

ONLINE SUPPLEMENT FOR:

**Implicit Theories of Personality and Attributions of Hostile Intent:
A Meta-Analysis, an Experiment, and a Longitudinal Intervention**

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Overview

This document contains the following:

- *A pilot experiment* demonstrating that the ambiguous peer provocation employed as a stimulus in Studies 1-3 was rated as more ambiguous with regard to intent than more explicit peer conflicts.
- *A description of the training and coding procedure* for categorization of open-ended responses to ambiguous peer provocations.
- Analysis of effects on *long-term implicit theories* from Study 3.
- *Table S1*, which reports the individual effect sizes for each of the tests employed in Study 1's meta-analysis.

Pilot Experiment

In a pilot experiment, conducted with grade 9 students attending a low-income, diverse urban school ($N = 89$), participants were randomly assigned to read the scenario described above or a scenario used in past research that involved explicit bullying (i.e., a mean nickname about you is spread around school by a few peers; Yeager et al., 2011, Study 2). On a five-point scale (1 = *A complete accident*, 3 = *Half on accident, half on purpose*, 5 = *Completely on purpose*), participants rated the scenario of a student bumping into them as more of an accident relative to the explicit scenario involving bullying, $M = 2.76$, $SD = 1.16$ and $M = 3.67$, $SD = .99$, $t(88) = 4.06$, $p < .01$. $d = .85$. Most importantly, the ambiguous scenario was rated near the midpoint of the scale. Hence, the stimulus used in the present studies was ambiguous as to its hostile intent.

Training of Coders and Coding Procedure

Two independent coders categorized statements from each open-ended response. These coders were trained for several weeks on practice datasets. When beginning coding on the data

used in Studies 1 and 2, coders categorized randomly-selected sub-sets of data (usually the first 20% of responses) and then compared responses with the other coder. After high agreement (over 92%) had been reached on a given random sub-set, the full sample of responses was then ordered in a new random order and coders coded the entire set. Coders did not discuss codes during the process. After completing their codes their work was thoroughly reviewed by a third coder, who was also blind to hypotheses and conditions and who coached them to reconcile discrepant codes after their independent codes had been assigned. Finally, a fourth coder looked through the final dataset for errors and when some were found (a rare event) then the group of four coders agreed on a final code.

Analysis of Long-term Treatment Effects on Entity Theories in Study 3

Interestingly, although the effect of the treatment on the key dependent variables was maintained over the 8-month period, the treatment effect on the theory of personality items was not sustained eight months post-intervention, $b = .03$, $SE = .04$, $t(76) = .87$, $p = .32$. This finding was not expected. Perhaps the initial change in implicit theory triggered a beneficial process that continued even after the implicit theory change waned. There is some precedent for this: Walton and Cohen's (2011) social belonging intervention produced treatment effects over 3.5 years even though only a minority of students recalled the treatment message. Nevertheless, it merits further study. For example, is it the case that the initial change in implicit theory triggered a beneficial process that continued even after the implicit theory change waned? Or is this finding perhaps an artifact—maybe those in the incremental group changed toward a higher standard for evaluating their beliefs about change (e.g., “I believe in change but not as much as the people who came to my classroom and taught me about it”). We recommend that future research address these possibilities. However, the most important point for our theory is that immediate changes in

implicit theories 1-2 days post-intervention mediated the longitudinal effects of the treatment on responses to ambiguous provocation.

Table S1. Summary of Correlational Relationships Between Implicit Theories, Attributions of Hostile Intent, and Aggressive Desires Across Eight Samples and Eleven Studies (Study 1).

Sample	N	Days Between Measures	Intent Measure	DV	Theories → Hostile Intent (a paths)			Hostile Intent → Aggressive Desires (b paths)			Theories → Aggressive Desires (controlling for intent) (c' paths)			Indirect Effect of Theories on Aggressive Desires (ab paths)	
					<i>b</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>t</i>	<i>p</i>	<i>b</i>	95% CI
1	39	0	1	1	0.56	3.07	.00	0.44	3.40	.00	0.14	0.73	.46	0.21	0.02 ,0.47
2	128	0	1	1	0.29	3.01	.00	0.46	6.32	.00	0.15	1.73	.09	0.11	0.04 ,0.21
3	179	430	2	1	0.15	2.35	.02	0.49	7.41	.00	0.08	1.27	.21	0.07	0.01 ,0.14
4	204	0	2	2	0.15	2.11	.04	0.38	5.18	.00	0.33	4.35	.00	0.12	0.06 ,0.20
5	36	210	2		0.07	0.43	.67								
5	36	14	3	2	0.59	2.19	.04	0.55	5.16	.00	0.13	0.69	.50	0.26	0.01 ,0.57
6	305	0	2	1	0.22	3.79	.00	0.38	8.55	.00	0.16	3.35	.00	0.08	0.05 ,0.13
6	299	21	4		0.26	2.60	.01								
7	211	0	2	1	0.11	1.40	.16	0.62	11.75	.00	0.03	.58	.56	0.06	-0.05 ,0.16
7	196	14	4		0.17	1.49	.14								
8	26	0	4		0.88	2.93	.01								

Note: All variables re-coded to range from 0 to 1. *b* = unstandardized regression coefficient; *t* = t-statistic, with *df* = *N* – 1; 95% CI = 95% confidence interval, estimated via bootstrapping methods (Imai et al., 2011). Intent measures: 1 = following hypothetical scenario, participants asked whether this person bumped into you on purpose or on accident;” 2 = following hypothetical scenario, participants asked how much they thought “They were being mean to me on purpose” and “They were trying to be mean to me;” 3 = following Cyberball exclusion, participants asked how much they thought “They were being mean to me on purpose;” 4 = following Cyberball exclusion, participants asked how much they thought “They were being mean to me on purpose” and “They did it on purpose.” DV = Dependent measures; 1 = Desire for vengeance; 2 = Desire to use vengeance for emotion regulation. Samples presented in order of data collection date. Samples 1, 2, 3, 4, 7, and 8 were collected from schools located in neighborhoods with higher levels of poverty and violence, while samples 5 and 6 were located in upper-middle class neighborhoods with lower levels of poverty and violence.