IS ANGER MORE ABSTRACT THAN FEAR?

A Construal Level Lens

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#SPSP2022

Anger

Fear

CLT conceptualizes basic emotions like fear and anger as low-level (concrete) emotions.

But is anger more abstract than fear?

- More social.

- Abstract, social concepts.

  - Abstract universal and social rules, and principles.

- A central emotion behind our moral compass.

- Less social.

- More concrete concepts.

  - e.g., physical properties of a threat (although anxiety can be more abstract than fear).

- A central emotion in threat processing.

Averill (2012), Zahn et al. (2007)

LeDoux (2014), Mobbs et al. (2019), Trope & Liberman (2010)
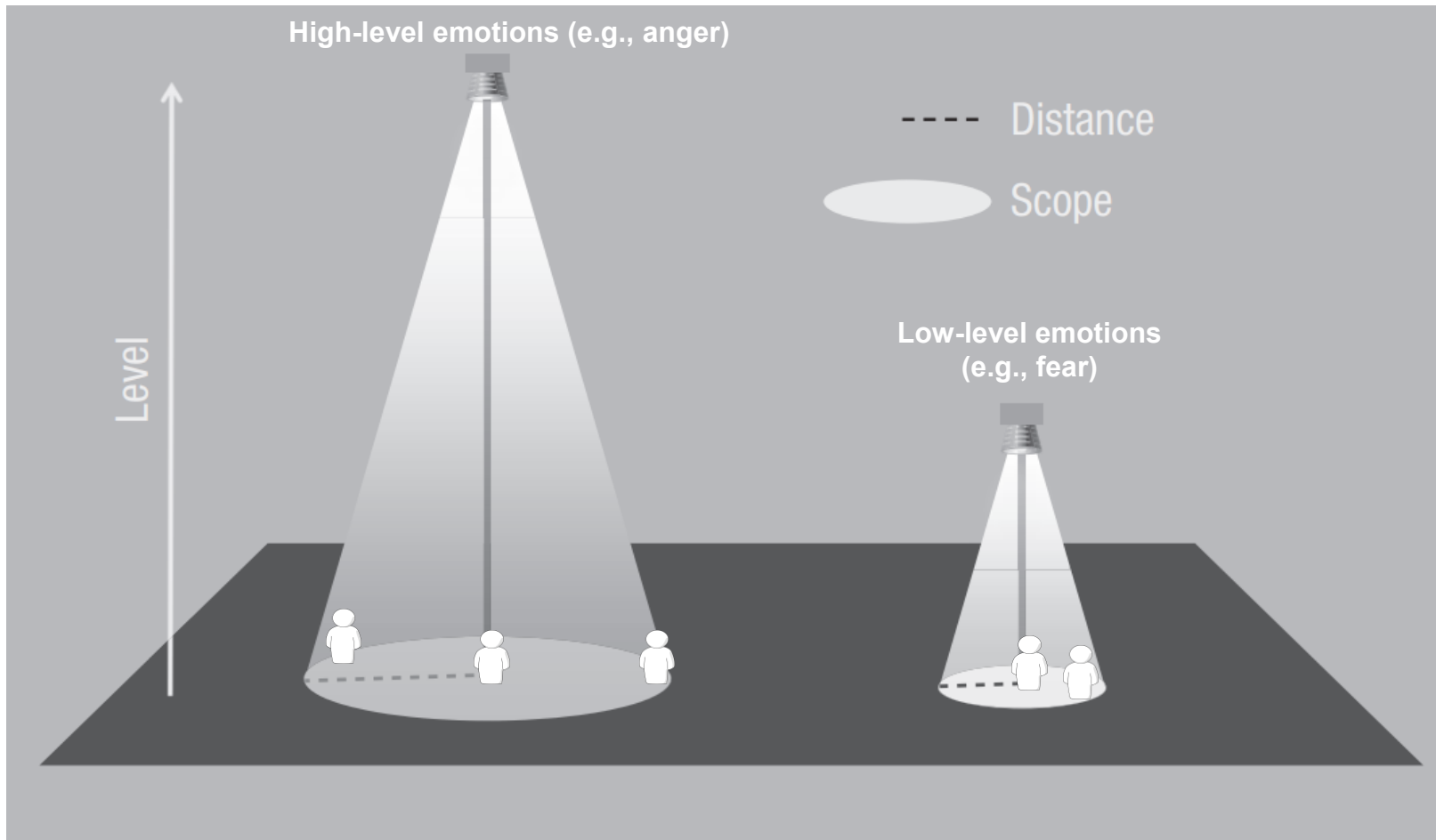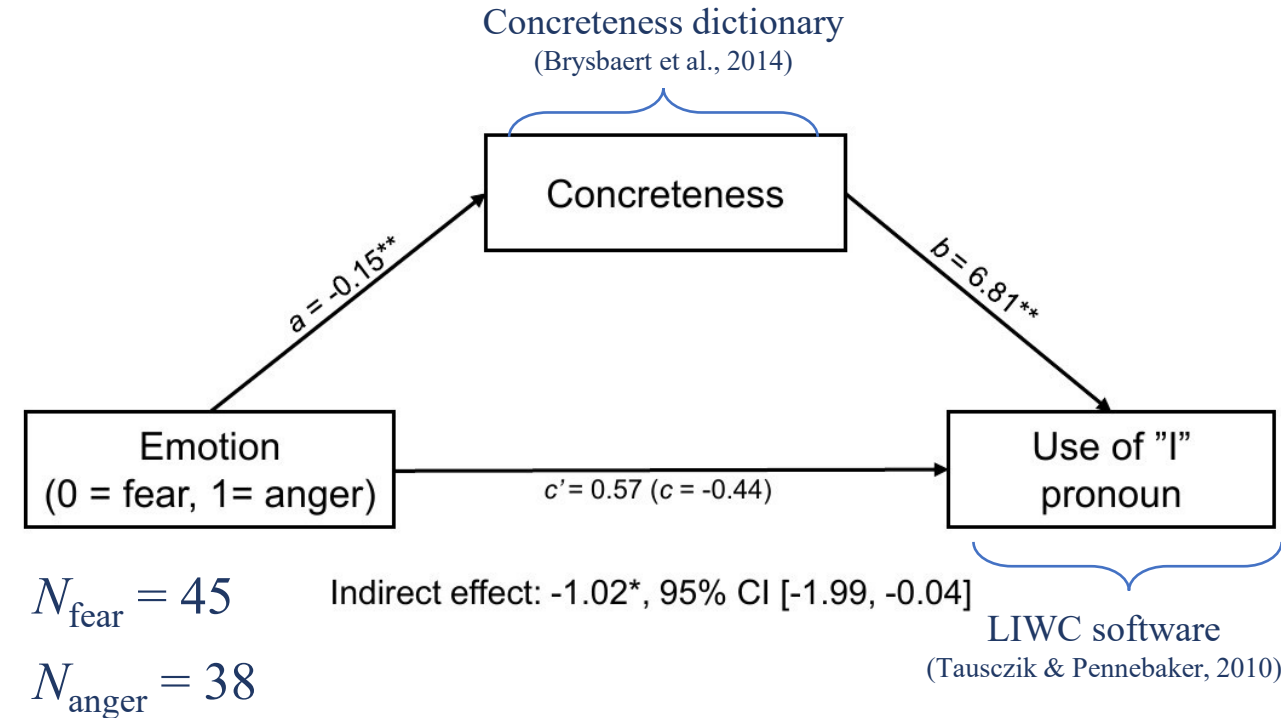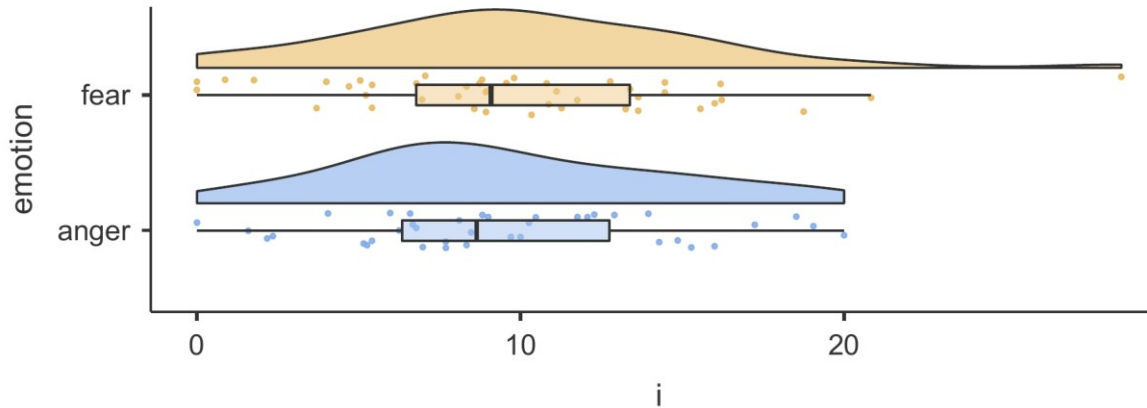
Construal Level & Regulatory Scope

High-level emotions (e.g., anger)

---- Distance
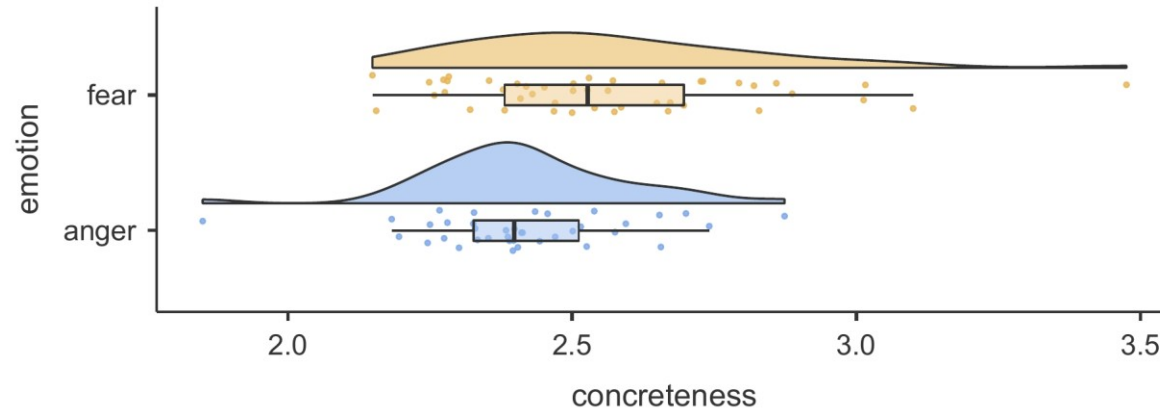
Scope

Low-level emotions (e.g., fear)

Level

Figure adapted from:
Trope, Y., Ledgerwood, A., Liberman, N., & Fujita, K. (2021). Regulatory Scope and Its Mental and Social Supports. *Perspectives on Psychological Science*, *16*(2), 204-224.

Dataset 1: Fear vs. personal anger (autobiographical writing task)

*"Please recall a memory of an event within the past year that made you feel fear **[anger]**."*

Concreteness dictionary
(Brysbaert et al., 2014)

$a = -0.15^{**}$ Concreteness $b = 6.81^{**}$

Emotion
(0 = fear, 1= anger) $c' = 0.57$ ($c = -0.44$)   Use of "I" pronoun

$N_{fear} = 45$

Indirect effect: -1.02*, 95% CI [-1.99, -0.04]

LIWC software
(Tausczik & Pennebaker, 2010)

$N_{anger} = 38$

Dataset 1: Fear vs. personal anger (autobiographical writing task)

Correlation Matrix

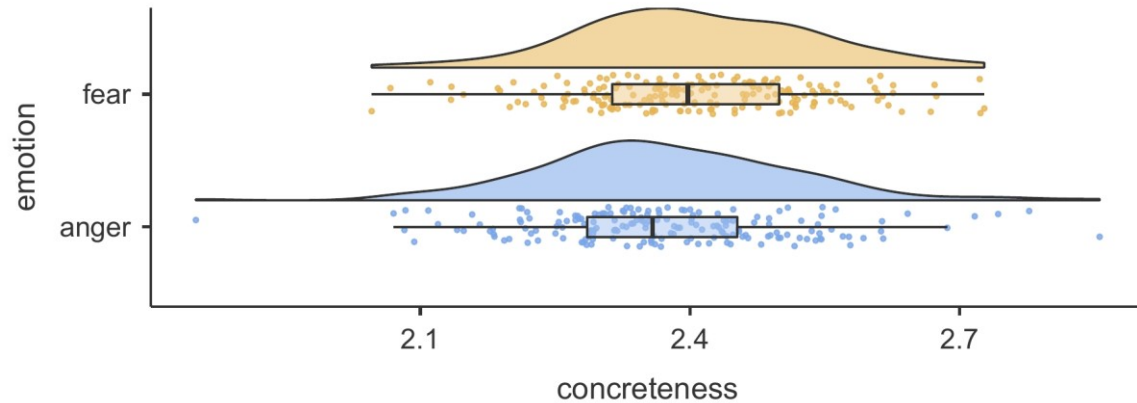|		emotion	concrete	i	we_bin	they_bin
emotion	Pearson's r	—				
	p-value	—				
concrete	Pearson's r	-0.308 **	—			
	p-value	0.005	—			
i	Pearson's r	-0.042	0.295 **	—		
	p-value	0.707	0.007	—		
we_bin	Pearson's r	-0.004	0.071	-0.399 ***	—	
	p-value	0.972	0.521	< .001	—	
they_bin	Pearson's r	0.103	-0.100	-0.059	0.053	—
	p-value	0.356	0.370	0.597	0.637	—

Note. emotion (0 = fear condition, 1 = anger condition), concreteness = proportion of concrete words, i = proportion of first-person pronoun "I", we_bin (0 = no first-person pronoun "we" used, 1 = first-person pronoun "we" used), they_bin (0 = no third-person pronoun "they" used, 1 = third-person pronoun "they" used).
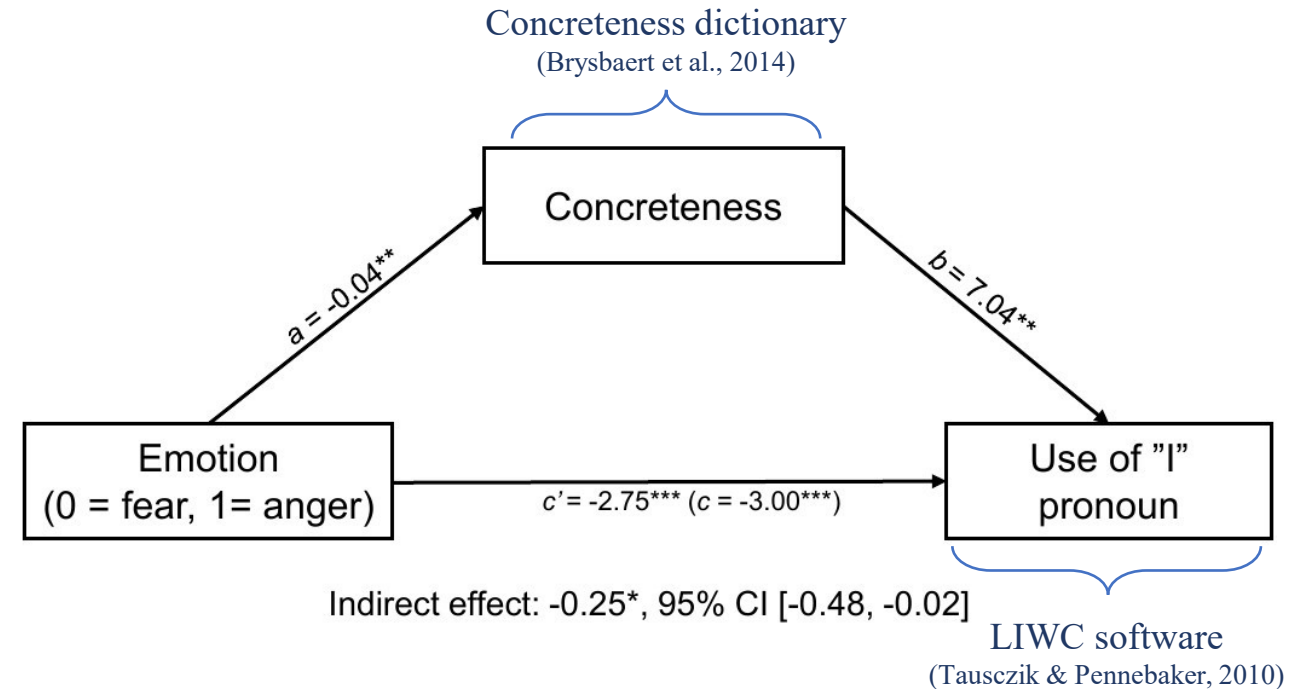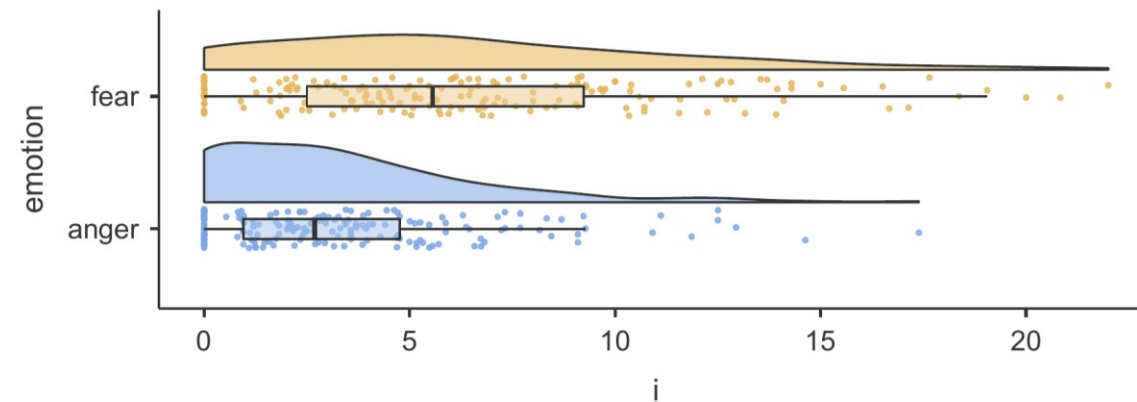* p < .05, ** p < .01, *** p < .001.

Dataset 2: Anxiety vs. moral anger (writing task)

*"Please think about a specific aspect of the pandemic that has made you most worried **[angry]**"*

$N_{\text{fear}} = 179$

$N_{\text{anger}} = 178$

Dataset 2: Anxiety vs. moral anger

"Please think about a specific aspect of the pandemic that has made you most afraid [angry]"
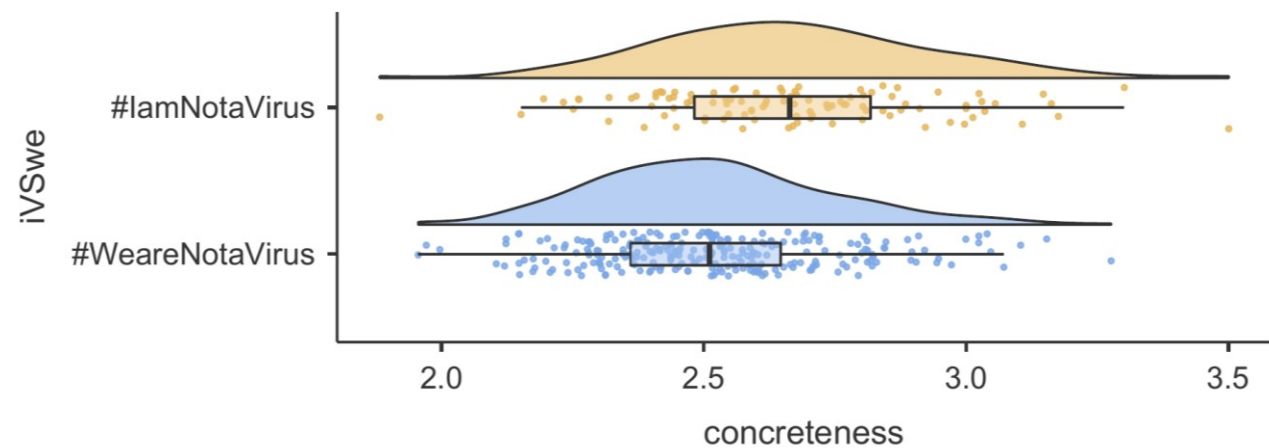
Correlation Matrix

		emotion	concreteness	i	we_bin	they_bin
emotion	Pearson's r	—				
	p-value	—				
concreteness	Pearson's r	-0.130 *	—			
	p-value	0.014	—			
i	Pearson's r	-0.339 ***	0.259 ***	—		
	p-value	< .001	< .001	—		
we_bin	Pearson's r	-0.190 ***	0.105 *	-0.121 *	—	
	p-value	< .001	0.047	0.022	—	
they_bin	Pearson's r	0.413 ***	-0.015	-0.285 ***	-0.038	—
	p-value	< .001	0.780	< .001	0.469	—

Note. emotion (0 = fear condition, 1 = anger condition), concreteness = proportion of concrete words, we_bin (0 = no first-person pronouns used, 1 = first-person pronouns used), they_bin (0 = no third-person pronouns used, 1 = third-person pronouns used). * p < .05, ** p < .01, *** p < .001.

Dataset 3: Twitter (N = 607)

Tweets tagged with *#WeareNotaVirus* VS *#IamNotaVirus*.

Correlation Matrix

		anger_bin	iVSwe	concreteness
anger_bin	Pearson's r	—		
	p-value	—		
iVSwe	Pearson's r	0.260 ***	—	
	p-value	< .001	—	
concreteness	Pearson's r	-0.132 *	-0.274 ***	—
	p-value	0.013	< .001	—

Note. anger_bin (0 = no use of anger-related words, 1 = use of anger-related words), iVswe (0 = first-person pronoun "I" in Tweet hashtag, 1 = first-person pronoun "we" in Tweet hashtag), concreteness = use of concrete words. * *p* < .05, ** *p* < .01, *** *p* < .001.

To summarize…

Results suggest that…

- Anger (vs. fear) activates more abstract mental representations.

- Anger (vs. fear) causes people to consider socially distant others.

- Consistent with Construal Level Theory and Regulatory Scope Theory.

- "I am more concrete [*and fearful?*] than We" (Yin et al., 2022)

- Furthers our understanding of the social function of anger.

- ❗ Results are exploratory. Future (preregistered) studies needed to replicate findings.

Thank you!

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