

Evaluations of Emotions: Distinguishing between Affective, Behavioral and Cognitive Components

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Attitudes toward Emotions

- People cultivate attitudes toward various targets, including emotions.
- Attitudes toward emotions reflect how people generally evaluate emotions.
- Individual differences in attitudes toward emotions are linked to:
 - what people want to feel
 - how people regulate their emotions

(Harmon-Jones et al., 2011; Markovitch, Netzer & Tamir, 2016)

The **A****B****C** of Attitudes

- Similar to other attitudes (Eagly & Chaiken, 1993), attitudes toward emotions involve three components:
 - **A**ffective
e.g., how much I like or dislike emotion *X*
 - **B**ehavioral
e.g., whether and how I act upon experiencing emotion *X*
 - **C**ognitive
e.g., how good or bad I think emotion *X* is

Measuring Attitudes toward Emotion

- There is one existing measure of attitudes toward emotions, the **Attitudes toward Emotions scale (ATE)**; Harmon-Jones et al., 2011). It taps primarily the **affective** and **behavioral** components of attitudes toward emotions, but is less focused on the cognitive component.
- In this investigation, we offer a measure that captures the **cognitive** component of attitudes toward emotions, the **Evaluation of Emotions Scale (EVE)**.

The Present Investigation

- **Study 1** – Exploratory Factor Analysis
- **Study 2** – Confirmatory Factor Analysis
- **Studies 1-3** – Construct Validity

Study 1 – Exploratory Factor Analysis

Method

- **Participants.** 314 MTurks (www.MTurk.com), $M_{\text{age}} = 33.98$; 50% female; 76.4% Caucasians.
- **Materials.**
 - **ATE scale**, $\alpha = .78-.91$ (i.e., happiness, fear, anger, sadness, and disgust).
 - **EVE scale**, $\alpha = .88-.93$ (the same emotions as the ATE).
 - **Perceived Pleasantness and Utility**
 - “Typically, when you are feeling emotion X, how PLEASANT does it feel?”
 - “Typically, how USEFUL do you think it is to experience emotion X?”
- **Procedure.** Complete randomization.

ATE Scale

	rarely / never	occasionally	sometimes	often	almost always / always
1. I like to do things that scare me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I do things just because they scare me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I like being scared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I seek out things that scare me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I dislike being scared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I dislike doing things that scare me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(Harmon-Jones et al., 2011)

EVE Scale

Fear is -

Bad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Good
Harmful	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Useful
Foolish	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Wise
Worthless	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Valuable
Redundant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Necessary

Study 1 – Exploratory Factor Analysis

Results

- The **EVE** and **ATE** scales were factor analyzed using principal component analysis with Varimax rotation.
- The analysis extracted 11 factors, as determined by eigenvalues greater than one, explaining 73.5% of the total variance.
 - None of the items cross-loaded on more than one factor
 - Only two items did not load on their expected factor (<.50):
 - **ATE disgust 3** formed the eleventh factor
 - **ATE anger 4** did not load on any other factor

Study 2 – Confirmatory Factor Analysis

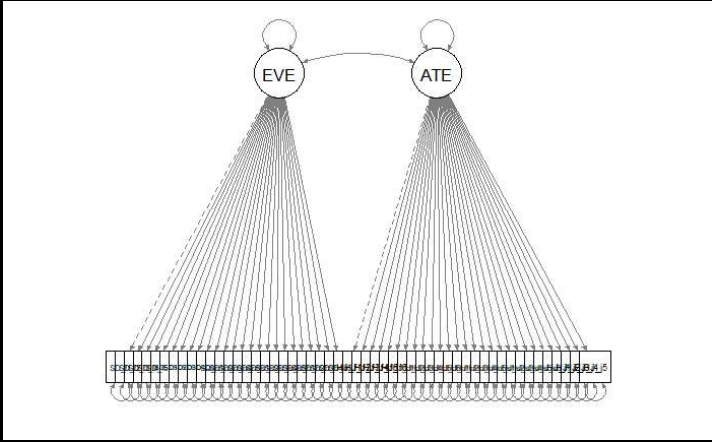
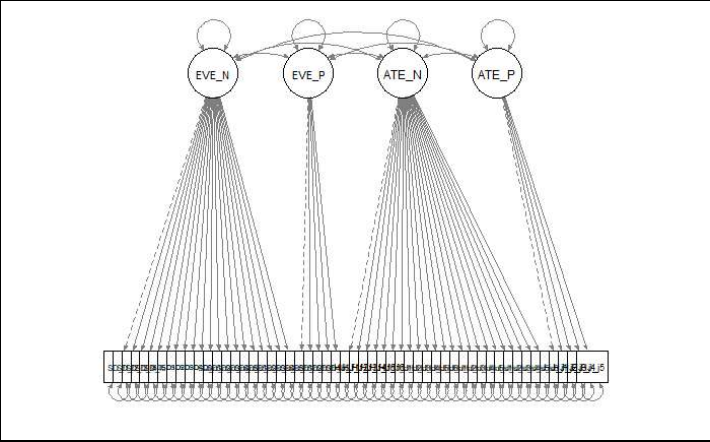
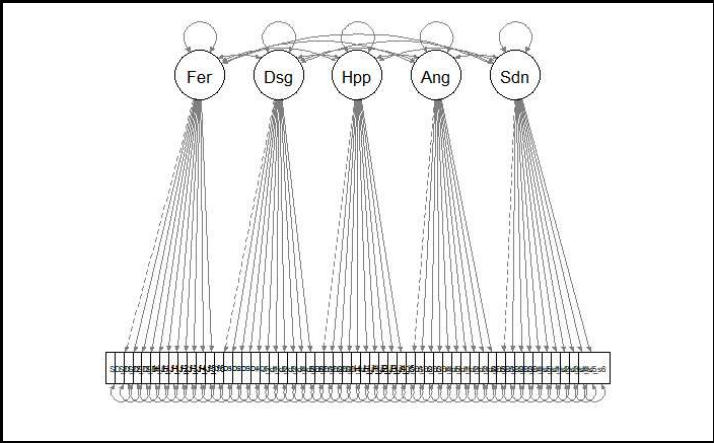
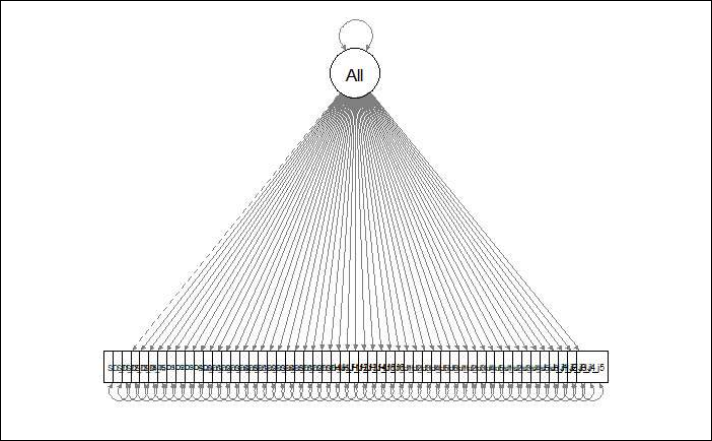
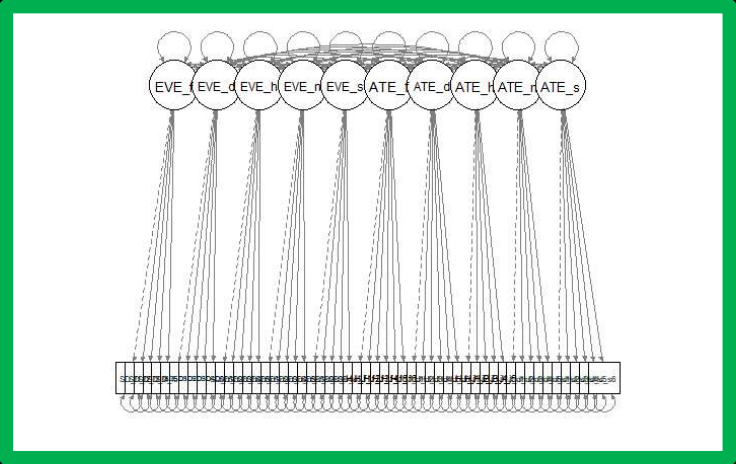
Method

- **Participants.** 345 MTurks, $M_{\text{age}} = 34$; 44.3% female; 75.7% Caucasians
- **Materials.**
 - **ATE scale**, $\alpha = .78-.91$.
 - **EVE scale**, $\alpha = .90-.93$.
 - **Perceived Pleasantness and Utility**
- **Procedure.** Complete randomization.

Study 2 – Confirmatory Factor Analysis

Results

- The 10-factor model, where scores vary both by scale (i.e., **ATE** and **EVE**) and by target emotion (i.e., happiness, fear, anger, sadness, and disgust), showed a better fit, compared to:
 - a 5-factor model, in which each factor corresponds to a different emotion
 - a 4-factor model, in which factors vary by emotional valence (i.e., positive or negative) and scale
 - a 2-factor model, in which factors vary only by scale
 - a single-factor model, in which all ratings load on one factor



Construct Validity

- We hypothesized that:
 - affect-based attitudes toward emotions captured by the **ATE scale** are more strongly related to the perceived **pleasantness** of emotions
 - cognition-based attitudes toward emotions captured by the **EVE scale** are more strongly related to the perceived **utility** of emotions

Study 1 – Construct Validity

	M (SD)	ATE - Attitudes towards Emotions Scales					EVE - Evaluation of Emotions Scales				
		Happy	Fear	Anger	Sadness	Disgust	Happy	Fear	Anger	Sadness	Disgust
Happiness pleasantness	4.53 (0.78)	.60**	-.10	-.29**	-.02	-.29**	.36**	.04	-.02	.04	.03
Fear pleasantness	1.16 (0.45)	-.39**	.34**	.33**	.19**	.43**	-.32**	.01	.10	.05	-.02
Anger pleasantness	1.20 (0.55)	-.39**	.25**	.47**	.20**	.39**	-.35**	.07	.20**	.09	.04
Sadness pleasantness	1.29 (0.55)	-.32**	.22**	.34**	.26**	.30**	-.19**	-.06	.12*	.16**	-.04
Disgust pleasantness	1.12 (0.42)	-.45**	.25**	.38**	.18**	.50**	-.30**	.01	.10	.07**	-.01
Happiness utility	4.02 (0.99)	.54**	-.14**	-.24**	-.16**	-.28**	.54**	-.03	-.06	-.04	-.08
Fear utility	2.51 (1.00)	-.01	.09	.12*	.30**	.13*	-.13*	.54**	.33**	.35**	.40**
Anger utility	2.01 (0.90)	-.06	.16**	.32**	.25**	.14**	-.11*	.35**	.50**	.37**	.27**
Sadness utility	1.94 (0.84)	-.12*	.13*	.18**	.37**	.17**	-.10	.27**	.31**	.43**	.16**
Disgust utility	2.01 (0.97)	-.06	.13*	.10	.26**	.20**	-.14*	.41**	.26**	.22**	.45**

Note. * $p < .05$, ** $p < .001$.

Study 2 – Construct Validity

	M (SD)	ATE - Attitudes towards Emotions Scales					EVE - Evaluation of Emotions Scales				
		Happy	Fear	Anger	Sadness	Disgust	Happy	Fear	Anger	Sadness	Disgust
Happiness pleasantness	4.49 (0.77)	.62**	-.10	-.21**	-.05	-.22**	.46**	.04	-.03	.05	.01
Fear pleasantness	1.26 (0.60)	-.20**	.28**	.35**	.29**	.42**	-.11*	.12*	.11*	.07	.04
Anger pleasantness	1.29 (0.64)	-.16**	.18**	.41**	.26**	.31**	-.06	.12*	.18**	.09	-.01
Sadness pleasantness	1.39 (0.67)	-.21**	.16**	.27**	.32**	.37**	-.11*	.07	.11*	.13*	.06
Disgust pleasantness	1.21 (0.57)	-.19**	.16**	.16**	.27**	.43**	-.09	.10	.12*	.12**	.04
Happiness utility	4.17 (0.94)	.52**	-.05	-.20**	-.07	-.09	.50**	-.01	-.05	.02	-.07
Fear utility	2.41 (1.03)	.04	.17**	.03	.09	.11*	-.04	.53**	.41**	.34**	.32**
Anger utility	2.09 (0.96)	.05	.10	.15**	.13*	.16**	-.02	.39**	.51**	.39**	.25**
Sadness utility	2.03 (0.93)	-.01	.16**	.13*	.22**	.26**	.02	.21**	.32**	.39**	.15**
Disgust utility	1.96 (0.96)	.02	.05	.09	.14**	.18**	-.09	.34**	.38**	.29**	.41**

Note. * $p < .05$, ** $p < .001$.

Study 3 – Construct Validity

	M (SD)	ATE - Attitude toward Emotions Scales			EVE - Evaluation of Emotions Scales		
		Fear	Anger	Sadness	Fear	Anger	Sadness
Fear pleasantness	1.81 (0.88)	.38**	.35*	.10	.08	.36**	.10
Anger pleasantness	1.70 (0.89)	.08	.50**	.17	-.10	.21	.07
Sadness pleasantness	1.60 (0.75)	.15	.37**	.25*	-.07	.28*	.21
Fear utility	3.53 (1.24)	-.10	-.05	.05	.24*	-.01	.22
Anger utility	2.41 (1.44)	-.21	.24*	-.14	.09	.25*	.13
Sadness utility	2.12 (1.10)	-.23	.13	.05	-.07	.30*	.28*

Note. * $p < .05$, ** $p < .01$.

- 70 Israeli undergraduate students ($M_{age} = 25.21$; 62.9% female).
- **ATE scale** ($\alpha = .71-.90$), **EVE scale** ($\alpha = .75-.87$)
- Temporal gap between measurements

General Discussion

We developed and validated the **EVE scale**, a measure designed to assess the cognitive component of attitudes toward emotions, and provided evidence for its discriminant and construct validity.

■ EFA and CFA

- The **ATE** and **EVE** scales capture distinct attitude components

■ Construct Validity

- Affect-based attitudes toward emotions are more strongly linked to the perceived pleasantness of emotions; whereas
- cognition-based attitudes toward emotions are more strongly linked to the perceived utility of emotions.

General Discussion

Theoretical Implications

- Attitudes toward emotions are complex
- Meta-emotions
- Attitudes toward emotions and emotion regulation

Pragmatic Implications

- The **EVE scale** may be used to assess the cognitive component of attitudes toward emotions

Research Limitations

- Happiness utility was associated with both ATE and EVE scales
- Self-report

Thanks and Acknowledgments

- This work was supported by the Israel Science Foundation [grant number 794/11]
- We thank Yonatan Saar from the National Institute for Testing and Evaluation (NITE) for his helpful input
- We thank the Israeli Committee for Advancing Psychometrics in Israel (ICAP) for their support
- Thank you for your attention!

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