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# Evaluating the Convergent Validity of the Measure of Emotional Connotations

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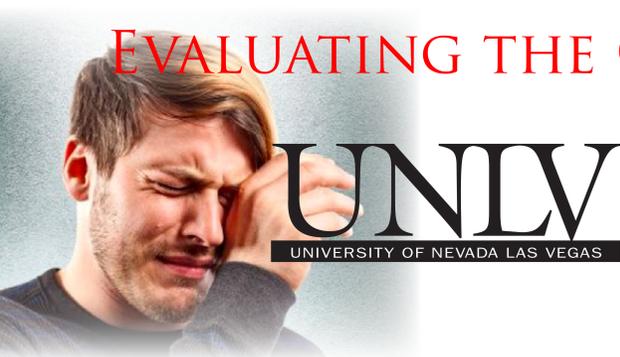
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# EVALUATING THE CONVERGENT VALIDITY OF THE MEASURE OF EMOTIONAL CONNOTATIONS



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## METHODOLOGY

### Participants

A total of 800 undergraduates from the UNLV subject pool (200 in each group) will participate in this study for 3 credits towards their psychology course. The study will take approximately 3 hours (45 minutes for MSCEIT and 2 hour and 15 for the MEC). Previous research from this subject pool has shown that most participants are between 18 and 22, with slightly more women than men.

### Measures

#### MSCEIT

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2003) is a test of emotional intelligence. Individuals are given a picture and use a five-point scale to indicate the extent to which an emotion is being expressed by the face, landscape, or abstract photo. The MSCEIT is scored using proportion consensus scoring.

#### MEC

Eight hundred participants will use the forced choice or rating scales format for all MEC items. They will be randomly assigned to one of three groups: "two word phrases," "imagine yourself as," or "a person feels like they are." Within that group, the participants will receive all either all 30 phrases per emotion (anger, fear, sadness, and happiness) for forced choice, or 10 for rating scales; thus the first part will total 120 or 40 items respectively. The next task for these participants is the Sentences task. Each participant will be assigned 10 sentences for each emotion, totaling 40 items. Finally, participants will complete the Stories task. The participants will be randomly assigned one of the four paragraphs (anger, happiness, sadness, or fear) for each of the scenarios (such as "The plane is leaving" and "I am going shopping today"), totaling to 5 items. All MEC items will be scored using proportion consensus scoring and then scored using veridical scoring.

### Procedures

Participants will be recruited through the UNLV Psychology Subject Pool. The study will be advertised using Sona Systems, which will direct interested students to the online materials for the study. Participants will first complete the demographics questionnaire and MEC. Then they will be directed to the MSCEIT website. The participants will be sent a debriefing email as soon as they begin the study, so that they will receive the debriefing regardless of whether they complete all parts of the study.

## DATA ANALYSIS

We will correlate the two MSCEIT scores (Faces and Pictures) with the 20 MEC scores (5 tasks, with 2 response scales, with 2 scoring methods). Tables 2 shows an example of how these correlations might look.

## CONCLUSION

### Conclusion

The MEC (Barchard et al., 2012) is measures participants' ability to perceive the emotional connotations of written language. If MEC scores correlate with MSCEIT emotion perception tasks, this suggests MEC is a valid test of emotion perception. If some of the MEC tests, scoring methods, or response options have higher correlations, then this means that the ones with higher correlations are more valid for testing emotion perception. This could be critical for companies who wish to recruit employees who will be dealing with emotionally sensitive topics in an online environment.

**Table 1**

*Measure of Emotional Connotations Stimuli*

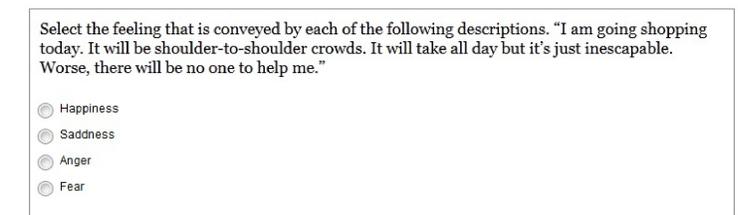
Stimuli Type	Example Forced Choice Item	Example Rating Scale Item
Two word phrases	Select the feeling that is expressed by each of the following phrases: fluttering butterfly	How much is each feeling expressed by the following phrases? Fluttering butterfly
Imagine yourself as	Imagine yourself as a fluttering butterfly. How do you feel?	Imagine yourself as a fluttering butterfly. How much do you feel each of the following feelings?
A person feels like	A person feels like a fluttering butterfly. How does that person feel?	A person feels like a fluttering butterfly. How much of each of these emotions would that person feel?
Sentences	Select the feeling that is conveyed by each of the following sentences: The snow paralyzed the icy landscape.	How much is each feeling expressed by each of the following sentences? The snow paralyzed the icy landscape.

Stories	Select the feeling that is conveyed by each of the following descriptions. "I am going shopping today. It will be shoulder-to-shoulder crowds. It will take all day but it's just inescapable. Worse, there will be no one to help me."	How much is each feeling expressed by each of the following descriptions? "I am going shopping today. It will be shoulder-to-shoulder crowds. It will take all day but it's just inescapable. Worse, there will be no one to help me."

**Table 2**

*Correlations between the MEC and MSCEIT for Proportion Consensus Scoring*

Response Format	MEC Item	MSCEIT Task
Forced Choice	Two word phrases Imagine yourself as A person feels like Sentences Stories	Faces    Pictures
Rating Scales	Two word phrases Imagine yourself as A person feels like Sentences Stories	



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## ABSTRACT

The Measure of Emotional Connotations (MEC; Barchard, Kirsch, Anderson, Grob, & Anderson, 2012) is a new test that has been developed to measure the ability to perceive the emotional connotations of written language. To examine its convergent validity, the MEC will be correlated with the two emotion perception tasks on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003). These MSCEIT tasks are valid tests of emotion perception; thus, strong correlations would provide support for the MEC as a valid test of emotion perception.

## INTRODUCTION

Emotion perception is the ability to identify and interpret emotional stimuli, which alters an individual's emotional state in response to the stimuli (Phillips, Drevets, Rauch, & Lane, 2003). There are two types of tests that examine emotion perception: non-verbal and verbal. Tests using non-verbal stimuli, such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer, Salovey, Caruso, & Sitarenios, 2003) or the Diagnostic Analysis of Nonverbal Accuracy (Nowicki & Duke, 1994), use a variety of stimuli to measure emotion perception. These tests have been proven as valid tests for emotion perception (Mayer, Salovey, Caruso, & Sitarenios, 2003; Nowicki & Duke, 1994). Verbal tests, such as the Metaphors Test and Gregory's Test (Gregory & Waggoner 1996), ask respondents to identify the emotions conveyed in written language. The MEC was developed to measure the ability to perceive the emotional connotations of written language. The test stimuli contain no metaphors and no explicit emotion words, and thus MEC provides an uncontaminated measure of the ability to perceive the emotional connotations of written language.

## LITERATURE REVIEW

There are two types of tests that examine emotion perception: non-verbal and verbal.

### Non-Verbal Tests of Emotion Perception

#### MSCEIT

The MSCEIT (Mayer et al., 2003) is designed to measure four branches of emotional intelligence. One of those branches is Emotion Perception. This branch is measured with two tasks: Faces and Pictures. The MSCEIT is scored using proportion consensus scoring.

#### Diagnostic Analysis of Nonverbal Accuracy

The Diagnostic Analysis of Nonverbal Accuracy (Nowicki & Duke, 1994) measures the ability to perceive and express happiness, sadness, anger and fear. Diagnostic Analysis of Nonverbal Accuracy contains four tests of how well individuals perceive emotions (facial expressions, posture, gestures, and tones of voice) and three tests of how well individuals express emotions (facial expression, gestures, and tone of voice).

### Verbal Tests of Emotion Perception

#### Emotional Accuracy Research Scale

The Emotional Accuracy Research Scale uses thought samples (descriptions of specific situations) from eight individuals. Test takers read the thought sample, and from each pair they chose the response that indicates how the individual felt. The Emotional Accuracy Research Scale allows researchers to calculate both target and consensus scores (Mayer & Geher, 1996).

#### Multifactor Emotional Intelligence Scale

The Stories Task includes six stories that were created by having fifteen people report on situations or thoughts affecting their mood. Respondents were then asked to record their moods on a 30-item mood-adjective checklist use a five point scale (Mayer, Caruso & Salovey, 1999).

#### Gregory's Test

Participants read 12 short (metaphors) sentences, selected one of two emotions that described the sentence, and then explained why they selected that emotion. The test was scored using a form of consensus scoring called "Mode Consensus Scoring" (Barchard & Russell, 2006) in which the correct answer to a test item is the most commonly selected answer.

#### Metaphors Test

The Metaphors Test (Barchard, Anderson, Hensley, & Walker, (2011) was designed to measure the ability to perceive the emotional connotations of written language. Respondents are presented with a metaphor followed by three emotion words. The test is scored using proportion consensus scoring.

#### Measure of Emotional Connotations (MEC)

MEC contains five types of verbal stimuli. See Table 1. The first three item types are similar to the items from Gregory and Waggoner (2008). The MEC stories are different in three ways. First, the verbal stimuli are based upon previous research on conceptual metaphors for the four emotions. Second, the MEC does not use explicit emotion words, such as happy or joyful in the stimuli themselves, the way the other two tests do. Finally, the MEC includes four stories for each scenario: The content is the same, the only difference is the phrasing of the ideas in order to convey the different emotions.