accuracy (Extraversion)	-.24*	-.21	-.19	-.26*	.66	-.24*

Note. $N = 76$.

* $p < .05$ ** $p < .01$ (all ps are two-tailed)

Table 5

Simple correlations of emotional intelligence, dispositional intelligence and accuracy ratings using expert ratings as true scores and Cronbach's accuracy component scores.

	Emotional intelligence	Perceiving emotions	Using emotions	Understanding emotions	Managing emotions	Dispositional Intelligence
Elevation (Neuroticism)	-.15	-.05	-.06	-.20	-.16	-.18
Differential elevation (Neuroticism)	-.03	-.01	-.05	.04	-.03	.03
Stereotype accuracy (Neuroticism)	-.04	-.12	-.17	.01	.17	-.03
Differential accuracy (Neuroticism)	-.27*	-.28*	-.35**	-.16	-.05	-.24*
Elevation (Extraversion)	.13	.12	.04	.10	.03	.08
Differential elevation (Extraversion)	-.10	-.04	-.13	-.10	-.02	-.19
Stereotype accuracy (Extraversion)	-.16	-.09	-.10	-.20	-.01	-.21
Differential accuracy (Extraversion)	-.24*	-.21	-.19	-.26*	.07	-.24*

Note. $N = 76$.

* $p < .05$ ** $p < .01$ (all ps are two-tailed)

Table 6

Hierarchical regressions examining the contribution of perceiving emotions over and above using, understanding and managing emotions

Squared multiple correlations			
Regression 1: using, understanding and managing emotions first and perceiving emotions second			
Accuracy criterion	Using emotions, understanding emotions, managing emotions	Using emotions, understanding emotions, managing emotions + perceiving emotions	ΔR^2_{PE} ^a
Root Mean Square Errors Neuroticism (self-ratings)	.02 (-.02)	.02 (-.04)	.00 (-.02)
Root Mean Square Errors Neuroticism (expert ratings)	.02 (-.03)	.02 (-.04)	.00 (-.01)
DE Neuroticism (self-ratings)	.00 (-.04)	.01 (-.05)	.01 (-.01)
DE Neuroticism (expert ratings)	.01 (-.04)	.01 (-.05)	.00 (-.01)
DA Neuroticism (self-ratings)	.12* (.08)	.12 (.07)	.00 (.01)
DA Neuroticism (expert ratings)	.13* (.10)	.15 (.10)	.02 (.00)
Regression 2: perceiving emotions first and using, understanding and managing emotions second			
Accuracy criterion	Perceiving emotions	Perceiving emotions + Using emotions, understanding emotions, managing emotions	$\Delta R^2_{3subscals}$ ^b
Root Mean Square Errors Neuroticism (self-ratings)	.00 (-.01)	.02 (-.04)	.02 (-.03)
Root Mean Square Errors Neuroticism (expert ratings)	.00 (-.01)	.02 (-.04)	.02 (-.03)
DE Neuroticism (self-ratings)	.00 (-.01)	.01 (-.05)	.01 (-.04)
DE Neuroticism (expert ratings)	.00 (-.01)	.01 (-.05)	.01 (-.04)
DA Neuroticism (self-ratings)	.03 (.01)	.12 (.07)	.10 (.06)
DA Neuroticism (expert ratings)	.08* (.06)	.15 (.10)	.07 (.04)

Note. Values in parentheses signify adjusted R^2 s (see Pedhazur, 1982, p. 148). $N = 76$.

^a Change in R^2 caused by adding perceiving emotions to the equation. ^b Change in R^2 caused by adding using, understanding and managing emotions to the equation.

* $p < .05$ (all ps are two-tailed)

Table 7

ANOVA results comparing accuracy of Neuroticism and Extraversion

	Mean (SD) Neuroticism	Mean (SD) Extraversion	F	Sig.
Self:				
Overall	10.27 (2.47)	6.35 (2.42)	87.05	.000
EL	.28 (.23)	.42 (.24)	11.58	.001
DE	.95 (.24)	.41 (.15)	290.79	.000
SA	.61 (.13)	.63 (.13)	1.08	.301
DA	.96 (.11)	.65 (.12)	426.85	.000
Expert:				
Overall	6.07 (2.16)	5.06 (2.04)	11.24	.001
EL	.29 (.19)	.21 (.17)	7.44	.008
DE	.51 (.22)	.42 (.19)	11.27	.001
SA	.48 (.11)	.43 (.11)	7.33	.008
DA	.65 (.13)	.65 (.12)	.07	.796

Note. $N = 76$. $df = (1, 75)$

EL = elevation, DE = differential elevation, SA = stereotype accuracy, DA = differential accuracy

Table 8

Summary of main accuracy findings

	Root Mean Square Errors Accuracy (Self Ratings)	Root Mean Square Errors Accuracy (Expert Ratings)	Cronbach's Accuracy (Self Ratings)	Cronbach's Accuracy (Expert Ratings)
Hypothesis 1a: Those with higher levels of EI are more accurate in their judgments of Neuroticism	Significant	Not significant	Differential elevation - not significant Differential accuracy - significant	Differential elevation - not significant Differential accuracy - significant
Hypothesis 1b: Those with higher scores on ability to perceive emotion are more accurate in their judgments of Neuroticism	Not significant	Not significant	Differential elevation - not significant Differential accuracy - not significant	Differential elevation - not significant Differential accuracy - significant
Hypothesis 2: It is expected that the "ability to perceive emotions" will significantly contribute above and beyond the other three branches of EI in the prediction of accurate judgments of Neuroticism.	Not significant	Not significant	Differential elevation - not significant Differential accuracy - not significant	Differential elevation – not significant Differential accuracy – not significant
Hypothesis 3: Judges are more accurate in rating Extraversion than Neuroticism	Significant	Significant	Differential elevation - significant Differential accuracy - significant	Differential elevation - significant Differential accuracy – not significant
Hypothesis 4: The relation between EI and accuracy in rating Neuroticism is higher than the relation between EI and accuracy in rating Extraversion	Significant	Not significant	Differential elevation- not significant Differential accuracy – not significant	Differential elevation – not significant Differential accuracy – not significant
Hypothesis 5a: Dispositional intelligence is related to accuracy in detecting Neuroticism	Not significant	Not significant	Differential elevation – not significant Differential accuracy - significant	Differential elevation – not significant Differential accuracy - significant
Hypothesis 5b: Dispositional intelligence is related to accuracy in detecting Extraversion	Not significant	Not significant	Differential elevation – not significant Differential accuracy - significant	Differential elevation – not significant Differential accuracy - significant

Discussion

Main Findings

The principal purpose of the current research was to examine the relation between emotional intelligence and accuracy in detecting Neuroticism in employment interviews. Those who are superior at detecting emotions were more accurate in judging Neuroticism when differential accuracy was used to measure accuracy and expert ratings were used as true scores. The proposed relation between the EI subscale of perceiving emotions and accurate detection of Neuroticism was partially supported.

Emotional intelligence and dispositional intelligence were only related to accuracy in detecting personality when differential accuracy was used as a measure of precision. When differential elevation was used to measure accuracy these relations were not significant. This means that although observers higher in EI and DI were better able to distinguish the highs and lows of targets' individual items, they were not better at rank ordering candidates.

The relation between emotional intelligence and accuracy in detecting Neuroticism was supported when root mean square errors and differential accuracy were used as a measure of precision. However, this study did not inform us as to what aspects of Neuroticism judges are able to detect. Future research could examine which of the six facets of Neuroticism (anxiety, anger, depression, self-consciousness, immoderation and vulnerability to stress) judges are able to recognize. In the current study questions were most closely related to the facet of vulnerability to stress and therefore may not have revealed information pertaining to the additional five facets. Measuring the facets would offer additional information as to what information judges are able to accurately detect.

This may be important information as certain facets of Neuroticism may differentially predict organizational outcomes. For example, the relation between depression and turnover may differ from the relation between anger and turnover.

It was predicted that the ability to perceive emotions would significantly contribute above and beyond the other three branches of EI in the prediction of accurate judgments of Neuroticism. However, this prediction was not supported by any of the accuracy measures. The RAM may help explain this finding. The EI ability of “perceiving emotions” may help in the third stage of the RAM where observers must detect behaviours. However, in order to accurately judge personality an observer must complete the fourth stage of utilizing emotion. The EI abilities of using, understanding and managing emotion may help an observer to make sense of the emotional information they have received and help them to complete the last step in the process. In order to accurately detect Neuroticism judges must not only be able to detect emotions but must be able to understand and manage emotional information as well.

Support was found for Hypothesis 3, which proposed that judges would be more accurate in rating Extraversion than in rating Neuroticism. This hypothesis was supported when accuracy was measured by root mean square errors, differential elevation and one measure of differential accuracy was used. This is consistent with past research, which has demonstrated that Extraversion is more easily detected than is Neuroticism (Barrick et al., 2000; Powell & Goffin, 2009). Extraversion may be more accurately detected because of the observable behavioural nature of this trait. Since Neuroticism is an affective trait, candidates may not display their emotion, particularly in an employment interview, which makes judging this trait difficult for observers. In this

case, the first stage of the RAM where the target's personality trait produces a behavioural effect would not be completed and the observer would therefore be unable to accurately detect this trait.

Hypothesis 4 proposed that the relation between EI and accuracy in rating Neuroticism would be higher than the relation between EI and accuracy in rating Extraversion. With the exception of self-ratings used as true scores and root mean square errors being used to measure accuracy, this hypothesis was not supported which indicates that emotional intelligence contributes to success in the third and fourth stages of the RAM for both Extraversion and Neuroticism. This finding may be attributed to the possibility that these traits may be more similar than expected. Although Pytlik Zillig et al. (2002) conceptualized Extraversion as a behavioural trait, other researchers have highlighted the affective nature of this trait. Correlational research has supported the idea that Extraversion and positive affect are related. Resulting correlations typically vary from .10 to .70 (Diener & Lucas, 1999; Lucas & Fujita, 2000). This finding has been observed with various Extraversion measures, in adults of various ages, and in at least 39 different countries (Lucas, Diener, Grob, Suh, & Shao, 2000).

Eysenck's (1967, 1981; Eysenck & Eysenck, 1985) model has provided a theoretical explanation as to how both Neuroticism and Extraversion relate to emotion. In Eysenck's model, Extraversion and Neuroticism are conceptualized as orthogonal personality dimensions, which result from individual differences in biologically-based systems. Those high in Neuroticism have a lower threshold for activation in the limbic system, which is responsible for emotions - particularly the "fight or flight emotions" of fear, anxiety, anger and distress. Therefore, individuals high in Neuroticism experience

more frequent negative emotions than those low in Neuroticism. The relation between Extraversion and affect is more indirect and related to different biological systems. Extraversion is a result of individual differences in arousal systems. Therefore, extraverts are prone to engaging in compensatory arousal seeking behaviours such as being sociable and seeking excitement, novelty and change. These behaviours may lead to positive emotional states such as excitement, engagement and enthusiasm (Rusting & Larsen, 1997). Eysenck's theory suggests that both Extraversion and Neuroticism are emotional traits. Even though the analysis conducted by Pyltik Zillig et al. (2002) revealed that Extraversion is measured with behavioural items, there is an emotional component to the trait itself.

Emotional intelligence may not have had a stronger relation with the detection of Neuroticism than with the detection of Extraversion because they are both traits with affective components. Future research could explore whether the relation between EI and the detection of Neuroticism is stronger than the relation between EI and a more behavioural trait such as Agreeableness or a cognitive trait such as Openness to Experience.

Though emotional intelligence contributed to the detection of Neuroticism and Extraversion, examination of the EI branches indicates that different emotional abilities contribute to the success of accurate judgments. The using and understanding emotions branches were significantly related to differential accuracy of detecting Neuroticism when self-ratings were used as true scores. Perceiving emotions was related to differential accuracy of Neuroticism when expert ratings were used as true scores. Differential accuracy of Extraversion was only related to the EI branch of understanding

emotions. This pattern of results may indicate that because Neuroticism is more difficult to detect, the use of more emotional abilities contributes to the success of accurately identifying this trait.

Though both traits have emotional components there are other explanations as to why judges are better at detecting Extraversion than Neuroticism. First, Extraversion has a stronger behavioral component than Neuroticism and may be more visible to observers. Second, Extraversion is seen as a positive trait while Neuroticism is generally considered to be socially undesirable. Interview candidates may engage in impression management in order to hide manifestations of Neuroticism. Impression management refers to “conscious or unconscious attempts to control the images that are projected in... social interactions” (Schlenker, 1980). Research has supported the notion that participants modify their self-presentations to match interviewer preferences during mock interviews (von Baeyer, Sherk & Zanna, 1981).

It is possible that the interview candidates engaged in impression management in order to hide any Neurotic behaviours because they are seen as undesirable. If the candidates in the video clips altered their image this would affect observers’ accuracy ratings of their personality. Judges may be less accurate at detecting Neuroticism because it is a less observable and socially desirable trait than Extraversion. Future research could examine the detection of Neuroticism in simulations given that they are performed in real time and engaging in impression management may be more difficult than during an employment interview.

A challenge of interpreting the main hypotheses is due to the different pattern of results across accuracy measures. Solid conclusions cannot be made because of

inconsistencies in the results. The used measures of accuracy involve different calculations which yield divergent results. There is currently not sufficient information to address why these differences between accuracy measures exist. Future research should examine which accuracy measures are best used in making personality judgements of others.

Implications for Research and Practice

This study has implications for personnel selection procedures. The link between Neuroticism and turnover illustrates the importance of being able to detect this trait in employee selection. Being able to screen out highly neurotic job applicants may be even more crucial for jobs where there is little room for anxiety and vulnerability to stress. Emotional intelligence may be an important quality for interviewers to possess when looking for long-term employees or high stress positions such as air traffic controllers or emergency professionals. Results suggested that those who are high in emotional intelligence are better at differential accuracy, or accurately assessing individual personality items. Interviewers who are high in emotional intelligence would be useful in determining personality when there are specific items that they find desirable or undesirable in a candidate. Examining Neuroticism would not be recommended when examining primary job selection criteria but may be considered when distinguishing between qualified applicants. Therefore, emotional intelligence may be a valuable ability for interviewers to possess.

This study has implications for research as well. The results from this research contribute to the understanding of the processes of judging personality. Previous research has found that individuals differ in their ability to detect traits and that traits differ in

their ability to be detected. This study integrates both perspectives and investigates specific individual differences that relate to detection of certain traits. This research adds knowledge of the mechanisms that contribute to the accurate detection of Neuroticism.

This study also furthers our knowledge of dispositional intelligence. Christiansen et al. developed the dispositional intelligence construct and corresponding measure in 2005, and called for more research to expand its nomological network. Few studies have examined relations between this construct and other skills and abilities. The current study discovered a significant relation between dispositional intelligence and EI. These constructs both involve being able to utilize information in the fourth stage of the RAM. Dispositional intelligence involves utilizing personality related cues while those high in EI are able to manage emotional information. The current study extends the nomological network of dispositional intelligence and provide a richer understanding of this social knowledge.

Limitations

There are several limitations to the current research. The first limitation is that Neuroticism and interview anxiety may manifest themselves in similar ways. Because employment interviews are highly evaluative situations, anxiety is a natural part of the interview process (Heimberg, Keller, & Peca-Baker, 1986). Employment interviews are also not under the applicants' control and this lack of control may lead the candidate to experience higher levels of anxiety (Jones & Pinkney, 1989). Observers may have challenges distinguishing between the stable trait of Neuroticism and the momentary state of interview anxiety. It is possible that a candidate may be low in Neuroticism but an interviewer judges them as high in this trait because the situation is creating an

anxious reaction. Future research should measure both interview anxiety and Neuroticism in candidates to provide clarity on this issue.

Another limitation of this study concerns the sample size. A two tailed power analysis with power of .80, a Cronbach's $\alpha = .05$ and an assumed effect size of $d = .18$ revealed that 237 participants would be required for this study. However, due to challenges with recruiting participants the resulting sample size was seventy-six. The data of this study could be reanalyzed with a larger sample in order to strengthen results.

An additional limitation of this study is the use of expert raters as a source of true scores. Though the expert raters had knowledge of personality they may not have been able to determine a target's true level of personality from watching a brief video clip. The experts also did not receive training to detect personality in others. In future studies it may be advantageous to use other sources of true scores that are more familiar with the candidate such as a parent or close friend. Using sources that know the interview candidate better than expert raters may provide ratings that are closer to a true level of personality.

Another limitation of this study is the use of the NEO-FFI to measure personality. This measure contains items such as "sometimes he/she feels completely worthless" and "he/she feels lonely or blue." It is a challenging task for observers to complete these items because they must make inferences about people that they do not know. A measure that contains items which would be related to information that would be revealed in an employment interview may be a superior tool.

Future Directions

The results of this study allow for further investigation. The implications of observers' ratings of Neuroticism have yet to be examined. Research has shown that self-reports of Neuroticism are related to turnover (Barrick & Mount, 1996; Barrick & Zimmerman, 2009; Salgado, 2002) and low job satisfaction (Judge & Bono 2001; Judge, Heller & Mount, 2002). It is currently unknown whether observer reports of Neuroticism relate to these outcomes as well. Future research could examine whether observer ratings of Neuroticism correlate with these organizational outcomes.

The current study has provided information as to how behavioural and affective traits are detected by observers. Future research could examine the individual differences that are associated with detecting cognitive traits such as Openness to Experience. This research could compare how cognitive traits are detected in comparison to traits that are behavioural or affective. This research would provide additional insight into the mechanisms underlying accurate personality perception.

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Appendix A: Consent to Participate in Research

Title: Assessing Personality in Interview Candidates

You are being asked to participate in a research study conducted by Daniella Permack and Dr. Deborah Powell, from the Psychology Department at the University of Guelph. The results of this research will be used in a master's thesis.

If you have any questions or concerns about the research, please feel free to contact:

Daniella Permack dpermack@uoguelph.ca
 519-824-410 ext 58931

Dr. Deborah Powell dpowell@uoguelph.ca
 519-824-4120 ext 52167

PURPOSE OF THE STUDY

The purpose of this study is to determine which factors affect the accuracy of people's judgments of others' personality.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

- Fill out a short demographic questionnaire
- Fill out a measure of communication style
- Fill out a measure of knowledge about personality concepts

These steps will take approximately 1 hour to complete.

- You will then be asked to watch four, five-minute videos of employment interviews. After watching each clip, you will be asked to record your perceptions of the interviewee's personality. Making these ratings will take approximately 5 minutes for each video clip.

In total, this study will take approximately 1 hour and 45 minutes.

POTENTIAL RISKS AND DISCOMFORTS

There are no potential risks or discomforts associated with this study.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

This research will further the literature on accurate personality detection. This study will also contribute to knowledge of personnel selection procedures. Participants will receive references in order to learn more about the study.

COMPENSATION

You will receive 2 course credits for your participation. If you choose to leave the study prior to completing the entire session, your compensation will be prorated. That is, you will receive 1 credit if you leave less than 1 hour into the study.

CONFIDENTIALITY

The information you provide will be kept confidential and used for research purposes only. Your name will not be associated in any way with the information you provide; your data will be recorded by participant number only. This form, which you will be asked to sign if you consent to participate, will be kept separately from any other information you provide. Once you submit your completed questionnaires, you will no longer be able to withdraw from the study. However, prior to submitting your completed questionnaires, you may withdraw your consent at any time by asking the researcher.

PARTICIPATION IN THIS STUDY IS VOLUNTARY

Your participation in this study is completely voluntary and you are free to withdraw from the study at any time. You may also decline to answer any question(s).

All information collected during this study will be kept in a locked filing cabinet in a locked office, and will be destroyed in 7 years. This research has been reviewed and approved by the University of Guelph Research Ethics Board. If you have any questions or concerns about the study, you may contact S. Auld, University of Guelph Research Ethics Officer, (519) 824-4120 ext. 56606, sauld@uoguelph.ca

Assessing Personality in Interview Candidates

Consent Statement

I have read the Letter of Information for this study. I have been given the opportunity to discuss the study and my questions have been answered to my satisfaction. By signing this consent form, I hereby consent to take part in this study.

Participant:

Print Name:

Signature

Date

Witness:

Print Name:

Signature

Date

Appendix B: Demographic Survey

1. I am:
 male.
 female.
2. I am currently _____ years old.
3. My major is _____.
4. I am currently in my _____ year of university.
5. Do you have any experience conducting interviews?
yes no
6. If yes, how many interviews have you conducted?

7. How many months of work experience do you have?
_____ months of part-time work experience
_____ months of full-time work experience

Appendix C: Personality Questionnaire

On the following page you will find a series of statements that might be used to describe a person. Read each statement and decide to what degree it describes **the interview candidate**. Then fill in the blank with the number that corresponds to your response. Please try to provide an answer to each question even if you are not completely sure of your answer.

Use the following scale when filling in your answers on the answer sheet

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. He/She is not a worrier. _____
2. He/She likes to have a lot of people around him/her. _____
3. He/She rarely feels lonely or blue. _____
4. He/She really enjoys talking to people. _____
5. At times he/she has been so ashamed he/she just wanted to hide. _____
6. He/She often feels tense and jittery. _____
7. He/She likes to be where the action is. _____
8. Sometimes he/she feels completely worthless. _____
9. He/She usually prefers to do things alone. _____
10. When he/she is under a great deal of stress, he/she sometimes feels like he/she is going to pieces. _____
11. He/She rarely feels fearful or anxious. _____
12. He/She often feels as if he/she is bursting with energy. _____
13. He/She often gets angry at the way people treat him/her. _____
14. He/She is not a cheerful optimist. _____
15. He/She often feels inferior to others. _____
16. Too often, when things go wrong he/she gets discouraged and feels like giving up. _____
17. He/She is seldom sad or depressed. _____
18. His/Her life is fast-paced. _____
19. He/She often feels helpless and wants someone else to solve his/her problems. _____
20. He/She doesn't consider him/herself especially "light-hearted". _____
21. He/She is a very active person. _____
22. He/She is a cheerful, high-spirited person. _____
23. He/She would rather go his/her own way than be a leader of others. _____
24. He/She laughs easily. _____

INTERPERSONAL JUDGMENT INVENTORY

SECTION I

DIRECTIONS: For items 1-6, read each item carefully. Circle the letter the represents the **BEST** answer.

1. Annie is very sympathetic and has a high concern for others. Which of the following is she **LEAST** likely to be?
 - A. compliant
 - B. humble
 - C. generous
 - D. gregarious

2. A journalism professor tells you that reporters need to be willing to be provocative, should dare to say things others might not, and should not be afraid of providing harsh criticism. The people **LEAST** likely to fit this description are those:
 - A. shallow and unimaginative
 - B. cooperative and introverted
 - C. worried and impatient
 - D. impractical and pessimistic

3. To be a good nurse, people should like to please people and be willing to put others' needs before their own. Which of the following statements would people like this be **MOST** likely to describe themselves as:
 - A. agreeable but conventional
 - B. practical but quiet
 - C. energetic but demanding
 - D. friendly but excitable

4. A teacher who has a tendency to discuss philosophical issues is likely to:
 - A. make plans and stick to them
 - B. do things by the book
 - C. come up with bold plans
 - D. prefer to deal with strangers in a formal manner

5. Coworkers who tend to express skepticism and cynicism are also likely to:
 - A. have difficulty imagining things
 - B. get upset easily
 - C. dominate most interactions
 - D. exhibit condescending behavior

6. Lucy's coworkers all describe her as efficient, thorough, and persistent. Most likely Lucy also:
- A. Feels the need to be around lot of people
 - B. Has a great deal of sympathy for those less fortunate
 - C. Doesn't often give in to her impulses
 - D. Enjoys fantasizing and daydreaming

SECTION II

DIRECTIONS: Listed below are descriptions of five personality traits. Each description lists adjectives that describe both people high and low on the trait. Please read each description carefully.

Trait	Description
Emotional Stability	Those low in emotional stability tend to be anxious, hostile, self-conscious, and sad. Those high in emotional stability tend to be calm, even-tempered, and capable of handling themselves in stressful situations.
Extraversion	This trait deals primarily with sociability and assertiveness. Those high in extraversion like people, are active, and warm. Those low in extraversion are reserved, independent, and have a low need for thrills.
Openness	This trait deals primarily with openness to new experiences. Those high on openness are curious, imaginative, and have a deep appreciation for art and beauty. Those low in openness find change difficult and prefer to stick with the tried and true.
Agreeableness	Those high in agreeableness are extremely altruistic and humble. In addition, they believe that others are trustworthy. Those low in agreeableness tend to be skeptical and are reluctant to get involved with the problems of others.
Conscientiousness	Those high in conscientiousness are strong-willed and determined. They are also well-organized and have high aspiration levels. Those low in conscientiousness tend to procrastinate, may be unreliable, and are not very methodical.

Each of the adjectives listed below describes one of the traits described above. Please circle the letter that corresponds to the trait that the item represents. (Hint: Each adjective may be describing someone high or low on the trait.)

	Emotional Stability	Extraversion	Openness	Agreeableness	Conscientiousness
7. Sloppy	ES	E	O	A	C
8. Insecure	ES	E	O	A	C
9. Helpful	ES	E	O	A	C
10. Innovative	ES	E	O	A	C
11. Vigorous	ES	E	O	A	C
12. Unreflective	ES	E	O	A	C
13. Selfish	ES	E	O	A	C

14. Undependable	ES	E	O	A	C
15. Efficient	ES	E	O	A	C
16. Sympathetic	ES	E	O	A	C
17. Talkative	ES	E	O	A	C
18. Thorough	ES	E	O	A	C
19. Irritable	ES	E	O	A	C
20. Envious	ES	E	O	A	C
21. Prompt	ES	E	O	A	C
22. Creative	ES	E	O	A	C
23. Withdrawn	ES	E	O	A	C
24. Systematic	ES	E	O	A	C
25. Touchy	ES	E	O	A	C
26. Shy	ES	E	O	A	C

SECTION III

DIRECTIONS: Read the boxed description of each person and give the BEST response to each of the questions that follow.

Janice	
Is not interested in other's problems Uses difficult words Makes insightful remarks.	Likes to plan ahead Takes no time for others Looks at the bright side of things

27. Which of the following is most likely true of Janice:

- A. She values cooperation over competition.
- B. She wouldn't harm a fly.
- C. She reveals little about herself.

Julie	
Accomplishes work on time Dislikes learning Keeps her cool	Is not interested in abstract ideas Is careful to avoid making mistakes Seldom gets emotional

28. Which of the following is most likely true of Julie:

- A. She imposes her work on others
- B. She keeps a sharp eye on others' work.
- C. She doesn't understand people who get emotional.

For items 29-31, circle the name of the person that you think is most likely to match the description given.

Julie	Carl	Ken
Accomplishes her work on time. Is not interested in abstract ideas. Dislikes learning. Is careful to avoid making mistakes. Keeps her cool. Seldom gets emotional.	Is not easily bothered about things. Seldom takes offense. Likes to be of service to others. Keeps in the background. Doesn't talk a lot. Senses others' wishes.	Starts conversation. Takes time for others. Leaves his work undone. Gets caught up in his problems. Is easily disturbed. Shows a mastery of language.

29. Often makes last minute plans.	Julie	Carl	Ken
30. Works according to a routine.	Julie	Carl	Ken
31. Can stand criticism.	Julie	Carl	Ken

SECTION IV

DIRECTIONS: Use the descriptions of the following traits to help you answer items 32-38.

Trait	High Scorer	Low Scorer
Risk-Taking	Someone who enjoys gambling and taking a chance: willingly exposes themselves to situations with uncertain outcomes; enjoys adventures having an element of peril; and is unconcerned with danger.	Someone who is cautious about unpredictable situations; is unlikely to be; avoids situations of personal risk, even those with great reward; and doesn't take chances, regardless of whether the risks are physical, social, emotional, or ethical.
Complexity	Someone who seeks intricate solutions to problems; is impatient with oversimplification; is interested in pursuing topics in depth regardless of their difficulty; enjoys abstract thought; and enjoys intricacy.	Someone who prefers concrete to abstract interpretations; avoids contemplative thought; and is uninterested in probing for new insight.

Empathy	Someone who tends to identify closely with other people and their problems; values close emotional ties with others; is concerned about others; and is upset by others' misfortunes.	Someone who is emotionally aloof; does not allow feelings to intrude on decision making; prefers impersonal to personal relationships; displays little compassion for other people's problems; has trouble relating to people; and is emotionally unresponsive to those around them.
Sociability	Someone who will eagerly join a variety of social groups; seeks both formal and informal associations with others; values positive interpersonal relationships; and is actively social.	Someone who keeps to themselves; has a limited number of friends and acquaintances; and avoids social activities.
Organization	Someone who makes effective use of time; completes work on schedule; is not easily distracted; and is planful and orderly.	Someone who frequently procrastinates; is easily distracted; falls behind in assignments or duties; often loses things; keeps personal effects in disarray; deals with situations in an unsystematic, unpredictable way; and rarely plans before doing things.

Each of the following asks you to choose the situation that is most relevant to the given trait. A situation is relevant to a trait if the situation can be expected to "provoke" the trait in some form of a behavioral response. For example, a situation that makes "aggression" relevant will include an opportunity for someone to behave aggressively toward another. To clarify this an example item has been provided.

Ex: Which of the following situations is most relevant to the trait of "Need for Change"?

- a. You have lived in your apartment for two years and have kept all your furniture and decorations in the same arrangement. Your landlord has asked you if you would like to have the apartment repainted and is willing to do it at a time convenient for you.
- b. You are eating alone at a restaurant when you overhear some strangers talking about someone you knew in high school.
- c. You bump into an athlete you know who was largely responsible for his team losing in a recent game.

The correct answer is "a". This situation provides an opportunity to rearrange the apartment making "Need for Change" relevant.

DIRECTIONS: Read each item carefully. Circle the best answer. Refer to the descriptions of the traits provided above as much as needed.

32. Which of the following situations is most relevant to the trait of *empathy*?

- A. Your professor has suggested that participating in a study group would help students do well in the course. You overhear some classmates talking about

- starting one.
- B. You need to change a light bulb in the ceiling in your living room. The only thing you have to stand on is a wobbly chair that is barely high enough for you to reach the bulb.
 - C. A co-worker has just learned that she is being laid off next week due to cutbacks and is visibly upset about it.
33. Which of the following situations are most relevant to the trait of **sociability**?
- A. A week after taking a final exam, you go to the professor's office to find out your final grade and you run into a classmate there. While you are both waiting for your grades, your classmate tells you he found the course difficult and is concerned about his performance.
 - B. You have just heard that your supervisor received a promotion that he/she has wanted for a long time.
 - C. Over the last two years, you have been employed at a job that entails working by yourself. Your boss offers you a chance to do essentially the same thing, but in a group of co-workers.
34. Which of the following situations is most relevant to the trait of **sociability**?
- A. You have budgeted time and money for an ongoing recreational activity. You receive a brochure from your local recreation center listing a variety of team sports and social clubs.
 - B. A friend tells you for the first time that he or she is engaged to be married next summer.
 - C. As you are shopping, you see an elderly woman having trouble finding something.
35. Which of the following situations is most relevant to the trait of **sociability**?
- A. It is 3 days before Christmas and you have about 10 people on your shopping list you still need to buy for.
 - B. As you are shopping at a small family-owned store, you get into a conversation with the proprietor. He notes with regret that business has been so bad lately that the store may have to go out of business.
 - C. Your neighbor has just mentioned that he or she is thinking about throwing a party.
36. Which of the following situation is most relevant to the trait of **complexity**?
- A. You are looking for a roommate mainly because you can't afford to live alone. You have found two ideal candidates. The only difference between them is that one likes to engage in deep discussions whereas the other prefers to keep things simple.
 - B. You need to take a difficult course from one of two professors. One professor routinely gives out B's and only rarely gives A's and C's. The other professor gives out equal numbers of A's and C's but very few B's.
 - C. A co-worker assigned to an important project has had to leave town for a few days on other business. Your boss has asked you to look after the project while the person is away. When you go to the co-worker's office, you find many assorted documents having to do with a variety of projects, piled haphazardly in stacks.

37. Which of the following situations is most relevant to the trait of *empathy*?
- A. You bump into an athlete you know who was largely responsible for his team losing in a recent game.
 - B. Some of your friends have just told you they are planning to go sky diving and have signed up for a free introductory jump.
 - C. Over the last two years, you have been employed at a job that entails working by yourself. Your boss offers you a chance to do essentially the same thing, but in a group of co-workers.
38. Which of the following situations is most relevant to the trait of *organization*?
- A. You have budgeted time and money for an ongoing recreational activity. You receive a brochure from your local recreation center listing a variety of team sports and social clubs.
 - B. You hear about an opening for a problem analyst at the place where you work. You have the required experience and your salary would stay the same.
 - C. You are tidying up around the house when you come across a drawer full of odds and ends. Among the items you see in the drawer is something you had been looking for the week before but couldn't find.

The following items are similar to those in the previous section. However, these ask you to choose the trait that is most relevant to the given situation. Once again, a trait is relevant to a situation if the situation can be expected to provoke the trait in some form of a behavioral response. To help clarify, an example item is listed below.

Ex: *You have been working under the supervision of a senior co-worker for six months. You know your job as well as you will ever know it. The senior co-worker has found another job and the department head has said she is thinking of finding someone else to supervise you.*

Sociability Empathy Complexity Need for Autonomy

Need for Autonomy is the correct answer because this situation offers the person a chance to ask the department head to allow him/her to work without supervision.

DIRECTIONS: Read each item carefully. Circle the best answer. Refer to the descriptions of the traits provided much as needed.

39. You bump into an athlete you know who was largely responsible for his team losing in a recent game.

Risk Taking Complexity Empathy Sociability Organization

40. After a morning exam, you overhear some classmates you've met only briefly talking about going to lunch at a nearby restaurant.

Risk Taking Complexity Empathy Sociability Organization

41. You and your friend are late in leaving to attend a concert that begins in 2 hours. The planned route will almost certainly take 2 1/2 hours. Your friend knows another route that could get you to the concert on time, but if there is traffic you could be an hour late.

Risk Taking Complexity Empathy Sociability Organization

42. Your current job requires that you work alone at a computer station. You have just heard of an opening in customer service. No additional training is needed and the salary would be the same as in your current position.

Risk Taking Complexity Empathy Sociability Organization

43. You are in the market for a leased car. A newspaper ad describing a simple lease agreement catches your attention. A friend has told you that such agreements are based on a number of factors and that relevant information can be obtained from the library.

Risk Taking Complexity Empathy Sociability Organization

44. A classmate tells you she didn't get the course she needs to graduate because she didn't register in time.

Risk Taking Complexity Empathy Sociability Organization

45. You need to take a difficult course from one of two professors. One professor routinely gives out B's and only rarely gives A's and C's. The other professor gives out equal numbers of A's and C's but very few B's.

Risk Taking Complexity Empathy Sociability Organization

46. You are looking for something to watch on television. As you scan through the channels, you come across a science show, a game show, and a sports event, all of which you have enjoyed watching in the past.

Risk Taking Complexity Empathy Sociability Organization



Appendix E:

Debriefing Form: Assessing Personality in Interview Candidates

Thank you for your participation! The personality ratings you provided about the interview candidates will be compared to the “true” level of their personality traits, based on questionnaires they have filled in.

The goals of this study are to determine which factors affect the accuracy of people’s judgments of others’ personality.

You were also asked to complete measures of:

- Emotional Intelligence (the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought)
- Dispositional Intelligence (knowledge of personality)

These measures will be correlated with your accuracy at making ratings of others. Thank you very much for your participation. Your information will contribute to some innovative employment interview research. If you have any questions, now, or in the future, please do not hesitate to contact the researchers listed below:

Daniella Permack dpermack@uoguelph.ca
Dr. Deborah Powell dpowell@uoguelph.ca
519-824-4120 ext 52167

If you have any questions or concerns about the study, you may contact S. Auld, University of Guelph Research Ethics Officer, (519) 824-4120 ext. 56606, sauld@uoguelph.ca

Below, I have provided some references to journal articles about person perception, in case you would like to learn more about our study.

References

Christiansen, N.D., Wolcott-Burnam, S., Janovics, J.E., Burns, G.N., & Quirk, S.W. (2005). The good judge revisited: Individual differences in the accuracy of personality judgments. *Human Performance*, 18, 123-149.

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Appendix F: Supplementary Analysis

Hierarchical Regressions examining the contribution of EI and dispositional intelligence

Squared multiple correlations			
Regression 1: EI first and DI second			
Accuracy criterion	EI	EI + DI	ΔR^2_{DI} ^a
DA Neuroticism (self-ratings)	.06* (.05)	.08* (.06)	.02 (.01)
DA Neuroticism (expert ratings)	.07* (.06)	.08* (.06)	.01 (.00)
DA Extraversion (self-ratings)	.06* (.04)	.07 (.05)	.02 (.01)
DA Extraversion (expert ratings)	.06* (.04)	.07 (.05)	.02 (.01)
Regression 2: DI first and EI second			
Accuracy criterion	DI	DI + EI	ΔR^2_{EI} ^b
DA Neuroticism (self-ratings)	.06* (.05)	.08* (.06)	.02 (.01)
DA Neuroticism (expert ratings)	.06* (.04)	.08* (.06)	.03 (.02)
DA Extraversion (self-ratings)	.06* (.04)	.07 (.05)	.02 (.01)
DA Extraversion (expert-ratings)	.06* (.04)	.07 (.05)	.02 (.01)

Note. Values in parentheses signify adjusted R^2 s (see Pedhazur, 1982, p. 148). $N = 76$.

^a Change in R^2 caused by adding DI to the equation. ^b Change in R^2 caused by adding EI to the equation.

* $p < .05$ (all ps are two-tailed)