Supplement to:

Greenberg, Jason, Christopher C. Liu, and Leanne ten Brinke. 2024. "When Do Haters Act? Peer Evaluation, Negative Relationships, and Brokerage." Sociological Science 11: 439-466.

Table A1: Descriptive Statistics from Classroom Field Data (Study #1)

	Mean	SD	Min	Max
Panel A: Individual Characteristics (N = 95)				
Evaluator's average score of evaluated	3.997	0.744	1.46	5.8
Ethnicity-Caucasian	0.432	0.498	0	1
Ethnicity-Asian	0.484	0.502	0	1
Ethnicity-Hispanic	0.021	0.144	0	1
Ethnicity-Black	0.053	0.224	0	1
Female	0.420	0.496	0	1
Born in USA	0.598	0.493	0	1
Exam score	28.95	4.897	17.7	38.2
Year entered University	2010	1.034	2008	2011
# of team members	4.000	0.911	1	6
Open triad count	17.40	19.52	0	90
# of friends-pre	1.274	2.060	0	17
# of friends-post	5.074	3.099	0	16
# of dislikes-pre	0.057	0.278	0	2
# of dislikes-post	0.455	1.277	0	9
# of high regards-pre	0.205	0.550	0	3
# of high regards-post	2.034	4.547	0	30
Panel B: Dyad-Level Characteristics (N =3,971)				
Evaluator's mean centered evaluation of evaluated	-0.009	1.218	-4.28	5.04
Evaluator and evaluated on same team	0.088	0.284	0	1
Evaluator and evaluated same gender	0.518	0.500	0	1
Evaluator and evaluated on same ethnicity	0.439	0.496	0	1
Evaluator and evaluated both born in USA	0.527	0.499	0	1
Evaluator and evaluated sat on same side of class	0.492	0.500	0	1
Evaluator and evaluated have the same major	0.287	0.452	0	1
Evaluator considers evaluated a friend	0.105	0.306	0	1
Evaluator considers evaluated a close friend	0.015	0.122	0	1
Evaluator dislikes the evaluated	0.010	0.100	0	1
Evaluator has high regard for the evaluated	0.045	0.207	0	1
" team members who are friends of evaluated (count)	0.175	0.445	0	4
Evaluator's OTC	17.69	19.57	0	90
Evaluated's OTC	16.77	19.39	0	90
Evaluator's network constraint	0.300	0.129	0.11	0.63
Evaluated's network constraint	0.312	0.147	0.11	1
" team members who dislike evaluated (count)	0.033	0.186	0	1
" friends who like evaluated (count)	0.552	0.909	0	5
" friends who dislike evaluated (count)	0.052	0.241	0	2
" dislikes who like evaluated (count)	0.054	0.269	0	4
" dislikes who dislike evaluated (count)	0.008	0.091	0	2
Evaluator's friends' avg. score for evaluated	-0.004	0.842	-2.44	3.58

Source: Proprietary data from two classes of a management class at a large, private school of business in the northeastern US.

"Pre" refers to pre-class; "post" end of semester

Table A2. Correlation Matrix for Classroom Data (Study #1: Dyad-level)

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Evaluation score	1												
2	Same team	0.12*	1											
3	Same gender	0.04*	0.05*	1										
4	Same ethnicity	0.03*	0.05*	-0.02	1									
5	Both born USA	0.03	0.01	-0.00	0.12*	1								
6	Same major	-0.02	0.01	0.03	0.05*	0.00	1							
7	Is a friend	0.15*	0.67*	0.06*	0.05*	0.04*	-0.00	1						
8	Is disliked	-0.00	0.00	0.01	0.24	0.02	0.01	-0.02	1					
9	High regard	0.19*	0.12*	0.02	0.02	0.01	-0.03*	0.13*	-0.02	1				
10	Evaluator Constraint	-0.17*	-0.00	-0.01	-0.01	-0.02	-0.02	-0.08*	-0.03*	-0.05*	1			
11	Evaluated Constraint	0.00	-0.00	-0.01	-0.01	-0.04	-0.01	-0.12*	-0.06*	-0.05*	0.16*	1		
12	Evaluator OTC	0.17*	0.01	0.03*	0.01	0.08*	0.01	0.15*	0.13*	0.02	-0.77*	-0.14*	1	
13	Evaluated OTC	0.00	0.00	0.03	0.02	0.04*	0.01	0.07*	0.04*	0.04*	-0.14*	-0.71*	0.11*	1

Source: Proprietary data from two management classes at a large, private school in the Northeastern US. Asterisks indicate p-values < 0.05.

Table A3. Descriptives and Correlation Matrix for Experimental Study Data (Experimental Study: Individual-level)

		Mean	SD	1	2	3	4	5	6	7	8	9
1	Evaluation score (single)	5.23	1.08	1								
2	Evaluation score (composite)	5.14	0.83	0.83*	1							
3	Negative	0.46	0.50	-0.09	0.04	1						
4	Real-World Broker	0.62	0.49	0.24*	034*	0.03	1					
5	Non-Embedded	0.49	0.50	0.07	0.04	-0.09	-0.08	1				
6	Is Non-White	0.23	0.42	-0.05	-0.03	0.37*	-0.15	-0.01	1			
7	Is Female	0.39	0.49	0.10	0.11	-0.01	-0.04	-0.19*	-0.01	1		
8	Facebook Friends (categorical)	4.12	2.15	-0.01	0.07	-0.11	0.15	-0.28*	-0.27*	0.16	1	
9	Is US Raised	0.91	0.28	-0.01	0.01	-0.17	0.16	0.02	-0.50	-0.10	0.12	1

Source: Experiment conducted at a college in the Northwestern US (N = 123). Asterisks indicate *p*-values < 0.05.

Figure 1. Timeline for Classroom Data Collection (Study #1)

| Network survey | Quiz | Group work | Quiz | Network survey
Peer evaluation |

Before class   Middle of class   End
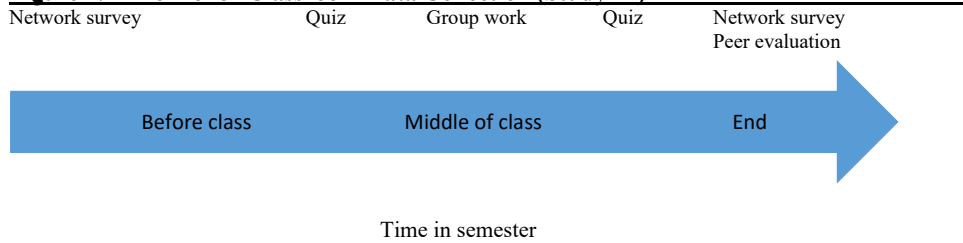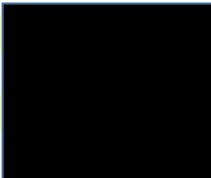
Time in semester

Figure 2. Key Survey Questions (Study #1)

* 1. This portion of the survey has a list and corresponding pictures of all the students enrolled in your section of the class. For each student please click on the box that applies

	Close Friend	Friend	Acquaintance	Stranger
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

* 2. Using the following scale, please evaluate the contribution each of your peers made to the classroom experience in ██████████████ **When you consider what score to assign to each student think about both the quantity and especially quality of each of your peers' contributions. Do not evaluate yourself.**

	1 Poor Contribution	2	3	4 Average contribution	5	6	7 Exceptional contribution
██████	○	○	○	○	○	○	○
██████	○	○	○	○	○	○	○
██████	○	○	○	○	○	○	○
██████	○	○	○	○	○	○	○

Note: Student and class information blacked-out to preserve confidentiality, anonymity, and privacy.

Figure 3. Images of Questions and Conditions Used in Experimental Study

INSTRUCTIONS: "You will be asked to read a brief pitch from an aspiring entrepreneur. This aspiring entrepreneur, Jake Elwood, is describing his small business--a coffee business. Jake is one of 10 people attending a pitch competition. Pitches will occur on Saturday. There will be a welcome dinner the evening before."

1. Warm/likable condition: "At the welcome dinner, Jake greeted the other attendees with a hug. He had long conversations with the other people present. It was clear that he loved socializing with other people, and was a friendly person."
2. Rude/unlikeable condition: "At the welcome dinner, when Jake was greeted by the other attendees, he did not respond. Reliable information also circulated that Jake was rude and mean, and screamed at several people for no reason."

Imagine that the following day you are a judge of the pitches provided by each of the aspiring entrepreneurs. You receive a text message from a friend saying:

1. "Hey! I hear that you are a judge at the competition today. Very cool! Too bad I couldn't make it, and no one else we know is also judging."
2. "Hey! I hear that you are a judge at the competition today. Very cool! Some of our friends will also be judges. We should ALL get together to talk about the pitches and trade notes after the competition."

PITCH/PRESENTATION

ROGUE COFFEE CO.
We're excited to announce our brand new line of Rogue Coffee blends. Roasted locally in Oregon and shipped directly to you. Perfect for an at-home drip coffee, espresso drink, or pour-over. At Rogue, we love our customers and our community.

Our Barista Blend
Rogue's original blend -- a blend of Ethiopian and Guatemalan 100% Arabica beans that were carefully chosen for their harmonious relationship in your cup. Roasted with the perfect everyday taste in mind, Rogue's Barista Blend combines the mountainous regions of Ethiopia with the ideal growing climates of Guatemala. The end result is a coffee that is delicate yet flavorful, without giving up any complexity. This coffee is wonderful for both homebrew and pour-overs.

The Rogue Story & **More About Us:**
Rogue was founded in 2019 with the goal of revolutionizing how people access high-quality coffee. We pride ourselves in the work we have done to build a coffee community across our Eugene locations. In such a short amount of time, our baristas have been able to connect with our customers on a personal and professional level.

From the beginning, our baristas have been paid an above-market wage and given access to health benefits not normally available to hourly workers. We recognize that our baristas responsibilities go far beyond our four walls. Our baristas are mothers, sons, daughters, students, artists and more; their livelihood and their families' livelihood depend on their ability to continue to work and serve coffee.

Expansion Plans:
We hope to expand our Rogue product-line, as well as our ability to ship our product line across the country. We are thus seeking investors to help us grow our business.

Supplement Table S1. LPM Regression of Open Triad Count (OTC) Determinants of Peer Evaluation (Study #1) including Evaluator Fixed Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evaluated disliked by evaluator		-0.193	-0.193	0.505*	-0.193	-1.061**		
		(0.270)	(0.272)	(0.238)	(0.237)	(0.318)		
Evaluator's open triad count			-0.004*	-0.004*				
			(0.002)	(0.002)				
Evaluated disliked by evaluator * Evaluator's OTC				-0.017**				
				(0.006)				
Evaluator's constraint					0.810***	0.855***		
					(0.115)	(0.116)		
Evaluated disliked by evaluator * Evaluator's constraint						3.883***		
						(0.988)		
Evaluated disliked by evaluator * Evaluator's # of friends							-0.176*	
							(0.072)	
Evaluated disliked by evaluator * Evaluator's # of high regards								-0.191
								(0.122)
Evaluated is a friend of evaluator	0.262**	0.257*	0.257*	0.252*	0.257*	0.253*	0.242*	0.257*
	(0.102)	(0.104)	(0.102)	(0.103)	(0.103)	(0.103)	(0.106)	(0.104)
Evaluated's open triad count	0.002	0.002*	0.002*	0.002	0.002	0.002	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Evaluator has high regard for evaluated	0.763**	0.759**	0.759**	0.762*	0.759**	0.766**	0.759**	0.760**
	(0.218)	(0.217)	(0.217)	(0.219)	(0.218)	(0.218)	(0.218)	(0.218)
Evaluator's # of friends	-0.001	0.001	0.031	0.037	0.014	0.018	0.011	0.001
	(0.019)	(0.019)	(0.025)	(0.026)	(0.022)	(0.022)	(0.019)	(0.019)
Evaluated's # of friends	0.029*	0.029*	0.029**	0.029*	0.029	0.030	0.029	0.029
	(0.019)	(0.018)	(0.018)	(0.019)	(0.019)	(0.019)	(0.019)	(0.018)
Evaluator's # of high regards	0.008	0.008	0.006	0.008	-0.000	0.002	0.012	0.008
	(0.069)	(0.068)	(0.071)	(0.071)	(0.073)	(0.072)	(0.068)	(0.068)
Evaluated's # of high regards	0.105**	0.105**	0.105**	0.104**	0.105**	0.104**	0.104**	0.105**
	(0.029)	(0.029)	(0.029)	(0.030)	(0.029)	(0.029)	(0.030)	(0.029)
Constant	-1.321**	-1.316**	-1.148**	-1.159**	-1.427**	-1.453**	-1.332**	-1.311**
	(0.480)	(0.480)	(0.452)	(0.452)	(0.478)	(0.478)	(0.480)	(0.482)
N	3971	3971	3971	3971	3971	3971	3971	3971
R^2	0.257	0.258	0.258	0.260	0.258	0.260	0.259	0.258

Source: Proprietary data from two classes of a management class at a large, private school of business in the northeastern US.

Note: Indicators for classroom; same classroom side, both born in the US, same major, same team, same gender, same ethnicity, evaluator test grade, evaluated test grade, and evaluator's friends' avg. score for evaluated included but not shown. Evaluator Fixed Effects included in all models. Two-way clustered errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, +$p < .10$ (two-tailed test).

Supplement Table S2. Summary Statistics and Comparisons of Evaluator Characteristics at Different Levels of Network Constraint

1. Evaluator network constraint above the 75th Percentile					
Normalized evaluation score	1,106	0.00	1.22	-3.087	3.761
Held evaluated in high regard	1,154	0.02	0.15	0	1
Not fond of evaluated	1,153	0.00	0.05	0	1
Year entered school	1,063	2009.13	0.74	2008	2010
Evaluator gender	1,155	0.40	0.49	0	1
Evaluator born in USA	1,155	0.56	0.50	0	1
Evaluator score in tests	1,155	26.73	3.98	19.95	36.8
2. Evaluator network constraint below the 25th Percentile					
Normalized evaluation score	1,114	0.00	1.12	-4.277	5.043
Held evaluated in high regard	1,123	0.05	0.22	0	1
Not fond of evaluated	1,123	0.02	0.15	0	1
Year entered school	1,123	2010.21	0.86	2008	2011
Evaluator gender	1,123	0.37	0.48	0	1
Evaluator born in USA	1,123	0.67	0.47	0	1
Evaluator score in tests	1,123	31.36	4.67	19.25	38
3. Evaluator network constraint between the 25th and 75th Percentile					
Normalized evaluation score	2,114	0.00	1.26	-3.261	4.891
Held evaluated in high regard	2,136	0.06	0.23	0	1
Not fond of evaluated	2,133	0.01	0.08	0	1
Year entered school	2,139	2009.79	1.08	2008	2011
Evaluator gender	2,139	0.43	0.50	0	1
Evaluator born in USA	2,092	0.62	0.49	0	1
Evaluator score on tests	2,139	28.61	4.79	17.675	38.2

Contrasts	**1 v 2**	**1 v 3**	**2 v 3**
Normalized evaluation score	ns	ns	ns
Held evaluated in high regard	ns	ns	ns
Not fond of evaluated	*	ns	**
Year entered school	***	**	#
Evaluator gender	ns	ns	ns
Evaluator born in USA	ns	ns	ns
Evaluator score on tests	***	#	*

Note: All contrasts account for multi-way clustering.

Supplement Table S3: Ordered Logit Regression Coefficients Predicting Evaluation as a Function of Experimental and Real-World Brokerage (RWB) W/Failed Attention Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub-Sample	All	All	All	All	Non-RWB	RWB	All
Evaluation Score	Single	Single	Single	Single	Single	Single	Comp
Real-World Broker (RWB)		1.114**	0.974*	0.395			0.888
		(0.333)	(0.434)	(0.762)			(0.773)
Negative		-0.014	-0.197	-0.718	-0.699	0.713	-0.642
		(0.379)	(0.512)	(0.818)	(0.937)	(0.618)	(0.770)
Non-Embedded		0.261	0.260	-0.091	-0.075	0.907	-0.169
		(0.362)	(0.362)	(0.696)	(0.850)	(0.618)	(0.651)
Neg x RWB			0.313	1.557			1.097
			(0.642)	(0.982)			(0.962)
Neg x Non-Embedded				0.980	1.162	-1.480+	1.162
				(0.944)	(1.040)	(0.884)	(0.912)
RWB x Non-Embedded				1.073			0.785
				(0.901)			(0.880)
Neg x RWB x Non-Embedded				-2.584+			-2.204+
				(1.320)			(1.222)
Non-White	-0.433	-0.363	-0.366	-0.405	-1.125	-0.063	-0.151
	(0.571)	(0.539)	(0.535)	(0.538)	(1.108)	(0.660)	(0.442)
Female	0.311	0.472	0.458	0.452	0.631	0.374	0.488
	(0.323)	(0.345)	(0.348)	(0.350)	(0.585)	(0.452)	(0.314)
Facebook Friends	-0.071	-0.082	-0.079	-0.066	-0.038	-0.074	-0.027
	(0.076)	(0.077)	(0.078)	(0.078)	(0.172)	(0.086)	(0.070)
US-Raised	-0.061	-0.134	-0.157	-0.081	-0.693	0.287	0.373
	(0.662)	(0.613)	(0.622)	(0.649)	(1.237)	(0.750)	(0.500)
Observations	143	143	143	143	54	89	143
Log-Pseudolikelihood	-196.9	-191.1	-191.0	-188.7	-74.6	-112.2	-395.8

Source: Experiment conducted at a college in the Northwestern US. In contrast to the regression results presented in Table 5, this sample contains 20 individuals who failed the attention checks during the experiment.

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, +$p < .10$ (two-tailed test).