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ARTICLE

Give and take: The role of reciprocity in capitalization

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ABSTRACT

A person can reap psychological benefits when sharing their accomplishments or capitalizing with a partner. These benefits often depend on whether a partner responds with enthusiasm; however, it is unknown what prompts enthusiastic responses. In two experiments, we aimed to examine whether partners reciprocate enthusiastic responses to capitalization attempts. In Study 1, participants ($N = 394$) who recalled their partner's past enthusiastic feedback to capitalization attempts endorsed stronger intentions to respond enthusiastically to their partner's capitalization attempts (relative to a comparison group recalling their partner's prior demeaning feedback). In Study 2 ($N = 326$), we found that enthusiastic responses to capitalization attempts were reciprocated among romantic couples but reciprocation was not mediated by subjective emotion, emotional expressiveness, nor physiological responses. In conclusion, our findings support reciprocity in capitalization, i.e. romantic partners are more motivated and more likely to respond enthusiastically to capitalization attempts depending on their partner's previous behavior.

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Interpersonal relationships; close relationships; positive emotions; capitalization

When good things happen to people, they benefit from communicating this information to others, a phenomenon known as capitalization (Bryant, 1989; Gable et al., 2004; Langston, 1994; Ilies et al., 2015; Lambert et al., 2013; Hovasapian & Levine, 2018). Whether individuals self-disclosing positive events experience psychological benefits depends on the type of response, or capitalization support, received from conversation partners. When partners display curiosity and enthusiasm for what is being disclosed as opposed to appearing passive, withdrawn, or demeaning, sharers report increased well-being and relationship satisfaction (Gable et al., 2006; Woods et al., 2015). Research has explored who capitalizes, with whom, and for what reasons (Derlega et al., 2011), in addition to where (e.g., via social media), and in what ways (Palmer et al., 2016). What we do not know is why some partners respond enthusiastically and others ignore or demean the sharer's success (Peters, Reis, & Gable , 2018).

The present research targets social reciprocity as a factor that influences whether a partner provides enthusiastic capitalization support; a type of social response relevant to the field of positive psychology (e.g., Seligman et al., 2006). Reciprocity is at the core of human (Fehr & Fischbacher, 2003) and animal (Newton-Fisher & Lee, 2011) social behavior. To our knowledge, there has been little explanation for how reciprocity might operate in responses to capitalization attempts (Peters, Reis, & Gable, 2018).

The benefits of capitalization

Communicating positive events to others predicts greater positive affect, life satisfaction, and self-esteem above and beyond the event itself and personality traits (Ilies et al., 2015; Pagani et al., 2015). On days when people make capitalization attempts, they report greater positive affect and life satisfaction (Gable et al., 2004; Lambert et al., 2013) and their tendency to capitalize predicts increases in positive affect and life satisfaction weeks later (Lambert et al., 2013). Similarly, capitalization attempts predict enduring positive affect (Hovasapian & Levine, 2018) and greater memory for the event communicated (Gable et al., 2004). Capitalization attempts produce greater positive affect than writing about these events and more life satisfaction, happiness, vitality, and

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positive affect than having a single or regular positive exchanges with others (Lambert et al., 2013).

Beyond intrapersonal benefits, capitalization attempts positively influence the sharer's relationship with their partner. Sharers report greater relationship quality (Pagani et al., 2015) and express less resentment and more gratitude and admiration for their partners (Gable et al., 2012). Likewise, both sharers and partners report greater intimacy and couple identity on days where capitalization attempts are made (Otto et al., 2015; Pagani et al., 2020). While these findings suggest that people can reap rewards from sharing good news, they do not take into account the type of feedback received.

Why feedback matters

Many benefits appear to be contingent upon or augmented by how a partner responds to a sharer (Gable et al., 2004; Gable et al., 2006). There are four ways to react when a person makes a capitalization attempt (Gable et al., 2004; Pagani et al., 2013): active–constructive, passive-constructive, passive–destructive, and active-destructive feedback. Active-constructive feedback is described as enthusiastic and elaborative and is considered healthy and effective. In contrast, the latter three types of feedback are described, respectively, as unenthusiastic, inattentive, and undermining, and considered dysfunctional (Gable et al., 2004; Gable et al., 2006; Woods et al., 2015).

When sharers receive enthusiastic responses, they report greater life satisfaction (Gable et al., 2012), happiness (Demir et al., 2013; Gable et al., 2004), and positive affect (Gable et al., 2004; Monfort et al., 2014; Lambert et al., 2013), and less anxiety (Gable et al., 2012) and negative affect (Gable et al., 2004; Monfort et al., 2014). When sharers receive enthusiastic responses, they report greater daily life satisfaction, positive affect, and positive activities (Gable et al., 2004). Likewise, enthusiastic responses are associated with longer-lasting positive affect and appears to slow down adaptation to positive events (Hovasapian & Levine, 2018).

The type of feedback a sharer receives appears to influence how sharers and partners view each other. With enthusiastic responses, sharers feel more understood, validated, and cared for by their partners (Gable et al., 2006). They also perceive partners as more responsive and trustworthy and are more inclined to self-disclose to them. Similarly, when partners respond enthusiastically, they attribute more gratitude and relationship satisfaction to sharers (Woods et al., 2015).

Unsurprisingly, enthusiastic responses bode well for relationships between sharers and partners. Enthusiastic responses predicts increased relationship quality across cultures (Demir et al., 2015, 2013) and months later (Donato et al., 2014; Gable et al., 2006). Specifically, it is linked to increased relationship commitment, trust, intimacy, and passionate love (Gable et al., 2006; Gable et al., 2004; Otto et al., 2015). On days where sharers receive enthusiastic responses, they report greater intimacy and less conflict (Gable et al., 2004).

While enthusiastic responses are conducive to a range of positive outcomes for the sharer, partner, and their relationship, we know little about the factors that influence how the capitalization process unfolds. Research shows that it does not matter whether enthusiastic response is spontaneous (Gable et al., 2006) or trained (Conoley et al., 2015; Woods et al., 2015), whether sharers and partners are in clinical (Otto et al., 2015) or non-clinical settings (Lambert et al., 2013) and whether they are familiar to one another or strangers (Reis et al., 2010). Most importantly, there are no studies exploring what prompts partners to respond enthusiastically to a sharer's good news.

The interpersonal model of capitalization

Reciprocity, a social norm where people anticipate that the valence and intensity of behavioral responses will be (to some degree) matched (Fehr & Fischbacher, 2003), is critical to the interpersonal model of capitalization (InterCAP). The InterCAP defines capitalization as an interactive process in which effective support predicts future attempts and additional effective support (Peters, Reis, & Gable, 2018). That is, one person is more likely to share positive events with and respond enthusiastically to another person if that other person responded with enthusiasm to previously shared positive events (i.e. a recursive loop). Emerging research suggests that capitalization begets more capitalization. Children who receive enthusiastic responses to sharing their academic successes are more likely to share academic successes one year later (Altermatt, 2017). A daily diary study found sharers reported greater willingness to sacrifice for and accommodate their partner's needs on days they received enthusiastic responses. In a novel experiment, participants were more likely to return an overpayment from a confederate if the confederate responded enthusiastically to positive events they communicated (Reis et al., 2010). Enthusiastic responses appear to promote later capitalization attempts and pro-social behavior. Nonetheless, pro-social behavior does not equate to effective capitalization support and no research has explored if capitalization is cyclical as InterCAP assumes.

InterCAP also suggests that the benefits of capitalization drive the cycle of capitalization attempts and enthusiastic responses (Peters, Reis, & Gable, 2018). Since enthusiastic

capitalization support is emotionally rewarding (Schueller, 2012), resulting increases in positive emotions explain why a sharer responds enthusiastically to their partner's subsequent capitalization attempts. While research suggests that people like to improve how others feels and that in doing so, they tend to feel better themselves (e.g., Brewer & Kramer, 1985; Zaki & Williams, 2013), no research has explored emotions as an explanatory mechanism in capitalization.

The present research

The present set of studies tested the reciprocity assumption of InterCAP. Study 1 included recollection of real-life events and behavioral intentions whereas Study 2 included a computer-generated interaction. Across studies, participants were randomly assigned to enthusiastic (active-constructive) or demeaning (active-destructive) responses from their partners, and we examined their subsequent responses to partner's capitalization attempts. We expected participants to respond enthusiastically to partner's capitalization attempts if their partner previously responded enthusiastically. Additionally, Study 2 tested the InterCAP assumption that the benefits (e.g., positive affect) of capitalization produce reciprocity. We expected that positive affect would mediate the relationship between the receipt and provision of enthusiastic responses to capitalization attempts.

Study 1

To test the reciprocity assumption of InterCAP, participants were randomly assigned to recall either enthusiastic or demeaning responses from partners and then asked how they intended to respond to their partner's future capitalization attempts. Compared to participants attending to demeaning responses, we expected attention on enthusiastic responses to influence greater intentions to respond enthusiastically during future capitalization attempts from partners.

Participants

Participants included 394 women (*M* age = 25.41, *SD* = 4.61) with relationships ranging from one month to 20 years in length (*M* = 4.29 years, *SD* = 3.70) recruited through Facebook advertisements. While the advertisement targeted men and women, few men responded to the invitations (n = 13), so their data was removed. Power analysis indicated that at least 352 individuals were needed to achieve power (.80) to detect small-to-medium effect sizes (*f*= .15) (Faul et al., 2009). We included additional participants to account for missing data.

Measures

Behaivoral intentions for capitalization attempt responses were assessed with six modified items from the *Perceived Responses to Capitalization Attempts Scale* (Gable et al., 2004). The original scale asks about perception of partner's past responses to the sharing of positive events, i.e. *My partner usually reacts to my good fortune enthusiastically*. Items were modified to account for behavioral intentions fitting with theories of planned behavior (Ajzen, 2011) and prior approaches to measuring behavioral intentions (Francis et al., 2004). Each item was preceded with the clause "I intend to … ". Three items asked about active-constructive feedback (*React enthusiastically to his/her good fortune, Show that I am even more happy and excited than he/she is*, and *Ask a lot of questions and show genuine concern about the good event)* and three asked about active-destructive feedback (*Point out to potential downsides of the good event, Find a problem with it*, and *Remind my partner that most good things have their bad aspects as well*). Participants reported their intentions using a 7-point scale from 1 'completely disagree' to 7 'completely agree'. The internal consistency for the constructive (α = .70) and destructive intentions (α = .88) was satisfactory.

Procedure

After completing informed consent, participants were randomly assigned to recall and describe in 2–3 sentences, using Google Forms survey, either their partner's active-constructive (or active-destructive) responses to capitalization attempts made:

> *Try to recall and describe briefly one situation in which your partner reacted positively (negatively) to your success or some good event, e.g., when you were promoted at work, received a raise, won a prize, or did well in the exam. This can be a situation where you said something good about something that happened in your life, your partner fully shared your enthusiasm and the information elicited very positive feelings in him/her (showed no enthusiasm, remained indifferent, or presented negative feelings). Try to describe the situation in 2-3 sentences showing what it was about and how your partner reacted.*

Participants were then asked to report behavioral intentions towards responses to their partner's future capitalization attempts using the aforementioned scale:

Individuals react to their partner's success in different ways. Determine how you intend to react to your partner's future success. For example, imagine that your partner comes home and says that they were promoted at work, got a raise, won a prize, or did well on an exam.

Results

Two univariate analyses of variance were conducted, with feedback focus (active-constructive vs active-destructive) as the independent variable and behavioral intentions for feedback (ratings of active-constructive and active destructive feedback) as dependent variables. As expected, participants who focused on their partner's active-constructive feedback reported stronger behavioral intentions to provide active-constructive feedback to their partner's future capitalization attempts (M = 18.46, SD = 2.47) relative to participants who focused on their partner's active-destructive feedback (M = 17.77, SD = 3.33), $F(1, 393) = 5.21$, $p = .03$, $\eta_p^2 = .01$. Conversely, type of feedback (active-constructive M = 7.53, SD = 4.04 and active destructive M = 8.04, SD = 4.33) had no effect on behavioral intentions for active-destructive feedback, $F(1, 393) = 1.43$, $p = .23$, $\eta_p^2 < .01$.

Discussion

In support of InterCAP's reciprocity assumption, participants reported stronger intentions to respond enthusiastically to partner's capitalization attempts if they recalled enthusiastic as opposed to demeaning responses. However, participants did not report strong intentions to provide demeaning responses if they had previously received demean responses. These results imply that partners experience benefits based on the type of feedback received during prior capitalization attempts. Specifically, reciprocity in capitalization may only operate when feedback is enthusiastic. Still, demeaning response intentions might have been more prone to social desirability bias (Visschers et al., 2017). Participants might have been less likely to disclose intentions to provide demeaning feedback.

There are several limitations to this study. First, few men responded to recruitment ads, meaning our findings pertain to females only. Second, participants were mostly young adults; thus, little is known whether the results can be generalized to older participants and participants with longer relationship length. Third, participants were asked to recall partner's previous feedback to capitalization attempts, and each social situation has different features including the events they attempted to capitalize on (e.g., impact of the event or proximity of the event to the attempt) and the feedback they received (e.g., impact of the feedback or proximity of the feedback to the attempt). Fourth, we assessed self-reported intentions rather than actual behavior. Recent findings suggest an imperfect relationship between intention and behavior (Sheeran & Webb, 2016). Therefore, it is reasonable to assume that only some of the participants enrolled responded to their partner's future capitalization attempts as intended, especially if the time-span between intentions measurement and behavior is long or if new events (including partner's new capitalization responses) occur (Ajzen, 2011).

Study 2

We attempted to replicate Study 1 and address methodological limitations. We used a computerized interaction to standardize features of social interactions across individuals. First, the event participants capitalized on and the feedback they received (whether enthusiastic or demeaning), and the event their partners capitalized on, and the feedback they provided (whether enthusiastic or demeaning) were consistent across participants. Second, participants selected and sent feedback to their partners such that we measured overt behavior as opposed to intentions.

Study 2 also investigated positive affect as an explanatory mechanism in the capitalizaiton cyle, thereby testing InterCap's assumption that the benefits of capitalization drive reciprocation. The vast majority of capitalizaiton research assesses emotions using self-report measures (e.g., Demir et al., 2013; Ilies et al., 2015) and only three studies used physiological indicators (Gouin et al., 2019; Monfort et al., 2014; Peters, Reis, & Jamieson, 2018). Research using physiological indicators of threat such as cardiac output and total peripheral resistance, suggest as people experience threat, they are less likely to provide positive feedback to capitalization attempts (Peters, Reis, & Jamieson, 2018)

There is also a small body of evidence suggesting that emotional expressiveness in the face offer insight into capitalization (Kashdan et al., 2013; Reis et al., 2010). Recent work found that the presence of happy facial expressions is a sensitive measure of enthusiastic responding to capitalization attempts (Monfort et al., 2014). Capitalization attempt interventions address the value of providing precise verbal and facial feedback to the person disclosing positive events (Conoley et al., 2015). More research is required on emotion indicators to discern optimal ways for sharers and partners to encourage enthusiastic responding to capitalization attempts.

Since findings demonstrate a weaker than expected relationship between subjective, behavioral, and

physiological indicators during emotional episodes (Barrett, 2006; Mauss et al., 2005), we used a multimodal approach to capture emotions arising during capitalization. Based on Study 1 findings, we expected participants would be more likely to respond enthusiasticlaly to capitalization attempts after receiving enthusiastic responses from their partners compared to receiving demeaning responses and that this would be mediated by increases in subjective experience, facial expressiveness, and physiological indices of positive affect.

Method

Participants

This experiment included 163 undergraduate opposite-sex couples (between the ages of 18 and 33 years old; M = 22.67, SD = 2.73) with relationships ranging from three months to 12 years in length (M = 2.75 years, SD = 2.10). Approximately 60% lived separately and 12% were married or engaged. Their body mass indices (BMI) fell between 11.60 and 29.80 kg/m^2 (M = 22.50, SD = 3.14) and sixteen people were excluded due to BMI > 30. Other exclusion criteria included a prior diagnosis of cardiovascular disease or hypertension and the use of drugs or medications that might affect cardiovascular functions and their assessment. Participants were instructed to avoid eating for at least one hour before the experiment and to refrain from physical exercise and the intake of caffeine, nicotine, alcohol, or non-prescription drugs for at least two hours before the experiment. Each participant provided written informed consent and received a cinema ticket for their involvement in addition to cash rewards for task completion (see procedure). Power analysis indicated that at least 126 dyads were needed to achieve sufficient power of .80 to detect small-to-medium effect sizes (β = 0.20) (Ackerman et al., 2016). Additional data was collected to account for missing data that usually occurs in psychophysiological studies.

Measures

Heart rate

Electrocardiogram (ECG) was recorded with BioAmp and Powerlab 16/35 AD converter (ADInstruments, NewZealand). ECG was recorded with Ag–AgCl surface electrodes on the chest, and stored on a computer with other physiological signals using a computer-based data acquisition and analysis system (LabChart 8.1; ADInstruments, NewZealand). The ECG signal was sampled at a frequency of 1 kHz. Heart rate in beats per minute (BPM) was calculated based on the RR intervals in consecutive cardiac cycles.

Hemodynamic parameters

Systolic blood pressure (SBP), diastolic blood pressure (DBP), cardiac output (CO) and total peripheral resistance (TPR) were recorded continuously using Finometer MIDI (Finapres Medical Systems, Netherlands) and Finometer NOVA (Finapres Medical Systems, Netherlands). Finometer is based on the volume-clamp method. Finger arterial pressure waveforms were recorded with finger cuffs. The data were analyzed with BeatScope 2.0 (Finapres Medical Systems, Netherlands). CO (the amount of blood ejected from the heart during a minute) and TPR (a measure of the total vascular resistance) have been used as markers of threat. Decreases in CO worsen cardiac efficiency and are observed when individuals are threatened (Jamieson et al., 2012).

Skin conductance

Skin conductance is a unique measure of sympathetic activation that is related to affective processing with higher levels of skin conductance, signaling greater arousal (Nagai et al., 2004; Waugh et al., 2011). It supplements other biosignals that are mostly under the combined sympathetic and parasympathetic influence (Blascovich et al., 2011). Thus, skin conductance can refine interpretations of complex physiological responses including those in the capitalization process.

Electric skin conductance levels were sampled with the GSR (galvanic skin response) Amp (ADInstruments, New Zealand) at 1000 Hz and reported in microsiemens (μS). We used electrodes (8 mm diameter) filled with a TD-246 sodium chloride skin conductance paste attached with adhesive collars and sticky tape to the medial phalanges of digits II and IV of the left hand. Skin conductance reflects sympathetic arousal and is related to affective processing (Waugh et al., 2011).

Facial behavior

Facial expressions were continuously recorded using an HD camera mounted on the top of the PC screen. The video data was analyzed using an automated facial expression analysis with Quantum Sense (Quantum CX, Poland). This software uses a neural network to detect and classify facial expressions by comparing the target face against the prototypical expression of basic emotions (Ekman, 1992). Such computerized solutions are valid and offer high reproducibility compared to the manual coding of facial expression of emotions by human coders (Chentsova-Dutton & Tsai, 2010; Stanko-Kaczmarek & Kaczmarek, 2016).

Emotional valence

The valence of the emotional experience was reported continuously with Response Meter (ADInstruments, New Zealand) scale from 1 ('extremely negative') to 10 ('extremely positive'). Participants adjusted the scale position as often as necessary for continuous ratings of felt emotions. The signal was sampled at 1000 Hz by Powerlab 16/35 (ADInstruments, New Zealand) and further reduced using LabChart 8.19 software (ADInstruments, New Zealand). The validity of Response Meter for capturing valenced emotion dimensionally has been documented in previous studies (Drążkowski et al., 2017; Kaczmarek et al., 2019).

Procedure

The experiment was carried out in a sound-attenuated and air-conditioned room. Upon arrival, each member of a couple underwent informed consent and they were separated into cubicles with no eye contact or talking. Biosensors were attached to participants and they were instructed on how to use the rating scale for continuous emotion assessments. The experiment began with 5-min habituation (Figure 1), after which participants were informed of a cognitive task that would be completed by them and their partner (taking turns). Each participant was told that they were randomly selected to be the first to complete the task. After participants completed the task, they were informed that they were successful at it and asked to send a message communicating this success to their partner. Next, they received a computer message from their partner providing them feedback. After a 2-minute recovery period, participants were informed that their partner was completing the task. Then, participants received a message from their partner indicating their task success. Participants selected feedback to send to their partner. The cycles continued for six total rounds (three per member of a couple). Participants were rewarded 1.50 USD for each successful round. Participants were unaware that they completed the task simultaneously, that success on the task was not based on performance, and partner messages were computer-generated.

Task

Based on a previous study on capitalization (Monfort et al., 2014), we used a highly motivating Navon (1977) task that elicits success. Stimuli included large letters made of small ones. Participants were asked to recognize the small letters while ignoring the large ones. The large and small letters were either congruent or incongruent. The difficulty of the task resulted from the conflict of global cues with local cues. Half of the figures were presented on the left and half on the right to the fixation point. Each trial was composed of 1000 ms fixation cross, 250 ms presentation of the Navon figure, 3000 ms of the mask composed of dots. All 24 stimuli were presented in a randomized order. Participants responded using a mouse and were asked to respond quickly and accurately.

Capitalization attempts

After completing the task, participants received bogus task results indicating success (regardless of their true score). Next, they were asked to share results with their partner and in reply, they received predefined computer-generated feedback (Lambert et al., 2013; Monfort et al., 2014; Reis et al., 2010). Depending on the condition, the (supposedly) partner message reflected active-destructive or active-constructive feedback. Each participant received the one kind of feedback providing a nested cluster of three within-person responses, namely between-person manipulation.

Capitalization support

After participants received a success message from partners, they were asked to provide verbal and non-verbal feedback to partners (Conoley et al., 2015; Kashdan et al., 2013; Monfort et al., 2014). Participants were instructed to send a selfie with a text message by looking at a camera lens located over the computer monitor and pressing Space to take a digital picture. Sending a selfie, e.g., via social media or multimedia mobile phones, is a modern method of communicating emotions (Manovich et al., 2017).

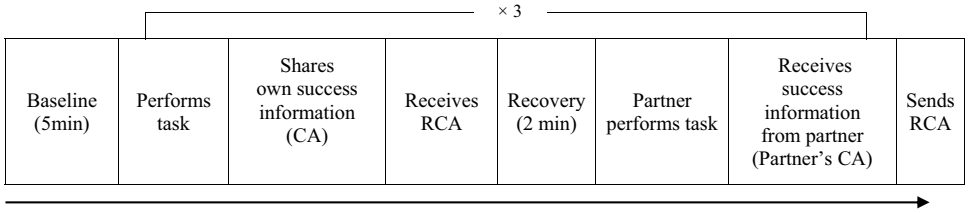

Figure 1. Study 2 procedure. *Note*. CA = capitalization attempt; RCA = response to capitalization attempt.

With the selfie, participants selected a pre-defined response to send from one of four capitalization support options (Lambert et al., 2013; Monfort et al., 2014; Reis et al., 2010): active-constructive (e.g., 'Wonderful! You did a great job!'), passive-constructive (e.g., 'Ok. Good.'), active-destructive (e.g., 'I bet the task wasn't very hard') or passive-destructive (e.g., 'Not much happening here').

Analytic strategy

Physiological data reduction

To operationalize physiological and affective reactivity, we used reactivity scores corrected for the baseline levels (Monfort et al., 2014; Peters, Reis, & Jamieson, 2018). We subtracted the levels of the last 120 seconds of baseline from the level of the 120 seconds of responses to partner's feedback.

Manipulation check

To test whether feedback from partners elicited the physiological and affective response, physiological, affective, and facial behavioral responses were regressed on condition (receiving active-constructive vs. active-destructive feedback) and sex. The effects of condition and sex were considered as significant if the 95% confidence intervals of regression coefficients did not include zero. Dependency between observations was accounted for by nesting the responses within-person (level 2) and within romantic couples (level 3).

Reciprocity and affect in capitalization

Path analysis was used to examine verbal and emotional responses to capitalization attempts using mPlus 8.0 (Muthén & Muthen, 2017). A three-level path analytical model accounted for dependency within-person (level 2) and within romantic couples (level 3). In the mediation model, the binary outcome (active-constructive vs. destructive/passive responses) was regressed on the mediators (physiological, affective, and facial behavioral responses to partner's feedback) and experimental condition (the type of partner's feedback – active-constructive vs. active-destructive). The binary outcome was used to reflect whether the feedback given by responders was enthusiastic or non-enthusiastic. Bayesian correction estimator (Bayes) was used to evaluate the fit of the path analytical three-level model with binary outcomes (Muthén & Muthen, 2017). The Bayesian Posterior Predictive (*PPp*) was used to evaluate model fit. A well-fitting model should have a *PPp* value around 0.50 in combination with symmetric 95% credibility interval centering on zero (Muthén, 2010; Van de Schoot et al., 2014).

Results

Manipulation check

Participants receiving active-constructive feedback from partners felt more positive emotions and had decreased levels of systolic and diastolic blood pressure, compared to participants receiving active-destructive feedback (Table 1). Thus, the experimental manipulation (receiving active-constructive vs. active-destructive feedback) influenced experience and physiological processes. As a secondary observation, women had stronger increases of smiling expression, skin conductance level, total peripheral resistance, and heart rate.

Reciprocity and affect in capitalization

In the mediational model, parameters sensitive to experimental manipulation, namely valence, systolic, and diastolic blood pressure reactivity, were included. After eliminating participants with missing data, 632 responses to capitalization attempts were analyzed, of which 402 (64%) were active-constructive (49% after receiving active-negative feedback, and 76% after receiving active-constructive feedback). Figure 2 presents the mediational path model of active-constructive responding. The model

Table 1. The effects of partner's feedback on subjective, physiological and behavioral responses.

	Descriptive		feedback		sex	
	M	*SD*	*β*	95% *CI*	*β*	95% *CI*
valence	1.26	1.40	0.13	0.06, 0.20	0.00	−0.08, 0.06
facial expression	0.04	0.12	0.03	−0.04, 0.11	0.09	0.01, 0.16
SBP [mmHg]	−4.13	9.31	−0.13	−0.20, −0.06	0.07	0.00, 0.15
DBP [mmHg]	−1.74	4.47	−0.12	−0.19, −0.04	0.05	−0.03, 0.13
HR [beats/min]	−5.56	5.82	−0.07	−0.14, 0.00	0.17	0.10, 0.24
CO [l/min]	−0.72	0.84	−0.08	−0.15, 0.00	−0.01	−0.08, 0.07
TPR [mmHg.min/l]	0.07	0.11	0.01	−0.07, 0.09	0.21	0.14, 0.28
SCL [μS]	0.33	1.12	−0.01	−0.08, 0.05	0.16	0.09, 0.23

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

Note. SBP = systolic blood pressure, DBP = diastolic blood pressure, CO = cardiac output, TPR = total peripheral resistance, HR = heart rate, SCL = skin conductance level. Sex coded as 0 = men, 1 = women. Feedback received from partner coded as 0 = active-destructive, 1 = active-constructive.

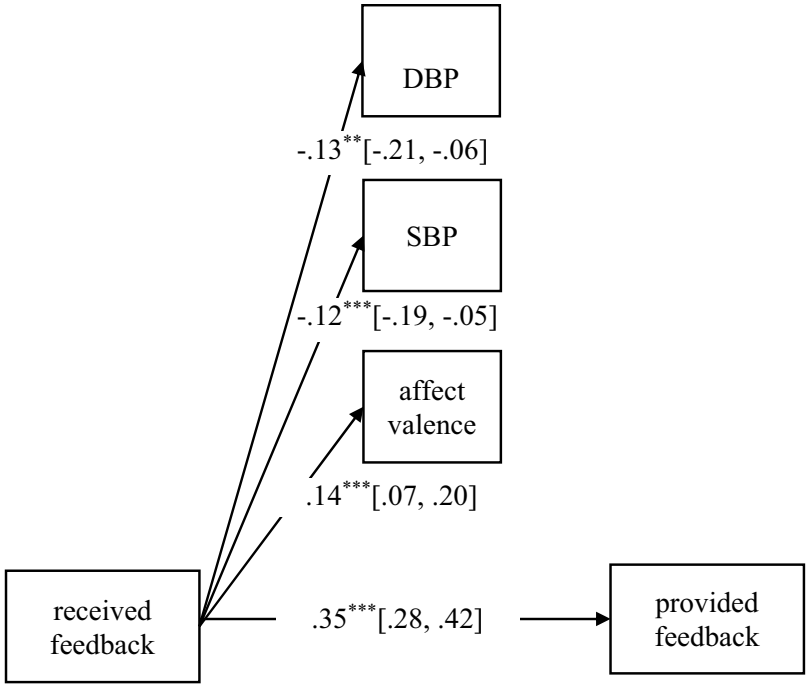

Figure 2. Affective model for the active-constructive responding to capitalization attempts. *$p < .05$, **$p < .01$, ***$p < .001$.*Note*. SBP – systolic blood pressure; DBP – diastolic blood pressure; Received feedback 0 = active-destructive, 1 = active-constructive; Provided feedback 0 = destructive or passive, 1 = active-constructive. Numbers in brackets represent 95% confidence intervals for standardized estimates.

Table 2. Correlations matrix for final model.

		1	2	3	4
1	Valence	-			
2	SBP	−.02	-		
3	DBP	−.02	.81	-	
4	RCA	−.06	−.01	−.01	-
5	Feedback	.13	−.13**	−.11**	.29**

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

Note: SBP – systolic blood pressure reactivity, DBP – diastolic blood pressure. Coding: RCA – response to capitalization attempts (0 = destructive or passive; 1 = active-constructive), Feedback – received from partner (0 = active-destructive; 1 = active-constructive).

fit the data well, *PPp* = .66, 95% *CI* [−17.16, 18.80] (for correlations matrix see Table 2).

Path analysis revealed that sharers who received active-constructive feedback from partners were more likely to send active-constructive feedback relative to sharers who received active-destructive feedback. Active-constructive feedback predicted an increase of positive emotions and decrease of systolic and diastolic blood pressure in sharers; however, these changes did not predict how sharers responded to a subsequent capitalization attempt.

Discussion

As hypothesized, a partner's response to a sharer was influenced by how the sharer previously responded to them. Results provide evidence that responses to capitalization attempts are reciprocated, which replicated Study 1 findings. Conversely, findings did not support the second hypothesis. While enthusiastic responses increased positive affect and decreased physiological mobilization (SBP) in sharers, these changes did not mediate how they responded to capitalization attempts as partners. This finding partially conflicts with InterCAP's explanatory mechanism for capitalization's iterative nature, that the benefits of capitalization influence reciprocity; however, it may be that benefits other than positive affect operate as mediators.

Receiving the enthusiastic response elicited mild effects on emotional valence, mixed effects on physiological responses, and no effects on facial expressiveness. Blood pressure often displays the strongest reactivity to emotions as indicated by effect sizes (Siegel et al.,2018). Moreover, the measurement of blood pressure might be more accurate because it is a direct mechanical outcome (pressure of pulsing arm's diameter on the cuff) whereas other measures such as TPR or CO are based on estimations (Blascovich et al., 2011). Consequently, mild emotional intensity could have a more effective impact on more sensitive physiological measures. Furthermore, we found no effects on facial expressiveness. This might be explained by the fact that we asked participants to send selfies to their partners before the measurement of their

facial expressiveness. Consequently, their facial expression might have been switched to a social mode (affiliative smile) rather than reflecting spontaneous expression of a feeling of satisfaction or pleasure (reward smile) (Rychlowska et al., 2017) as it might have been the case in previous studies on capitalization that used facial expression (Monfort et al., 2014). In general, these complex outcomes support previous theories suggesting a relatively weak link between components of emotions (Barrett, 2006; Mauss et al., 2005) and indicate that more work is needed to dissect the unique effects of experience, expression, and physiology in capitalization research.

The study has several limitations. First, people communicated using predefined validated messages rather than writing them on their own (Monfort et al., 2014) to maximize internal validity. This provided more control over the flow of the study including strict time-control that is essential for physiological studies. The results might be different if participants had to generate messages on their own because it would require not only motivation to select an enthusiastic message but also the ability to construct convincing enthusiastic responses. Second, we analyzed relativley short physiological recordings. Longer recordings might provide more robust material for reliable estimation ofphysiological processes. Third, we tested reciprocal interactions that lasted several minutes. Little is known about the durability of capitalization reciprocity effects, e.g., whether a capitalization cycle that occurred in the evening still influences a capitalization cycle that occurs on the next morning. Fourth, participants provided ratings of general emotional valence (negative-positive dimension) rather than discrete emotions relevant to reciprocity such as gratitude (McCullough et al., 2001) and guilt (Baumeister et al., 1994). A discrete emotion approach might be more sensitive to detect influences or mediators in the capitalization process. Finally, given replication concerns (Open Science Collaboration, 2015), more replication studies are required before inferences are formulated.

General discussion

The present set of studies indicate that people respond enthusiastically to their partner's capitalization attempts if they previously received enthusiastic responses from their partner. Findings from both studies serve as initial empirical evidence for InterCap's assumption that enthusiastic responses to capitalization attempts are reciprocated (Peters, Reis, & Gable, 2018). When people switch from the role of sharer to the role of partner, their experiences as sharers are influencing how they act as partners. However, results suggest people do not tend to respond in a demeaning manner following the receipt of prior demeaning responses; lending support to the idea that capitalization has many benefits and few pitfalls (Peters, Reis, & Gable, 2018). Capitalization might only be reciprocal when effective and the capitalization cycle might halt when sharers do not get enthusiastic responses.

Unexpectedly, Study 2 did not find evidence that positive affect explains why people reciprocate enthusiastic responses to capitalization attempts. Within the InterCAP model, enthusiastic responses promote future capitalization attempts and enthusiastic responses through the intrapersonal and interpersonal benefits of capitalization. While positive affect is one of the primary benefits of effective capitalization, it may be that other commonly observed intrapersonal benefits serve as mechanisms (e.g., life satisfaction or negative affect). Alternatively, interpersonal benefits may be responsible such as relationship quality or intimacy. Still, replication is required to conclude that positive emotions do not explain reciprocation in capitalization.

These studies have some practical implications. Enthusiastic responses to capitalization attempts exist in a reciprocal loop, as implied by InterCAP. Alternatively, demeaning responses may not be reciprocated, which means a person may not set off a reciprocal loop of capitalization attempts and ineffective capitalization support. Nonetheless, a person providing demeaning feedback can terminate or disrupt a reciprocal loop that otherwise both parties and the relationship could benefit from. People should be aware that how they respond to capitalization attempts influences which responses they receive in return. This should mobilize regulatory effort in modeling enthusiastic responding and inhibiting the urge for demeaning responding. This process is important because capitalization has been used as an active ingredient in positive psychological interventions for non-clinical recipients (Lambert et al., 2013; Schueller, 2012), positive psychotherapy (Seligman et al., 2006), and positive education (Seligman et al., 2009).

Even though a reciprocal loop may not occur, Study two results found that participants receiving demeaning feedback experienced increased systolic blood pressure. The relationship between reactivity in systolic blood pressure and cardiovascular disease risk is linear (Prospective Studies Collaboration., 2002). Thus, even smaller effects observed in laboratories have a cumulative long-term impact on health (Chida & Steptoe, 2010). Taken together, this provides evidence that capitalization's intrapersonal outcomes extend to cardiovascular health and that demeaning

feedback may be detrimental to a person's physical well-being.

Any interpretation of our findings requires careful consideration of caveats. First, individual differences may have influenced results. Prior studies show that partners with low self-esteem may be less likely to provide effective capitalization support (Wood et al., 2005). Thus, partners with low self-esteem may be less influenced by previous responses to their shared success. Future investigations should examine the influence of moderators in capitalization reciprocity. Second, couples who self-select into this type of study tend to be satisfied with their relationship (Monfort et al., 2014). Research should examine whether effects are limited to highly functioning couples. This is important because capitalization deteriorates in the context of prolonged adversity (Hershenberg, 2013; Horn et al., 2017). Contempt, criticism, and stonewalling that dominate in low-functioning couples (Gottman, 1993) might hinder the benefits of enthusiastic responses.

The present research exhibits several strengths. First, a experimental design allowed us to examine the causal influence of reciprocity in capitalization. Second, we conducted two studies to replicate findings. Third, by using behavioral intensions and behaviors as outcomes, we assessed the impact of capitalization support on how someone aims to and actually responds to subsequent capitalization attempts. Fourth, examining real-life events and computerized interactions in existing romantic dyads increased external and internal validity. Finally, Study two employed a multimodal approach to emotional experiences, including peripheral indices of autonomous nervous system activity, which allowed us to replicate and broaden prior findings that capitalization support leads to self-reported changes in positive affect (e.g., Lambert et al., 2013).

When people share good news and their partners respond enthusiastically, they reciprocate by demonstrating the same interest and excitement to their partner's good news. While they feel better as a result of their partner's enthusiasm, this does not explain why they reciprocate. The present findings add to a cumulative and increasingly complex model of interpersonal capitalization.

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