Enacted love: Capitalization responses signal love, including toward strangers

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Author Note

The study was conducted while Dr. Tatum A. Jolink was a graduate student and Dr. Brett A. Murphy was a postdoc at the University of North Carolina at Chapel Hill. Dr. Tatum A. Jolink is now at the University of Michigan and Dr. Brett A. Murphy is now at Texas A&M University, San Antonio. The authors declare no conflicts of interest.

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Abstract

What behavior is seen as "love" and why does it matter? We theorize active-constructive responding to another's disclosure of good news is prototypical "enacted love" and test hypotheses about implications for a loving person's relationship development. We use three distinct methods – dyadic interactions between romantic couples (Study 1, *N*= 160), real spontaneous responses to a stranger's good news (Study 2, *N*= 204), observation of others' real capitalization responses to a stranger's good news (Studies 3-5, *N*= 97, 105, and 402, respectively) -- to assess convergent and discriminant evidence for the construct. Study 2 uses experience sampling to track the development of capitalization respondents' social life over time. Studies 4 and 5 use within-subjects experiments to test hypotheses that loving behavior could influence others' interactions with loving people. Results have theoretical implications for close relationships and the concept of "loving one's neighbor", plus practical implications for building bridges in a divided society.

Keywords: love, capitalization, social behavior, affiliation, relationship initiation

Public significance statement

World health experts are drawing urgent attention to the importance of social connection at the same time communities are feeling pulled apart by divisiveness. This research shines the spotlight on love. We systematically document that people can spontaneously show love toward strangers and reveal implications for the development of new high-quality relationships from being the kind of person who does. By focusing on a behavioral prototype of *enacted love*, the findings present a novel perspective on motivations for prosociality and may generate renewed interest in the nature of love and its implications for the well-being of self and society.

Enacted love: Capitalization responses signal love, including toward strangers

What is love? There is a fresh burst of interest across psychological science about the nature of love – from what it feels like to experience it (Sasaki et al., 2024; [Authors masked for review]), to the prevalence and dynamics of its experience in daily life (Bhargava, 2024), and even in revitalizing Harlow's insights about its fundamental role in development and survival (Bos et al., 2025). Our field is rapidly gaining traction on the experiential phenomenology of love. Yet, in practical terms, what are the behaviors that love engenders? Because theorists agree that love always has an object (i.e., another person), and most people believe that love is a driving force in social relationships, we need to know: How do we reliably convey love to others? This question is as relevant to scientists seeking to illuminate the roots of flourishing developmental trajectories as to those trying to (re-)connect people across perceived differences.

Here, we theorize about one behavior we believe prototypically represents "enacted love". In this initial investigation, we set out to test whether it is associated with naturally-occurring feelings of love and is perceived by others as loving, as well as why enacting this (loving) behavior might matter for the individual, particularly when directed toward people they have never met. Operationalized as *active-constructive responding* to another person's shared good news (Gable, et al., 2004), the behavior resembles the Buddhist concept, *sympathetic joy* (mudita; Salzberg, 2017). Research on close relationships shows that when a loved one shares good news, listeners naturally vary in how they respond (Gable, et al., 2006). When listeners respond with enthusiastic and engaged support about the loved one's positive news, the *loved one* (discloser) experiences better outcomes; these include greater positive feelings about the event, esteem, and perception of the respondent's understanding, validation and care for them

(Peters et al., 2018). The present investigation homes in on that enthusiastic and engaged behavior of the listener.

We theorize that the behavior of active-constructive responding to another's good news is undergirded by the emotion of love. Functional accounts of emotion have long posited tight conceptual mapping between the subjective content of an experience and the behavioral concomitants of those experiences (Algoe, et al., 2016; Lerner & Keltner, 2000). A range of empirical evidence suggests such a mapping between love and spontaneous active-constructive behavioral responses to another person's shared good news. Although love is defined and measured in myriad ways in the broader psychological literature (e.g., an attitude toward a loved one or humanity *in general*; Sprecher & Fehr, 2005), there is scholarly consensus on three fundamental features relevant to *emotion* – who is the object of the emotion, what is the motivational component, and what is the valence: Love (1) is typically experienced for another person (i.e., it is *other-focused*), (2) rather than being a self-conscious experience, like embarrassment which turns one inward, love is a *self-transcendent* (beyond the self) motivational moment, and (3) love is *positive* in valence (e.g., Gonzaga, et al., 2001; Fehr, 1988; [Authors masked for review]; Shaver et al., 1987). Critically, several well-studied pro-relationship behaviors such as sacrifice (e.g., Impett et al., 2005; Righetti et al., 2021) and forgiveness (Gordon et al., 2009; Karremans & Van Lange, 2008) have been theorized to be likely acts of love in broader scholarship. However, we cannot find empirical tests of whether they are. Among the possible loving behaviors, active-constructive responding stands out as being accompanied by the third feature of love -- *positive valence* -- which is central to empirical evidence on this momentary experience (Fehr, 1988; Fredrickson, 1998; [Authors masked for review]; Shaver, et al., 1987). This positions active-constructive responding as a prime candidate

for investigation into what counts as "loving behavior"; we use a variety of methods –e.g., naturalistic behavior, longitudinal, and experimental – to triangulate initial evidence around this novel research question (see left side of Figure 1).

Further, although the majority of research on love has been conducted in the context of close relationships, here we propose that love can be enacted between strangers. The concept of loving one's neighbor has existed for centuries (Bransen, 2014; Held, 2024; VanderWeele, 2023). Yet to date, the relatively limited empirical focus on this concept has centered on people's *self-reported tendencies* toward care and compassion for strangers, called "compassionate love of humanity" (Sprecher & Fehr, 2005). The present question is about behavior, and in particular, behavior that might be reliably seen as loving.

Behavior matters because it is a reliable way for one person's love to have an impact on the other person, and most theories of love (including whether as an attitude or as an emotion) imply that moments of love are interpersonally mechanistic. Indeed, emotions have long been theorized to coordinate dyadic interaction (Algoe, 2019; Keltner & Haidt, 1999 Cosmides & Tooby, 2000), and evidence follows: people regularly infer momentary emotion experience from others' context-relevant behavior, they can do that reliably (e.g., Oya & Tanaka, 2023), and emotion perception is associated with additional inferences about the individual that guide subsequent behavior toward them (e.g., Van Kleef, 2009). Although there is no one-to-one mapping between emotion experience and behavior (e.g., anger does not always produce aggression, it depends on the situation), recent work on demonstrated gratitude illustrates that some behaviors are more typical signals of the underlying emotion than others (Chang & Algoe, 2020). So, although in daily life a variety of behaviors might be motivated by love and perceived as loving (e.g., caring for a child), a theoretically grounded approach for our first research

question (left side of Figure 1) is to focus on behavior with a high likelihood of corresponding to the real-time experience of love, a positive other-focused emotion, as well as conveying love to others. As with other research on behavioral demonstrations of emotion experience, we start with naturalistic observation and triangulate evidence from multiple sources, including observer reports (e.g., Tracy & Robins, 2004). Critically, the emotion literature strongly supports the proposal that emotion-motivated social behavior is relationship-agnostic (cf. *feeling* gratitude and *expressing* gratitude across a variety of relational contexts), and here we rest on that theoretical assumption to test questions about enacted love in the context of strangers.

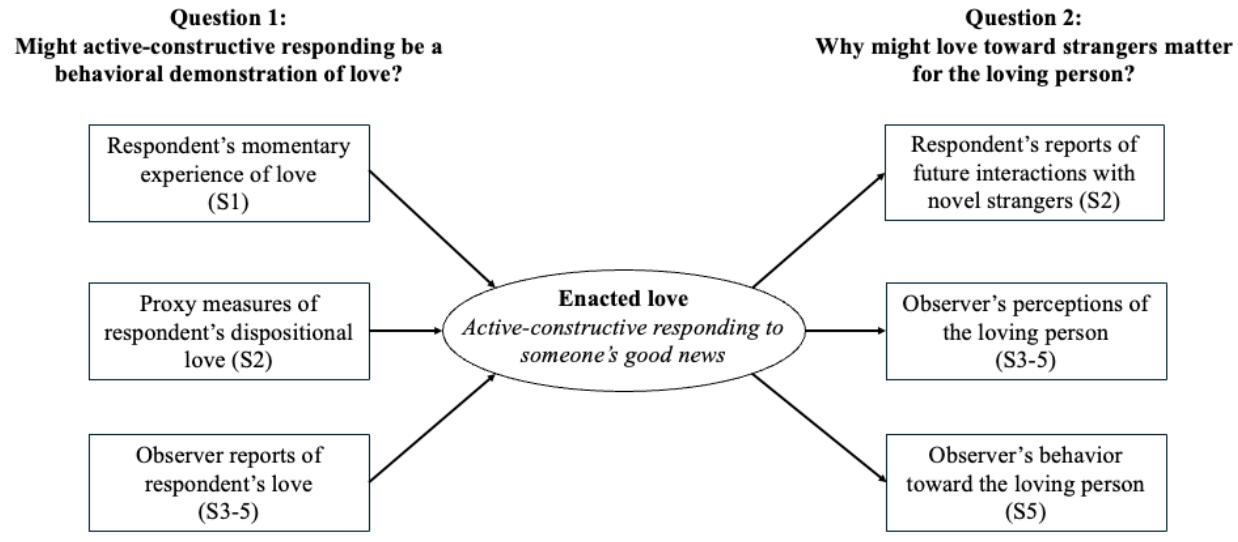
An important second aim of our research is to draw attention to the possible downstream implications of being a loving person (right side of Figure 1). Taking affective scientific theorizing seriously opens the possibility that enacted love may be generative, by planting seeds for future loving relationships which, in turn, support well-being and health. Thus, a single act of love could have short-term benefits, and loving behavioral tendencies could catalyze growth and thriving for the loving individual.

Three theoretical principles from affective science support these ideas. First focused on moments of experienced and demonstrated love, social functional accounts of emotion show that different types of positive emotions can reliably predict different social behaviors (Algoe & Haidt, 2009) and (as such), convey different information about the person experiencing the emotion (Algoe et al., 2020). So initial predictions about social consequences of demonstrated love should be derived from literature on the specific emotion: the empirical literature on momentary experiences of love leads to the conclusion that, when people say they experience love for another person, they mean they feel a sense of *affection, caring and commitment* for that person (Gonzaga et al, 2001; Fehr, 1988; Authors masked for review, 2025 [N = 2,658 across

five studies]). Second, there are individual differences in people's tendencies to experience moments of a particular type of emotion in daily life (Frijda, 1994). From this logic, people who are dispositionally loving of others, with love representing a motivated caring and commitment to others' welfare, may be more likely to foster social relationships and future experiences of love. Third, these ideas of growth are further supported by the Broaden-and-Build theory of positive emotions, that such moments fuel the *building of resources, over time* (Fredrickson et al., 2008). Building on this review, we would expect moments of *demonstrated* love to convey commitment toward (Study 4) and elicit generosity from others (Study 5). And people who have a natural tendency toward experiencing and demonstrating love will build enduring social resources; we use multiple methods (e.g., behavioral, longitudinal, experimental) to test the preconditions for this in Studies 2, 4, and 5.

Figure 1

Conceptual model of methods and theoretical questions regarding enacted love



Note. Question 1 is addressed by triangulating evidence from multiple indicators and methods across Studies 1-5, seen on the left side of the figure. Question 2 is tested with multiple methods,

including behavioral measures, in Studies 2-5, seen on the right side of the figure. See each study for tests of alternative explanations.

The present research

Please see Figure 1. We use multiple methods across five studies to triangulate evidence around the proposal that active-constructive responding to another person's shared good news (hereafter, "capitalization response") could be considered "enacted love" (Studies 1-5), as well as to test whether enacted love toward strangers is possible (Studies 2-5), and whether enacted love could have meaningful downstream implications for the loving person. All studies address possible alternative explanations.

Transparency and openness

For each study, we report how we determined our sample size. Ethics approval for all studies was granted by the [university masked for review; IRB #s 07-1988, 20-0928, and 24-0830]. Studies 2 (https://osf.io/bhqsy/?view_only=7baab826a01a4c66b47b81cbf911f9dc), 3 (https://aspredicted.org/43bj-t8m4.pdf), and 5 (https://aspredicted.org/7snj-b8xj.pdf) were pre-registered. All materials required for reproduction can be found in-text or in the supplemental material. Videos are unable to be shared for participant privacy and consent restrictions, but authors can provide additional details upon request. We are unable to publicly share Study 1 data due to participant privacy and consent restrictions. The primary data for all studies except Study 1 and all analysis scripts are available at https://osf.io/udjsn/?view_only=364eccea00fe4b3598e4344303b42fdd.

Study 1

Method

Study 1 provides the first test of whether respondents experiencing more *love* in capitalization interactions also enact more love, via greater capitalization responses. Based on

prior research on specific positive emotions ([Authors masked for review] and positive empathy (Andreychik & Migliaccio, 2015), we controlled for the respondent's general positive affect to assess unique variance explained by *love*. These tests are conducted using videorecorded capitalization interactions between romantic couples rather than strangers because they provide the opportunity to assess this foundational research question of whether capitalization responses could be considered enacted love using a concurrent assessment of the constructs in a naturalistic setting across a wide variety of good news topics.

Participants

Eighty romantic couples (N = 160 individuals) were recruited from the [masked for review] area in North Carolina, USA. To be eligible, couples must have been romantically involved for at least 6 months (range = 6 months to 35.25 years; M = 4.22 years; Mdn = 2.58 years). Upon enrollment, 53.8% of couples were dating, 40% married, 3.8% engaged to be or living as married, and 2.4% self-reported a different relationship type; 65% were cohabiting; three couples were in same-gender relationships. See Table 1 for demographic information. We used all available data from an existing dataset for this secondary analysis ([Authors masked for review]).

Design and procedure

As part of a larger study, couples attended a laboratory session together. Each person independently completed a questionnaire where they named something good that had happened to them recently that did not involve their partner. Then they took turns engaging in two naturalistic conversations where one person shared their good news with the other and they discussed for up to five minutes as they normally would, then repeated this with the other person (see Gable et al., 2006). After each conversation, we assessed the experienced emotions of the

person responding to the partner's disclosure. Videos were later coded for capitalization responses.

Self-reported experienced emotion. Participants were asked to rate several emotions they had experienced "during or as a result of the interaction with" their partner on a scale ranging from 0 (*not at all*) to 6 (*very much*). Here, we focus on the term "loving" (hypothesis test) as well as an average of other positive emotions that cover a range of theoretical emotion space, including social and other-focused emotions (control variable): satisfaction, admiration, amusement, gratitude, proud, inspired (ω total = .84).

Behaviorally coded capitalization responses. Active-constructive capitalization responding to the partner's positive event disclosure was coded by 4 trained coders following instructions in Gable et al (2006) and previously reported in [Authors masked for review]. Specifically, coders were asked to rate the listener's activity, both verbal and nonverbal, on a scale of 1 (*extremely passive*) to 7 (*extremely active*) (ICC = .86), as well as the listener's constructiveness, both verbal and nonverbal, on a scale of 1 (*extremely destructive*) to 7 (*extremely constructive*) (ICC = .86). For the passive-to-active dimension, coders were specifically told, "Rate the activity, both verbal and nonverbal, on the scale provided. This rating should be devoid of content, made irrespective of positivity or negativity of the interactions. Look for head nodding/shaking, emotional displays, animation, hand gestures, laughing or scoffing, questions, or statements." For the destructive-to-constructive dimension, they were specifically told, "Rate the valence of the verbal and nonverbal displays using the scale provided. Destructive units include negative suggestions and questions, turning the discussion away from the target, and displays of negative emotion. Constructive units include elaboration of positives, linking to other positive events, smiling, laughing." The correlation between dimensions was .51,

$p < .001$. As is standard (Gable et al., 2006), codes for each dimension were summed for the final score per participant (range: 2-14).

Results

Multilevel analyses were conducted in R (using the lmer function from the lme4 package), with individuals nested within couple. Results showed that, consistent with the hypothesis, participants who reported experiencing more love within the interaction showed greater capitalization response behavior to their partner's disclosure of a positive event $b = .37$, $SE = .10$, $df = 153.00$, $t = 3.69$, $p < .001$, CI 95% [.17, .57], $r = .29$. Of note, this conclusion about love held, $b = .41$, $SE = .15$, $df = 151.06$, $t = 3.16$, $p = .002$, CI 95% [.16, .67], $r = .25$, even when controlling for the other positive emotions during the interaction $b = -.08$, $SE = .15$, $df = 149.50$, $t = -.52$, $p = .61$, CI 95% [-.36, .21], $r = .04$. This evidence is a meaningful first step toward construct validity of "enacted love". Yet the context is one of romantic partnership: Respondents are invested in the relationship with the discloser and may be more prone to respond with love. Studies 2 - 5 turn to enacted love toward strangers.

Table 1. *Demographics of Participants across Studies 1-5*

	Study 1 (N = 160)		**Study 2** (N = 204)		**Study 3** (N = 97)		**Study 4** (N = 105)		**Study 5** (N = 402)	
Sample Characteristics	*M / N*	*SD / %*	*M / N*	*SD / %*	*M / N*	*SD / %*	*M / N*	*SD / %*	*M / N*	*SD / %*
Age	28	8.1	18.27	0.93	21.04	1.94	20.70	1.38	20.77	1.37
Gender										
Men	79	49.4	34	17.0	37	38.0	43	41.0	133	33.0
Women	81	50.6	157	77.0	53	55.0	59	56.0	253	63.0
Other gender, self-described			12	6.0	5	5.0	3	3.0	16	4.0
Race										
American Indian			2	1.0	1	1.0	1	1.0	5	1.2
Black/African American	20	12.5	21	10.3	22	22.7	11	10.5	51	12.7
East Asian	3	1.9	28	13.7	12	12.4	14	13.3	60	14.9
Hispanic	6	3.8	24	11.8	13	13.4	17	16.2	62	15.4
Latino/x			21	10.3						
Other	8	5.0	18	9.0	3	3.1	3	3.0	19	4.7
Pacific Islander or Native Hawaiian			1	0.5	1	1.0	1	1.0	2	0.5
South Asian	4	2.5	30	14.7	6	6.0			36	9.0
White/Caucasian	119	74.4	115	56.4	49	50.5	54	51.4	220	54.7
Sexual Orientation										
Asexual			5	2.5	3	3.1	3	2.9	11	2.7
Bisexual			38	18.6	22	22.7	20	19.0	87	21.6
Gay/Lesbian			13	6.4	6	6.2	4	3.8	24	6.0
Heterosexual			122	59.8	58	59.8	73	69.5	249	61.9
Other identities			15	7.4	1	1.0	1	1.0	10	2.5
Pansexual			9	4.4	2	2.1	4	3.8	12	3.0
Class										
Poor			6	2.9	7	7.2	7	6.7	30	7.5
Working Class			31	15.2	41	42.3	38	36.2	128	31.9
Middle Class			65	31.9	41	42.3	40	38.1	163	40.6
Upper Middle Class			97	47.5	7	7.2	19	18.1	72	18.0
Upper Class			3	1.5	0	0.0	1	1.0	8	2.0

Study 2

Methods

This study leveraged the natural initiation of brand-new relationships by enrolling young adults soon after arriving to their new college campus and using experience sampling to collect reports about new people they met. The design addressed three goals. The first was to document natural variability in capitalization responses *toward strangers*. The second was about the construct: we consider whether spontaneous capitalization response behavior in a laboratory setting could be an indicator of a person's dispositionally loving nature, representing the theoretical convergence of the experience and enactment of love toward strangers. The third was to assess initial evidence for whether (theorized) enacted love toward strangers plants seeds to grow new high-quality relationships. Our pre-registered analysis plan addresses potential alternative explanations for various hypothesis tests (e.g., general happiness, social motivations like extraversion).

Participants

Participants were recruited for a longitudinal study among the undergraduate students at a large public university in North Carolina, USA. To be eligible, participants had to be at least 18 years of age, experiencing their first year on their university's campus, single (not in a committed relationship), and open and willing to make new friends and go on dates.[1] The recruitment goal for the study was 250 participants, but due to recruitment challenges related to the COVID pandemic, a total sample of 204 participants were recruited into the study in two waves, beginning August 2021 (Wave 1; $N = 76$) and 2022 (Wave 2; $N = 128$). See Table 1 for demographic information.

[1] See Supplemental Materials (SM) for additional criteria relevant to biological factors measured for the larger study.

Procedure overview

Participants enrolled at the beginning of the academic year. To enroll, participants completed initial questionnaires online, then attended a laboratory session. Then, over the rest of the semester, each time they met someone they wanted to get to know better, they completed a brief report about that person; 169 participants completed an average of 3.95 reports [*SD* = 2.51] (see [Authors masked for review] for procedural approach). They completed an online questionnaire at the end of the semester (N=131), and one approximately 6 weeks later (N = 120) where we assessed experienced love and extraversion, respectively. See [Authors masked for review] for description of the larger study.

Videorecorded conversation procedure: Sharing good news. At a natural transition point near the end of the lab visit, the experimenter shared their good news with the participant. "OK, so this is a little random, but I just have to tell someone: When you were doing the survey, I got a message that I finally got off the waitlist to adopt a puppy I applied for. I pick her up tomorrow, and I'm so excited!"

Experimenters were trained to allow the participant to respond as they normally would, and engage with the participant as it seemed natural, letting the participant guide the conversation. Experimenters were prepared with answers to frequently asked questions and when it seemed the participant's engagement had naturally ended, experimenters moved on to the next part of the study. Participants interacted with any one of 21 experimenters. To capture a participant's natural response, this interaction was videorecorded without the participant's knowledge, but all participants were debriefed at the end of the study and given an opportunity to withdraw their videos. Thirteen participants chose to withdraw their videos and two additional

videos were not obtained due to procedural errors. This left behavioral data from 189 participants.

Behavioral codes

Participant's active-constructive response to experimenter's shared good news. The coding scheme used in Study 1 (Gable et al., 2006) was adapted for the standardized naturalistic positive event disclosure between strangers that we introduce here. Four novice coders, unaware of hypotheses, were trained following standard and rigorous training, consensus, and reliability protocols for behavioral coding (see SM for training details). Coder ratings on each dimension were averaged to create the final value for the code. Passive-to-active dimension (ICC = .95; M = 3.99, SD = 1.28, range = 1 - 7) was moderately correlated with the destructive-to-constructive dimension (ICC = .88; M = 4.37, SD = 1.02, range = 1.75 - 7): r =.67, p <.001. Per Gable and colleagues (2006), scores were summed for the final active-constructive scale value.

Additional behavioral codes. As detailed in SM, three additional novice coders were trained to code videos for participant's dog ownership and enthusiasm about dogs. Pre-registered analyses controlled for whether the participant mentioned owning a dog themselves (yes = 1, no = 0; ICC = .84).

Self-report measures

Table 2 summarizes pre-registered self-reported measures of interest, which are described fully in SM. Participants completed questionnaires assessing dispositional scales used for construct validity and alternative explanations (e.g., other social motives). Over the semester, they also completed a brief survey anytime they met someone they wanted to get to know better. Specific outcomes of interest from these reports include quantity and quality of initial interactions as well as initial evaluations of the social interaction partner.

Table 2. *Table of Study 2 Self-Report Measures*

Construct validity	**Alternative explanations and moderators**	**Quantity and quality of initial interactions**	**Self-reported behavior and first impressions during initial interactions**
		Created by the study team	
Compassionate love of humanity – 24 items (α = .94)	Expressive impulses – 6 items (α = .80)	Quantity of initial social interactions: Number of completed reports	Experienced love during initial interaction – 1 item
Appetitive contagion – 6 items (α = .87)	Social anxiety – 7 items (1998; α = .68).	Quality of initial social interaction – 1 item	Capitalization attempts from the social partner – 1 item
Experience of love – 3 items (created by the study team; baseline and future [i.e., end-of-semester] α = .79)	Subjective happiness – 4 items (α = .87)	Instant relationship following initial interaction – 1 item	Capitalization response to social partner's good news – 1 item
	Extraversion – 10 items (α = .82)		Initial evaluation of the social partner – 6 items (w-p w = .85; b-p w = .92
	Agreeableness – 10 items (α = .67)		Social partner's characteristics – 9 items (w-p ω = .74; b-p ω = .97
	Self-esteem – 1 item		*Covariate*: Experienced positive emotions during the interaction – 2 items (i.e., happy/pleased/joyful and proud/good about yourself)

Note. w-p = within-person, b-p = between-person.

Analysis plan

To account for the non-independence of the repeated initial interaction report data, we calculated the *effective* sample size using the design effect equation: $N_{effective} = N/[1+(n_{cluster} - 1)*\rho]$ where N = total sample, $n_{cluster}$ = cluster size (in our case, ~3.5) and ρ = intraclass correlation (ICC; i.e., measure of nonindependence between reports). Because we had multiple outcomes, we used both the smallest and largest ICC, the latter of which provides the most conservative estimate. We then added the number of individual participants (i.e., 189) to the effective sample size computed using the design effect equation for the smallest and largest ICCs, separately, and used those total sample sizes to run sensitivity analyses in G*Power. Overall, our smallest effective sample size was 96, which was powered to detect effects as small as ρ = .164 (where ρ = population correlation coefficient). The largest effective sample size was 137, which was powered to detect effects as small as ρ = .154. Overall, we were adequately powered to detect small effects in this study.

All data cleaning and analyses were conducted in R. The data analytic plan was pre-registered and more details about the approach can be found in SM.

Construct validity. We tested zero-order correlations between capitalization response codes and each self-reported love variable, including compassionate love of humanity, appetitive contagion, and experienced love at baseline. We also tested zero-order correlations between capitalization response codes and potential dispositional alternative explanations, including extraversion, agreeableness, social anxiety, expressive impulses and subjective happiness.[2]

Hypothesis Tests. To test the first hypothesis, we used linear regression (run using the lm function in R) to regress love experienced at the end of the semester on capitalization

[2] See SM for pre-registered analyses with relevant control variables.

responses, controlling for love experienced at baseline. In additional pre-registered models, we separately controlled for dispositional compassionate love of humanity, appetitive contagion, extraversion, and subjective happiness. We also ran exploratory models controlling for agreeableness and social anxiety. The next hypothesis test regressed the quantity of initial social interaction reports on participant's capitalization response, using lm function in R.

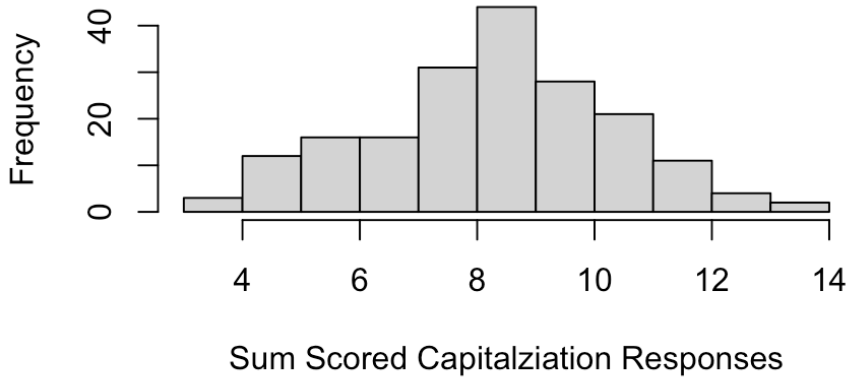
For all other hypothesis tests using initial social interaction outcomes, we conducted multilevel models using the lmer function from the lme4 package in R (Bates et al., 2015) to account for the nonindependence of multiple initial interaction reports being nested within participant. We started by estimating two random effects – intercept and slope, but models did not converge, and we thus eliminated the random slope and only modeled a random intercept and fixed slope. Residual maximum likelihood – the default in lme4 – was used in all models. In these models we controlled for time, or the number of days between the capitalization response (i.e., participant's laboratory visit) and the initial social interaction report.

For the outcome of experienced love during the initial interaction, we ran additional models controlling for 1) experienced love at baseline, 2) other positive emotions experienced during the initial interaction, and 3) subjective happiness. (See SM for rationale for deviation from the pre-registration for these models.) For all hypothesis tests, we controlled for study wave and dog ownership.

Moderators. We explored whether study wave (W1 = 0, W2 = 1) moderated the association between capitalization response and each outcome. For the outcomes from initial social interaction reports, we also tested for moderation by time (continuous, in days) or by the type of potential relationship with the interaction partner (friend = 0, romantic interest = 1).

Results

Figure 2. Histogram of Coded Capitalization Responses to a Stranger



Construct validity

Table 3. Correlations between Capitalization Response and Self-Reported Love Variables.

	N	1	2	3	4	5	M(*SD*) min-max
1. Capitalization response	189	--					8.36(2.1) 3 – 14
2. Compassionate love of humanity	186	.17*	--				-0.04(0.98) -3.33 – 2.03
3. Appetitive contagion	187	.27**	.39***	--			4.9(1.15) 1.33 – 7
4. Baseline experienced love	185	.07	.16*	.21**	--		0(0.84) -.85 – 3.31
5. Future experienced love	112	.25**	.15	.12	.41***	--	0(0.84) -1.09 – 3.43

* $p < .05$. ** $p < .01$. *** $p < .001$.

Discriminant validity

Table 4. Correlations between Capitalization Response and Theoretically-Relevant Alternative Explanations.

	N	1	2	3	4	5	6	*M*(*SD*) min-max
1. Capitalization response	189	--						8.36(2.1) 3 – 14
2. Extraversion	107	.13***	--					3.28(0.64) 1.9 – 5
3. Agreeableness	187	.04	.16	--				3.25(0.53) 1.7 – 4.4
4. Social anxiety	188	-.22**	-.57***	-.15*	--			11.75(4.55) 2 – 24
5. Expressive impulses	187	.12	-.04	-.01	.05	--		4.7(1.24) 1 – 7
6. Subjective happiness	188	.18*	.57***	.32***	-.40***	.10	--	4.6(1.21) 1.25 – 7

* $p < .05$. ** $p < .01$. *** $p < .001$.

Validity

Figure 1 documents the natural variability in capitalization responses to a stranger's good news disclosure. As documented in Table 3, capitalization response was significantly positively associated, to a modest degree, with self-reports of appetitive contagion – that is, being a person who responds with joy for others' joy – as well as dispositional compassionate love of humanity and everyday love experiences at the end of the semester. Contrary to hypotheses, it was not correlated with everyday love experiences from the few days prior to the study; we speculate that this may have been because these participants were in a new social environment (i.e., college) at the time of this measurement so had fewer opportunities to experience love in daily life.

In addition, as documented in Table 4, capitalization response was significantly positively associated, to a modest degree, with extraversion and subjective happiness, and conceptually replicating prior work (Kashdan et al., 2013) was negatively associated with social anxiety. It was not correlated with agreeableness or expressive impulses.

Hypothesis tests

Below, we report main findings of participant's capitalization response on primary outcomes. Full model statistics including all model predictors can be found in SM, Tables S6-S62.

Capitalization response predicting future love experiences. An individual's capitalization response was positively associated with the love they reported experiencing at the end of the semester (b = .09, p =.01, CI 95% [.02, .17]), f^2 = .06, when controlling for their experienced love at baseline (b = .40, p < .001, CI 95% [.23, .56]), f^2 = .22. The association between capitalization response and future experienced love held when controlling for compassionate love of humanity, appetitive contagion, extraversion, or subjective happiness, none of which were associated with their future experiences of love (see Tables S8 – S11).

Regarding reports of experienced love during initial interactions, after pre-registration, inspection of the distribution of the experienced love item indicated that this feeling (a) was rarely endorsed in these initial interactions and (b) that the pattern differed for potential friends (M = 0.65, *median* = 0) and potential romantic interests (M = 1.02, *median* = 1). We thus deviated from the pre-registration (see SM), running models for love experienced in initial interactions *separately* for potential friends and potential romantic interests. Participant's capitalization response at the lab session was not associated with their reports of experienced love during initial interactions with potential romantic interests, b = -.10, p = .12, CI 95% [-.23, .02], fixed effect R^2 = 3% or r = .17, or potential friends, b = .06, p = .31, CI 95% [-.05, .17], fixed effect R^2 < 1%. These conclusions do not change when controlling for other positive emotions experienced during the interaction, participant's overall subjective happiness, or their experienced love at baseline.

Capitalization response predicting quantity and quality of initial interactions. Capitalization response was positively associated with three unique and promising indicators of relationship initiation. Participants with greater capitalization responses in the lab reported (1) a greater number of new people they might want to get to know better over the course of the semester (b = .12, p = .02, CI 95% [.02, .23], f^2 = .05), (2) that their initial interactions with those people were more *enjoyable* (b = .05, p = .03, CI 95% [.01, .09], r = .17), and (3) they were more likely to say they felt they had formed an "instant relationship" with the initial interaction partner (b = .18, OR = 1.20, p = .05, CI 95% [-.001, .36]). These findings are notable because both quantity and quality of social interactions predict thriving.

Capitalization response predicting self-reported behavior and first impressions during initial interactions. Overall, contrary to expectations, capitalization response behavior was not associated with the participant's self-reports about more fine-grained details of the interactions, that is, their behaviors and more nuanced evaluations of the social partner. Specifically, participant's in-lab capitalization response behavior was not associated with – in the future -- perceiving capitalization attempts made by the novel social partner during the initial interaction (b = .02, p = .41, CI 95% [-.03, .08], r = .07) or participant's self-reported capitalization responses to such attempts when they happened (b = .03, p = .22, CI 95% [-.02, .08], r = .10). Participant's in-lab capitalization response behavior was neither associated with future perceptions of novel social partners having more positive characteristics (e.g., attractive, competent; b = .01, p = .77, CI 95% [-.04, .05], r = .02), nor with participant's initial evaluations of these novel social partners (b = .03, p = .22, CI 95% [-.02, .09], r = .09).

Moderation. No effect was moderated by relationship type. In general, associations did not change when testing for moderation by study wave or time, with two exceptions described in greater detail in SM.

Discussion

This is the first evidence to our knowledge to suggest a behavioral indicator of love of humanity. This study documents, for the first time, natural variability in active-constructive responding to a stranger's good news (see Figure 2). Building on Study 1 and aligned with the broaden-and-build theory of positive emotions, we document that this behavior forecasts increased *future* experiences of love in everyday life – more frequent, more intense, and toward more people. Moreover, this novel behavioral measure may reflect dispositional tendencies: As these individuals became immersed in their new environments, their capitalization response behavior in the lab predicted critical outcomes for adaptation and thriving: the quantity and quality of interactions with new potential social partners.

Active-constructive responders from the laboratory task did not *also* perceive better qualities in the new interaction partners they encountered later in the semester (e.g., attractiveness), which was contrary to predictions (see General Discussion). Regardless, there are several theoretical mechanisms through which people who are more loving toward strangers will have better social experiences, which we test in Studies 3-5 using others' perceptions of real capitalization response behavior.

Study 3

Method

Building on theory and methods from affective science, here we use a third method to assess our proposition that active-constructive responding could be considered enacted love:

Observer reports. In an experiment, participants rated participant videos from Study 2 that had been previously coded as low, medium, and high in capitalization response behavior.

Participants

Participants were recruited via Prolific and were compensated $4.00 for their participation. All were ages 18-22 and resided in the USA. We recruited 110 participants and retained 97; 13 participants were excluded due to failed attention checks or inclusion criteria. Using the design effect equation (see Study 2 for explanation of procedure), our effective sample size was 65, which was powered to detect effects as small as $\rho = .216$. See Table 1 for demographic information. This study was pre-registered.

Design and procedure

This is a within-subjects experiment. Participants watched 12 videos,[3] in randomized order, of participants from Study 2 who had been coded as particularly low, right in the middle, and particularly high in active-constructive responding. They watched four videos from each category. Videos were selected based on similarities in certain visual features (i.e., which of two experimental rooms; whether the participant was wearing a medical mask, to account for possible reactions from viewers), by a research assistant who was unaware of the hypothesis. The final videos had average capitalization response behavior ratings of 3.87, 8.40 and 11.94 for the low, medium, and high response stimuli, respectively.

After watching each video, participants rated the person on six attributes, always presented in randomized order. Specifically, participants rated, "To what degree did the person in the video seem...", on a scale from 0 (not at all) to 6 (very much). The focal term was the

[3] Due to a survey coding error, each participant saw and rated 11 of the 12 videos. For each participant, the missing video was random; given the statistical power of the study, this should not influence conclusions.

hypothesized “loving”, and five distractor terms were conscientious, aggressive, perfectionistic, intellectual, and funny.

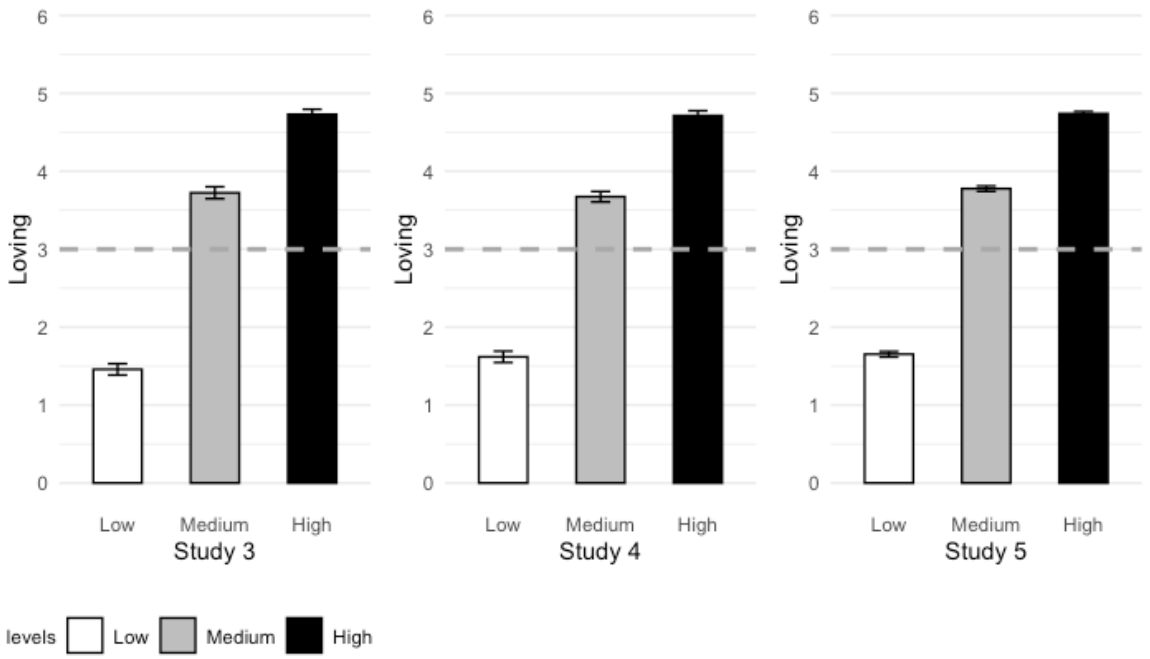
Results

As demonstrated in Figure 3, the pattern of means on rated love closely maps the fact that these were low, medium, and high capitalization responses. Notably, participants readily attributed the term “loving” to respondents in the high-capitalization condition: $M = 4.73$ is well above the midpoint (3) and approaching the scale ceiling of 6.

Hypothesis test: Capitalization response predicting loving.

We conducted a mixed-effects model to test our pre-registered hypotheses about the effect of condition on perceptions of loving (see SM for full statistics), estimating two effects in the fixed effect model: high versus medium and low versus medium. Consistent with predictions, participants rated the high capitalization respondents as significantly more loving than the medium capitalization respondents, $b = 1.42$, $SE = .05$, $df = 972.65$, $t = 26.93$, $p < .001$. Further, participants rated the low capitalization respondents as significantly less loving than the medium capitalization respondents, $b = -1.85$, $SE = .05$, $df = 971.91$, $t = -35.23$, $p < .001$. The variance explained by the fixed effects was 51% and variance explained by the entire model (including fixed and random effects) was 60%. See SM for tests of alternative explanations, including how condition effects hold when controlling for other rated positive attributes of respondents.

Figure 3. Results of Study 3-5 Effects of Capitalization Response Condition on Loving



Note. Scale midpoint (3) is marked with a dashed line.
Study 3. Low M = 1.46, SE = .09. Medium M = 3.73, SE = .09. High M = 4.73, SE = .09.
Study 4. Low M = 1.62, SE = .09. Medium M = 3.67, SE = .09. High M = 4.71, SE = .09.
Study 5. Low M = 1.65, SE = .06. Medium M = 3.78, SE = .06. High M = 4.74, SE = .06.

Study 4

Triangulating evidence from across three studies using distinct methods, we have begun to document the validity of considering active-constructive responses to capitalization attempts to be *enacted love*. That is, while we did not test whether it is the only behavior that people see as "loving", it is strongly and systematically viewed as a loving behavior (Study 3), and this may be undergirded by real feelings of love (Studies 1 and 2). See left side of Figure 1. Study 4 replicates Study 3 and returns to the question of why enacting love might matter for the loving person (right side of Figure 1): It builds on theory and evidence about love as a commitment device (cf. Gonzaga et al., 2000; [Authors masked for review]) to test the hypothesis that people

who enact greater love will be seen as people who can be counted on: more willing to sacrifice their time and energy for strangers, more willing to be loyal.

Method

Participants

The recruitment goals, anticipated power, and procedure were identical to Study 3. Of the 110 participants who completed the study, 5 were excluded due to attention checks or inclusion criteria (N = 105). According to the design effect equation, the effective sample size was 51, which was powered to detect effects as small as $\rho = .22$. See Table 1 for demographic information.

Design and procedure

The design is the same as Study 3, with additional measures. For each video, after rating "loving", participants rated perceptions of support and loyalty.

Attribute ratings. Participants rated people in the videos on four of the six attributes used in Study 3 -- loving, aggressive, perfectionistic, funny -- using the same scale.

Perceived social support. Participants rated how they thought the people in the videos would respond "when something bad has happened to you (e.g., criticism at work, having an argument with someone)," on three items representing problem-focused support ("give you resources [e.g., money, time, skills] to help you with a problem/negative event") and three representing emotion-focused support (e.g., "comfort you") from 0 (never) to 6 (always). These six items were averaged for a perceived social support rating ($\alpha = .97$; see Barbee & Cunningham, 1995). Giving time and energy is a proxy for sacrifice given that the participant is a stranger to the people in the videos.

Perceived loyalty. Participants rated the likelihood that the person in the video would "stick by a friend's side through anything", or "would betray someone close to them" on a scale ranging from 0 (not at all likely) to 6 (extremely likely). The former item was adapted from [Authors masked for review] *experienced love* scale and the latter was exploratory.

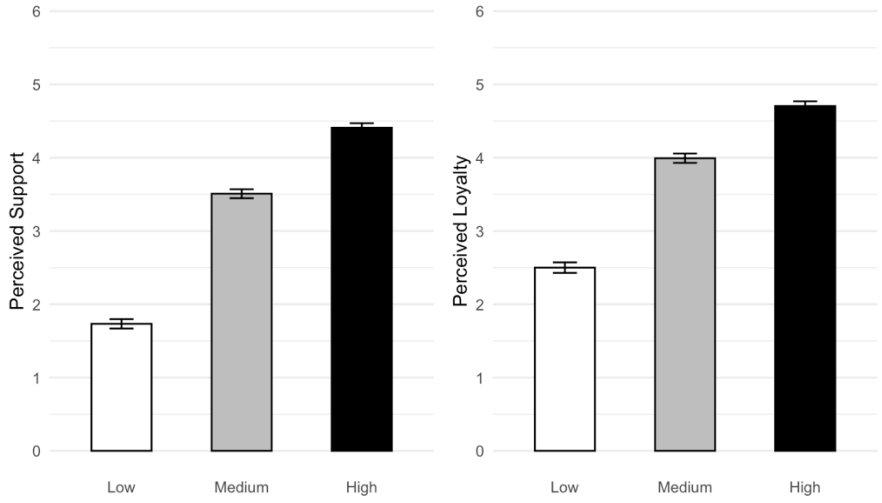
Results. See Table 5 for full model statistics.

Hypothesis tests

Capitalization response predicting loving. See Figure 3 and Table 5. Directly replicating the pattern of results from Study 3, participants rated high capitalization respondents as significantly more loving than the medium capitalization respondents and rated the low capitalization respondents as significantly less loving than the medium capitalization respondents. Similar to Study 3, the fixed effect R^2 was 46% -- quite large -- and full model R^2 was 60%.

Capitalization response predicting perceived commitment. See Figure 4. Greater capitalization responses contributed to greater perceptions of the person's willingness to support the participant in the future as well as greater perceptions that the person would be loyal to a close other. Specifically, compared to the medium capitalization respondents, the high capitalization respondents were perceived to be significantly more likely to support the participant, and the low capitalization respondents were perceived to be significantly less likely to support the participant (fixed $R^2 = .43$, total $R^2 = .64$). This pattern replicated with perceived loyalty (fixed effect $R^2 = .31$, total effects $R^2 = .53$), and with the exploratory measure of likely betrayal (reversed; see SM).

Figure 4. Effects of Capitalization Response Condition on Perceived Commitment



Note. Perceived support: Low $M = 1.73$, SE = .09. Medium $M = 3.51$, SE = .09. High $M = 4.41$, SE = .09.
Perceived loyalty: Low $M = 2.50$, SE = .09. Medium $M = 3.99$, SE = .09. High $M = 4.70$, SE = .09.

Table 5. *Effect of Capitalization Response Condition on Perceived Loving, Perceived Commitment, Interest in Affiliating, and Generosity*

Perceptions and Evaluations			High (vs. Medium)				Low (vs. Medium)			
	fixed R^2	*total* R^2	*b*	*SE*	*df*	*t*	*b*	*SE*	*df*	*t*
Study 3										
Loving	0.51	0.60	1.42	0.05	973	26.93	-1.85	0.05	972	-35.23
Study 4										
Loving	0.46	0.60	1.38	0.05	1153	28.97	-1.72	0.05	1153	-36.08
Support participant	0.43	0.64	1.19	0.04	1153	29.19	-1.48	0.04	1153	-36.32
Perceived loyalty	0.31	0.53	0.97	0.05	1153	21.59	-1.23	0.05	1153	-27.27
Likely betrayal	0.12	0.51	-0.47	0.04	1153	-11.25	0.73	0.04	1153	17.51
Study 5										
Loving	0.49	0.60	1.35	0.05	815	28.66	1.74	0.05	815	36.88
Interest in affiliating	0.39	0.55	1.14	0.05	816	23.91	-1.50	0.05	816	-31.47
Give benefit of doubt	0.21	0.57	0.72	0.04	808	17.67	-0.94	0.04	809	-22.92
Actual generosity	0.05	0.76	4.75	0.45	816	10.59	6.99	0.45	816	15.61

Note. All contrasts were significant at $p < .001$.

Study 5

Study 4 directly replicated causal evidence that greater active-constructive responding signals – or is seen as demonstrating – a person's greater underlying love. In turn, consistent with Study 2, people who enact greater love toward strangers likely experience their social worlds differently. Specifically, consistent with theory and evidence that momentary love is associated with commitment, participants saw more loving people as more likely to be willing to support them (a total stranger) and to be loyal to their close others. In Study 5, we hypothesize that love is also *generative* for the loving person: as two possible mechanisms through which enacted love may build resources, we predict that others will be more affiliative and generous toward them.

Method

Participants

We used the same recruitment procedure as Studies 3 and 4. Our recruitment goal was 400 to increase generalizability, so we over-enrolled to 410 with assumed exclusions based on pre-registered criteria. Eight participants were excluded for failing either attention checks or to meet the age minimum, leaving 402 participants. Using the design effect equation, our effective sample size was 268, which was powered to detect effects as small as $\rho = .107$. See Table 1 for demographic information.

Design and procedure

This study was preregistered. Participants watched 3 of the 12 videos in the stimuli set used in Studies 3 and 4, one low, medium, and high, each selected at random by the survey software. For each video, after rating "loving", participants rated their interest in affiliating, willingness to give the person the benefit of the doubt and actually had a chance to be generous.

Attribute ratings. The attribute measure was the same as in Study 4.

Interest in affiliating. Participants rated the extent to which they would "enjoy spending time with the person in the video", "would enjoy meeting the person in the video", and can "see yourself being friends with the person in the video" on a scale ranging from 0 (not at all true) to 6 (always) [Authors masked for review]. These three items were averaged to create the interest in affiliation score (α = .97).

Generosity. Two items assessed participant generosity toward the people in the videos. First, they answered "If this person did something to really let you down, how likely would you be to give them a second chance?" on a scale ranging from 0 (not at all) to 6 (extremely likely). Second, we let participants actually give away their own money. Following standardized behavioral paradigms ([Authors masked for review]; see SM Figure S3 for exact participant instructions), participants were truthfully told that we would hold a chance drawing and distribute $100 based on one participant's allocation decision. The participant made a decision about how to divide the money between themselves and the respondent. It was made clear that they could keep the $100 for themselves and give $0 to the other person, but if they chose to distribute some to the respondent, we really would provide that amount to the person in the video. Critically, participants were told the respondent (and we) would never know their identity, due to the anonymous nature of the survey; the drawing amount could be provided as a bonus payment in the Prolific system. Thus, participant allocation to the respondent in the video, ranging from $0 to $100, was the measure of generosity. (We did conduct the drawing and distribute $100, accordingly.)

Results. See Table 5 for full model statistics.

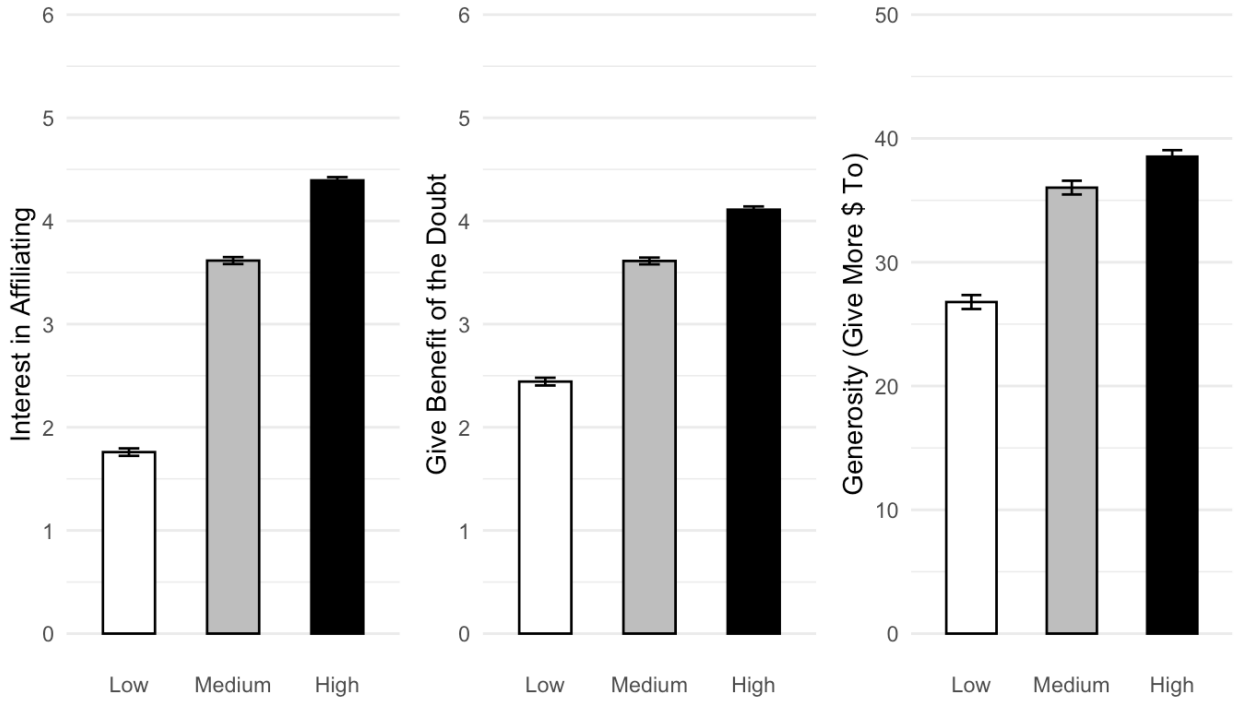
Hypothesis tests

Capitalization response predicting loving. Replicating Studies 3 and 4, participants rated high capitalization respondents as the most loving, and significantly more loving than the medium capitalization respondents, who were rated as significantly more loving than the low capitalization respondents. Like Studies 3 and 4, variance explained by the fixed effects was quite large -- 49% -- and was 60% for the entire model. See Figure 3 and Table 5.

Capitalization response predicting affiliation and generosity. The same pattern emerged for interest in affiliating (fixed effect $R^2 = .39$, total effects $R^2 = .55$), willingness to give the benefit of the doubt (fixed effect $R^2 = .21$, total effects $R^2 = .57$), and actual generosity (fixed effect $R^2 = .05$, total effects $R^2 = .76$). For each dependent measure, participants rated high capitalization respondent videos as significantly higher than the medium capitalization respondent videos, which were rated as significantly higher than the low capitalization respondent videos (see Figure 5).

The one outcome that showed a more muted difference between the medium and high conditions than prior hypothesized outcomes was actual generosity. This may have been influenced by participants' inclination toward fairness (50/50 split) and away from giving away more than 50% (i.e., ceiling); see SM Figure S4 for distribution of this variable.

Figure 5. Effect of Capitalization Response Condition on Interest in Affiliating and Generosity



Note. The right most figure (Generosity) depicts a truncated y-axis. Participants could endorse giving up to $100, and some did.

Interest in affiliating: Low *M* = 1.76, SE = .07. Medium *M* = 3.62, SE = .07. High *M* = 4.39, SE = .07.
Give benefit of the doubt: Low *M* = 2.44, SE = .07. Medium *M* = 3.61, SE = .07. High *M* = 4.11, SE = .07.
Behavioral generosity: Low *M* = 26.80, SE = 1.10. Medium *M* = 36.00, SE = 1.10. High *M* = 38.50, SE = 1.10.

General Discussion

In this work, we set out to understand what behavior conveys love, and why it might matter. Guided by theory from affective science, for this first investigation we focused on capitalization responses. The current evidence supports the conclusion that capitalization responses are seen as loving. This prediction was built on theory from affective science that capitalization responses might serve as a *reliable signal* of love. Indeed, a mini-meta-analysis of Studies 3-5 showed a large effect size for each contrast between experimental conditions (see SM). In stark contrast to stereotypes of love being a "fuzzy" construct or an "intense" term that might not apply to interactions between strangers, our participants (N =604) readily employed high ratings and showed remarkable systematicity in their use of the term across conditions and studies. Taking the evidence altogether–five studies that involve both conceptual and direct replication, and convergent and discriminant evidence–it suggests a ground truth in that people who have high capitalization responses may also be *feeling* (and thus motivated by) love (e.g., Studies 1 and 2). This initial confirmatory evidence is aligned with the theoretical mapping of active-constructive responding onto the positive emotional experience of love. Among various pro-relationship behaviors (e.g., sacrifice), this is the first of which we are aware to be supported by such evidence.

Regarding why enacting love toward strangers might matter, these results provide initial evidence for the possibility that love of strangers plants seeds for the growth of new high-quality relationships. Mechanistically, this may happen through the loving person's own perceptions and behaviors when interacting with new people (Study 2; see Peters et al., 2018) or through others' responses to interacting with loving people (Studies 4 and 5). Consistent with laypersons' conceptions of love and commitment being closely aligned and largely overlapping (e.g., Fehr,

1988), loving people are perceived to be committed to others (Study 4), which would have implications for others' willingness to trust the person in the future. Consistent with our theorizing that demonstrating love may be generative, others are drawn toward the loving individual and are more generous toward them, even when they would receive nothing from that person in return (Study 5). That is, loving people may not only be asked to give of themselves (Study 4), but may *receive* social rewards (Study 5), which would bolster resources for the future. Moreover, the prospective experience sampling evidence from Study 2 implies that this behavioral assay may capture *dispositional* love of strangers: greater enacted love toward a stranger in the lab forecasts greater quantity and quality of new interactions as well as greater future experiences of love in everyday life. These findings from Study 2 hold despite tests of several alternative explanations.

The finding that people who are loving toward strangers are more likely to receive the benefit of the doubt (Study 5) is provocative: could love of strangers pave the way toward a more civil society? Overall, findings from Studies 4 and 5 add to a growing body of evidence that the study of positive interactions between strangers can greatly inform personal, relational, and societal health (Berman, et al., 2024; Gunaydin, et al., 2020).

Behavioral measure of love of strangers

These studies contribute to the open philosophical and practical questions of whether one may love one's (metaphorical) neighbor. Our study designs addressed several possible alternative explanations. For example, Study 2 employed just one piece of good news (adopting a puppy), but Study 1 employed 160. Studies 1-3 addressed alternative emotions (e.g., happiness), other social motives, and attributes potentially underlying the association. For example, we theorize that moments of love include other-oriented and self-transcendent social motivations,

and controlling for different social motivations, like extraversion, agreeableness, and social anxiety, do not account for key findings in Study 2. Critically, what was captured by the *behavioral* measure of a loving disposition was not wholly captured by the most relevant self-reported dispositional scale from the extant literature on love of strangers (compassionate love of humanity; Study 2, $r = .17$). This small correlation is consistent with other literatures demonstrating that how people report behaving does not always comport with how they actually behave (e.g., empathy, Murphy & Lilienfeld, 2019) and highlights the need for more behavioral research on the nature of love.

Our theorizing about enacted love highlights the rewarding nature of positive affect that undergirds self-reported *experiences* of love ([Author names masked for review]; Fredrickson, 1998; Shaver et al., 1988). In turn, results raise important theoretical questions for the literature on love of humanity, which emphasizes *compassion* in its theorizing. Compassion is typically experienced as ambivalent, that is, it includes negative valence (e.g., Oveis, et al., 2010); notably, 15 of 21 items in the compassionate love of humanity scale explicitly mention negative situations like responding to another's suffering (Sprecher & Fehr, 2005). We do not question whether behaviors theorized to be central to love and commitment, such as helpfulness, sacrifice and forgiveness, *may* also arise from love. However, we have not found behavioral tests of this question (e.g., Kim, Enright, & Wong, 2022; Xu, Kim, Olmstead & Enright, 2021). We do hope the present evidence spurs additional rigorous research on exactly which behaviors stem from and most reliably signal love to others.

Constraints on generality, limitations, and future directions

These data were collected in the United States, for reasons specific to each study (e.g., convenience of recruiting young adults transitioning to college; Study 2). Thus, the focus on U.S.

samples limits the potential generalizability of these findings. For instance, we know the behavioral demonstration of other positive emotions, such as gratitude, varies across culture, as appropriate to norms (Chang & Algoe, 2020). The same could be true for aspects of capitalization responses in other contexts and countries, and we are eager to engage with open questions about context. For example, we expect cultural variability in valuing this behavioral response (e.g., ideal affect, Cachia et al., 2025), and with display rules when one is responding to another's good news (e.g., historical heterogeneity, Niedenthal et al., 2023). For example, in cultural contexts where highly expressive positive affect is not particularly valued, one may observe more muted demonstrations of active-constructive responding, relative to demonstrations from people in cultures that more highly value such expressiveness. Regardless of possible between-culture differences in level or range of expressivity, the theoretical question is whether, within-culture, greater spontaneous enactment of the behavior is associated with greater love. And there is normative discomfort with the word "love" to describe feelings and behaviors toward strangers, despite the exemplar of Mother Teresa, to whom many would ascribe such feelings and behaviors. Cultural variability in this will also be an interesting topic for future research (e.g., love toward in-group versus out-group, Matsumoto et al., 2008). And how does this behavior toward strangers develop? Must we learn to love within the home (e.g., with family) before extending to other types of relationships, including strangers? Whatever the answer, it will be informative for practitioners and parents.

In Studies 2-5, all dyads were zero-acquaintance, with no motivated reason to invest further in the relationship with the stranger. While that was a benefit for the aims of the present research, the benefits or consequences of high capitalization responding may be different in relational contexts with higher stakes (e.g., getting to know coworkers at a new job). Further,

most of our participants were on the younger side (all study *M ages* < 29). Although prior research on capitalization responses (Peters et al., 2018) would lead us to maintain the prediction that capitalization responding is a behavioral demonstration of enacted love among midlife to older adults, future work should examine this interpersonal process across the lifespan. Likewise, although we know of no research explicitly testing for differences in what people mean when describing momentary love experiences between strangers versus romantic relationship partners, research on lay prototypes of love in Western samples strongly suggests that participants across all studies had the same concept in mind when providing their rating (e.g., Fehr, 1988; [Authors masked for review, 2025].

One possible mechanism we considered for the potential downstream benefits of being a loving person was that dispositionally loving people might see others through rose-colored glasses, so to speak. While Study 2 provided suggestive evidence in reports of a greater number of people and enjoying those interactions more, we also considered that this perception may extend to evaluating novel potential partners more positively on a *range* of personal attributes (e.g., attractive). Evidence from Study 2 did not support this latter possibility. One possible methodological limitation of that test is that we asked participants to only report on people *they wanted to get to know better*: partners may have already surpassed the "positive evaluation" threshold when they chose to complete the initial questionnaire. It is also an open question as to whether people who may be dispositionally loving actually go on to develop (enduring) relationships with these individuals in particular or whether – as our theorizing suggests – they build *enduring* social resources. We believe these data – the behavioral findings about the *quantity* of their connections with novel potential social partners as well as the reported *quality*

of those initial encounters (Study 2) paired with how others perceive them (Studies 3-5) – justify future work on such questions.

Notably, the social outcomes employed a mixture of hypothetical scenarios (e.g., interest in affiliating) and real behavior (e.g., reporting more potential friends, choosing to give money). While promising, the generosity measure in Study 5 was limited by the distribution of real human behavior; as next steps, future work should test different behavioral measures. Critically, these data contribute to the small body of suggestive evidence regarding social outcomes for people who respond actively and constructively (i.e., with love) and move from a romantic relationship context (Le et al., 2022; Tavares et al., 2025) to novel relationships.

Our theorizing emphasized the motivational aspect of the emotion (and emotional disposition) of love, and this theorizing guided our predictions across all studies. This broader theoretical backdrop also influenced our approach to triangulate evidence across methods to address our first question, represented on the left side of Figure 1. Although in Studies 3-5 we did experimentally manipulate levels of active-constructive responding, akin to other research on demonstrated emotion (e.g., pride; Tracy & Robins, 2004), we did not manipulate the participant's own experience of love itself. We believe that creating a validated procedure to do so would enhance future research in this area (Chester & Lasko, 2021).

More broadly, in these first studies on what behavior might convey loving feelings, we only scratched the surface regarding discriminant validity. Take specificity among emotions, for example. Our statistical control of general positive emotions in Study 1 did include two other-focused positive emotions (admiration and gratitude). Given that gratitude is documented to occur when someone does something to benefit the self and has its own typical verbal demonstration in the US ("thank you"), we did not consider asking participants in studies 3-5 the

extent to which the person in the video is grateful. However, such a test would provide stronger discriminant evidence regarding emotion. Conversely, we also did not prioritize differentiating perceptions of love from all (desirable) interpersonal perceptions. We started with attributes widely considered to be desirable in others (Study 3). We chose not to measure the widely studied dimension of warmth/friendliness (for example) for multiple reasons. The first is that seeing "love" in stranger-based interactions is likely a higher bar than seeing friendliness, and if our hypotheses about love were confirmed, this would set the stage for novel theorizing about *motivational* drivers of prosociality, given theory that emotions coordinate social interactions (e.g., Cosmides & Tooby, 2000). The second is that lay conceptions of love are inclusive of other "warm" feelings (e.g., affection; Fehr, 1994; Shaver et al., 1987), and it was outside the scope of the current investigation to parse the contours of the construct, as long as participants also saw love. In future work, it would be interesting to understand *how prototypical* active-constructive responding may be to conceptualizations of "enacted love"; such a project should compare across pro-relationship behaviors on perceptions of several positive interpersonal evaluations, including love.

Conclusion

A rapidly-expanding science of love promises to help address societal concerns about loneliness (Office of the Surgeon General, 2023), politics (Iyengar et al., 2019), and child development (Bos et al, 2025). Loving *behavior* is key to unlocking such benefits. Like other social behaviors, this one transcends relationship type: it is possible to show love toward strangers. In turn, interacting with strangers in loving ways may plant seeds for the growth of new high-quality relationships.

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