

Evidence for Vicarious Hope and Vicarious Gratitude

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Abstract Theorists posit that well-being reflects an optimal balance of self- and other-interest. An index of other-interest may be the degree to which hope and gratitude concern *others* (termed *vicarious hope* and *vicarious gratitude*) in addition to concerning the self. We examined the frequency of vicarious responses generated by participants ($N = 350$) invited to list ten things for which they were hopeful or grateful. Results showed that, on average, about 13 % of participants' responses were other-oriented, that such responses were more likely to occur in the hope than in the gratitude condition, and that they were more likely to occur in conditions where task instructions primed inclusion of others. The generation of vicarious responses correlated with the trait of empathic concern. Implications of these findings for future work on vicarious hope and vicarious gratitude are discussed.

Keywords Hope · Gratitude · Vicarious hope · Vicarious gratitude · Empathy · Self-construal

1 Introduction

“Other people matter” (Beloved positive psychologist Dr. Christopher Peterson)

If other people matter when it comes to living a good life, it is surprising that the preponderance of research and theorizing on hope and gratitude—two central concepts within positive psychology—concerns only their egoistic variants. In most studies, hope

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concerns people's aspirations for their *own* positive future, and gratitude concerns people's appreciation of their *own* past or present good fortune. We contend that people frequently hold hopes for others (termed *vicarious hope*), such as hoping that a friend passes a professional licensing exam. Similarly, we contend that people frequently are grateful for the good fortunes of others (termed *vicarious gratitude*), such as being grateful that a parent recovered from an illness.

According to Brewer (2004), social living requires humans to achieve a balance between benefitting the self and benefitting others, or what is referred to as self-interest and other-interest, respectively (see also De Dreu and Nauta 2009; Gerbasi and Prentice 2013; Korsgaard and Meglino 2008). Brewer argued that humans are neither wholly selfish nor purely altruistic, but rather that their motivation and behavior is highly adaptable and responsive to social and other contextual factors. In a similar vein, Gerbasi and Prentice (2013) argued that any one behavior may be motivated by a mix of self- and other-interest, that self- and other-interest are relatively independent psychological dimensions underlying behavior, and that they operate in tandem with each other. Importantly, recent theoretical work points to heightened well-being as one consequence of balancing self- and other-interest (Bauer 2008; Dambrun and Ricard 2011; Leary and Guadagno 2011). Because transcending self-interest can be adaptive, the current work examines whether other-interest penetrates important positive psychological processes heretofore examined primarily from the point of view of self-interest; namely, hope and gratitude.

There are several reasons to consider hope and gratitude alongside one another. Hope and gratitude are important concepts within happiness studies; both are associated with well-being (Emmons and Mishra 2010; Snyder 2002) and are the focus of positive psychology interventions (e.g., Boehm et al. 2011; Seligman et al. 2006). Hope and gratitude are related conceptually: In Peterson and Seligman's (2004) taxonomy of character strengths, hope and gratitude both fall within the virtue of *transcendence*, and in Haslam, Bain, and Neal's (2004) model of the structure of positive traits, they co-inhabit a category labeled *love*. Indeed, hope and gratitude are positively associated (e.g., McCullough et al. 2002). And, they may have a temporal relationship with each other: Things hoped for today can become tomorrow's focus of gratitude. This final point of convergence also highlights key ways in which hope and gratitude differ: gratitude concerns desired outcomes fulfilled in the present or past, whereas hope concerns uncertain outcomes sought in the future (Emmons and Mishra 2010).

2 Hope and Vicarious Hope

Lazarus (1999) wrote that to hope is "to believe that something positive, which does not presently apply to one's own life, could still materialize" (p. 653). Although this definition does not refer to hopes held in the interest of others, neither does it preclude such a possibility. The phrase *apply to one's own life* can be interpreted as inclusive of positive events that a person hopes will transpire for a significant other; indeed, Lazarus acknowledged the possibility of others being the target of one's hopes.

Other theorists have, on occasion, explicitly identified a variant of hope directed toward others. McGeer (2004) contrasted egocentric hope with hope that concerns another's welfare. Godfrey (1987) distinguished between hopes aimed at one's own benefit (*hope-for-me*) and hopes aimed at another's benefit (*hope-for-another*). Wong and Heriot (2007, 2008) used the term *vicarious hope* in the context of parental hopes held for their ill children (see also Faso et al. 2013). Elliott and Olver (2002, 2007, 2009) identified *focused*

on the self versus *focused on another* as an important dualism within the study of hope among those with terminal illnesses.

Evidence for vicarious hope was proffered by Averill, Catlin, and Chon's (1990) identification of *altruistic hope* among undergraduate students asked to provide open-ended descriptions of hoped-for events. Categorization of participants' descriptions showed that 41 % of hopes were classifiable as achievement-related, 25 % pertained to interpersonal relationships (e.g., romantic hopes), and 24 % concerned material objects (e.g., desiring a new car). Most important for the current purposes, about 9 % of hopes concerned the well-being of another person. Further support for the existence of vicarious hope comes from Bruininks and Malle (2005), who asked undergraduate participants to tell a story that involved hope from their past experiences. Fully 38 % of stories were categorized as hopes which concerned positive outcomes of another person.

The current research aimed to further buttress the empirical support for vicarious hope, defined (based upon the definition of hope by Lazarus 1999) as *the tendency to believe that something positive, which does not currently apply to another person's life, could still materialize*.

3 Gratitude and Vicarious Gratitude

Emmons and Mishra (2010) defined gratitude as "an acknowledgement that we have received something of value from others" (p. 248), whereas Wood, Froh, and Geraghty (2010) defined gratitude as a "life orientation towards noticing and appreciating the positive in life" (p. 891; see also Adler and Fagley 2005; Tucker 2007; Watkins et al. 2004; Wood et al. 2008). Consistent with these complementary conceptualizations, Lambert et al. (2009) showed that laypersons identify *both* a specific form of gratitude associated with receiving benefits from others and a more generalized form of gratitude-as-appreciation.

These conceptualizations of gratitude are congruent with the possibility of a form of gratitude that is other-oriented; that is, if gratitude reflects appreciation for positive events, including others' benevolence, then one might appreciate positive events experienced by others as well as those experienced first-hand. This notion resembles *happy-for* emotional reactions, described by Ortony et al. (1988) as delighting in response to another person's good fortune. Indeed, Emmons and Mishra (2010) argued that gratitude can spill over to include feeling happy about someone else's success. They further argued that gratitude is closely associated with values of benevolence and universalism, implying an association between gratitude and a widened purview of appreciation concerning, respectively, the welfare of those close to us and of others in general.

To date, there is little or no direct empirical evidence for the concept of vicarious gratitude. However, some support comes from research on positive empathy and on active-constructive responses to another's good fortune. Sallquist et al. (2009) elicited positive empathy (i.e., happiness resulting from another's positive emotional state) among pre-school children exposed to another person receiving a gift, and showed that such a response was associated with social competence. Perry et al. (2012) showed that empathic responses to another person's joy were weaker than responses to another person's distress but nonetheless employed overlapping neural networks.

In contrast to the automatic elicitation of positive empathy, active-constructing responding characterizes a person's deliberate and intentional supportive response to positive news disclosed by a partner (Gable and Reis 2010; Langston 1994). Research by Gable et al. (2004, 2006) showed that active-constructive responses are associated with

adaptive consequences for the disclosing individual and for the relationship. Research on both positive empathy and active-constructive responding supports the possibility of vicarious gratitude, given the common emphasis on positively responding to another's good fortune.

While there is less evidence for vicarious gratitude than vicarious hope, the conceptual underpinnings of vicarious gratitude are supported by the broader view of gratitude and appreciation reviewed above, and indirect support is provided by studies on positive empathy and active-constructive responding. The current research is aimed at further validating the concept of vicarious gratitude, which we define (based on the definition of gratitude by Wood et al. 2010) as *the tendency to notice and appreciate the positive in another person's life*.

4 The Current Study

We sought evidence for vicarious hope and gratitude in a study that employed a $2 \times 2 \times 2$ between-subjects experimental design. Overall, participants were asked to list 10 things for which they were either hopeful or grateful, and we coded their responses as self- or other-oriented. Half of all participants were asked to generate things for which they were hopeful whereas the other half were asked to generate things for which they were grateful. The focus upon hope versus gratitude reflected our interest in uncovering the rate of vicarious responses for both hope and gratitude; no specific hypothesis concerning differential occurrence of vicarious hope and gratitude was tested.

Half of all participants were primed to undergo the temporary induction of a more other-oriented mindset, whereas the remaining participants were not. Gerbasi and Prentice (2013) showed that other-interest can be made more salient in response to experimental manipulations. We heightened the salience of other-interest by manipulating task instructions so that some participants were made mindful that their responses could concern themselves or others (i.e., "please write down 10 things that you truly hope for, for either yourself or others"), whereas other were not (i.e., "please write down 10 things that you truly hope for"). We tested the hypothesis that participants primed to adopt an orientation inclusive of others respond with more vicarious hope or gratitude. Finally, half of all participants were instructed to adopt a 1 month time frame when generating their responses of hope or gratitude, whereas the remaining half adopted a 1 year time frame. No hypothesis was associated with this manipulation, but it allowed us to ascribe the time period considered by participants and to examine whether length of the time period interacted with the hope versus gratitude or priming versus non-priming manipulations.

In addition to generating a list of events for which they were hopeful or grateful under various experimental conditions, participants also completed five individual difference measures. Participants completed measures of perspective-taking and empathic concern, two key facets of empathy (Davis 1983). Empathy shares a focus with vicarious hope and gratitude on caring for the welfare of another; indeed, empathy is a correlate of other-interest (Gerbasi and Prentice 2013). Participants also completed measures of independent, relational, and interdependent self-construal. These measures concern the extent to which people identify themselves as autonomous or as interconnected with close others or others more generally, respectively (relational self-construal is similar to interdependent self-construal, but is focused on close relationships to a greater degree and on roles and group identities to a lesser degree; Cross et al. 2000). Evidence shows that interdependent (and, presumably, relational) self-construal is associated with both empathy (Wolfin et al. 2011)

and prosocial behavior (Utz 2004). Overall, we hypothesized that vicarious hope and gratitude would correlate with empathic concern, perspective-taking, and the tendency to construe the self in an interdependent or relational (vs. independent) manner.

5 Methods

5.1 Participants

Participants were 350 undergraduate students at a Canadian liberal arts university who received partial introductory psychology course credit for their participation. Their mean age was 21.7 ($SD = 1.30$, range = 17 to 58), and 70 % were female. Arts was the program of study for 30 % of participants, followed by science (22 %), general studies (13 %), business (12 %), and nursing (5 %). Students in their first year (58 %) and second year (27 %) were predominant. English was the first language of 85 % of participants.

5.2 Materials

5.2.1 Hope and Gratitude Responses

Eight versions of the study materials were constructed, reflecting the manipulation of three between-subjects factors: hope versus gratitude; priming versus no priming of an other-oriented mindset, and month versus year time frame applied to the hoped-for or grateful-for events. The materials instructed participants either to “write down 10 things that you truly hope for...” or to “write down 10 things that you are truly grateful for...”. These task instructions were, for participants in the condition which primed an orientation to the other, followed with the phrase “... for either yourself or others”. Note that this is a subtle form of prime, referring not only to others but inviting *either* a self- or other-perspective. For non-primed participants, this clause was omitted altogether; as such, non-primed participants were not led to experience a *self-only* mindset but rather were uninfluenced with respect to whether they considered themselves or others. The instructional sentence ended with either “...during the upcoming year” (or *past year* for gratitude participants) or “...during the upcoming month” (or *past month*). Following these instructions, participants then read the sentence stem, “I hope for...” or “I am grateful for...”, after which were 10 numbered lines on which to generate their responses.

5.2.2 Measures of Empathy

The Interpersonal Reactivity Index (Davis 1983) is composed of four scales: perspective taking, empathic concern, personal distress, and fantasy. As perspective taking and empathic concern are central cognitive and affective components of empathy, respectively, only these scales were employed. Items (e.g., “I am often quite touched by things that I see happen”) were rated on 5-point scales, with endpoints labeled 1 (*does not describe me well*) and 5 (*describes me very well*). Higher scores denote greater endorsement of each facet of empathy. The measures have shown good internal consistency (>0.70 for each scale), acceptable test–retest reliability (>0.60 for each scale), and evidence of construct validity (e.g., perspective taking and empathic concern correlate with independent measures of sensitivity to others; Davis 1983).

5.2.3 Measures of Self-construal

We employed three scales assessing three forms of self-construal. The first was Singelis' (1994) measure of an interdependent self-construal (e.g., "Even when I strongly disagree with group members, I avoid an argument"). The second was Singelis' measure of an independent self-construal (e.g., "I value being in good health above everything"). The third was Cross et al.'s (2000) measure of a relational self-construal (e.g., "My sense of pride comes from knowing who I have as close friends"). All items were rated using 7-point scales with endpoints labeled (1) *strongly disagree* and (7) *strongly agree*. Internal reliability of these scales is acceptable (e.g., .88 for the relational scale; Cross et al. 2000; .74 and .70 for the interdependent and independent scales, respectively; Singelis 1994). Evidence for the validity of the scales includes convergent correlations with related variables (e.g., Cross et al. 2000; Singelis 1994).

5.2.4 Manipulation Checks

As a check on participants' experience of the manipulations of hope versus gratitude, priming versus non-priming task instructions, and month versus year time frame, we asked participants whether their mindset during the hope or gratitude listing task was on the future or the past, whether they adopted an orientation to the task that was toward themselves or toward both themselves and others, and whether the time period borne in mind was 1 month or 1 year. Each question was formatted as a forced-choice between the two response options.

5.3 Procedure

Participants were tested in-person in groups of 5–15. After signing a consent form, participants were randomly assigned to one of eight versions of the study materials package, reflecting the eight experimental conditions arising from the $2 \times 2 \times 2$ experimental design. Participants first completed the task asking them to list 10 things for which they were grateful or hopeful, with specific instructions reflecting the particular condition to which they were assigned. Participants were asked to think carefully before creating their list, and they were asked not to list trivial things. Participants then completed the measures of empathy and self-construal, followed by the manipulation check items and demographic questions inquiring about their gender, age, year of study, program of study, and whether English was their first language.

Following collection of all of the data, and while blind to experimental condition, a rater coded each response of participants into a 2×4 matrix. Responses were coded as to whether they were self-oriented, known other-oriented (e.g., focused upon friends and family), unknown other-oriented (e.g., focused upon strangers or people in general), or impersonal (e.g., focused upon animals). For a response to be judged to be other-oriented, it had to clearly identify another person, a group of people, or people in general being the *most prominent* beneficiary or beneficiaries of the event for which the participant was hopeful or grateful. As an example, hoping for a continued ongoing relationship with a partner was *not* judged as other-oriented (although it is clearly relational in nature), because the chief beneficiary is just as likely to be oneself as it is to be one's partner. (We make no claim that an other-oriented response is fully non-self-relevant. We claim only that responses which clearly emphasize a chief beneficiary or beneficiaries beyond oneself are reasonably seen as expressing other-interest). Responses were also coded as approach or avoidance in their orientation on the basis of whether the response concerned seeking or

attaining a positive outcome, on the one hand, or preventing or removing a negative outcome, on the other. We tallied the number of responses coded in each cell of the coding matrix. We computed the total number of other-oriented responses by summing across the known and unknown other categories and across the approach and avoidance types of responses. We computed the total number of self-oriented responses in a similar manner. A second rater, blind to experimental condition, independently coded a subset of 60 participants' responses, reflecting Neuendorf's (2002) recommendation of a subsample size of at least 50 for reliability analyses. Across raters, the number of other-oriented responses correlated $.89, p < .001$. As some of our analyses concerned whether participants generated any vicarious responses or not, we calculated reliability across the two coders of the binary judgment of the presence or absence of any other-oriented responses within each participant's list of responses. Kappa's coefficient was $.80, p < .001$, exceeding the threshold for "substantial agreement" according to Landis and Koch (1977).

5.4 Data Analytic Strategy

The total number of vicarious responses was not normally distributed (see Fig. 1). Analyses therefore focused upon the occurrence or non-occurrence of vicarious responses. Given the binary nature of the outcomes and a sufficient number of individuals in each response category (Agresti 2007), logistic regression was employed. Specifically, logistic regression was used to analyze the effects of emotion type (hope vs. gratitude), task instructions (primed vs. non-primed) and time frame (month vs. year) on (1) the probability of participants generating any vicarious response and (2) the probability of each single response of participants being vicarious. The first analysis provides the advantage of being able to classify participants into those who did and did not include a vicarious response and to examine whether participants' status within this classification is well-predicted by their experimental condition. The latter analysis affords the advantage of being sensitive to all of the vicarious responses generated by a particular participant, rather than (as in the former analysis) only whether a particular participant generated any other-oriented response. For example, if a participant generated three vicarious responses (out of a total of 10 responses), the first analysis would identify this as a single instance of a participant whose score is affirmative for including at least one vicarious response among their list, whereas the second analysis would include the further detail that a response by this participant had a $.30$ (i.e., $3/10$) likelihood of being vicarious. We employed SPSS 17.0 for these analyses, via the *Generalized Linear Models* module. The *Binary Logistic Model* subprogram allowed us to identify the dependent variable as *Binary* (i.e., applied to a variable coded for the presence or absence of any vicarious response) for the first logistic regression analysis and as *Events/Trials* (i.e., applied to a variable coded for the total number of vicarious responses) for the second analysis.

6 Results

Descriptive statistics for the main study variables are reported in Table 1. All self-report measures yielded total scores with acceptable levels of reliability.

6.1 Manipulation Checks

We compared hope and gratitude participants on their responses to the manipulation check item concerning whether they focused upon the future or the past when generating their

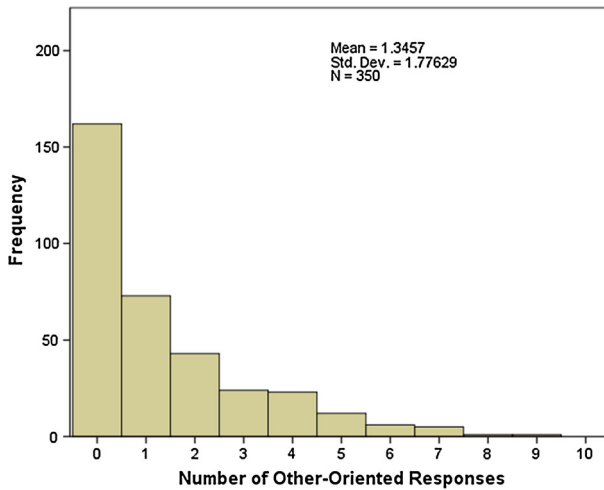


Fig. 1 Frequency distribution for the number of vicarious responses generated by participants

Table 1 Descriptive statistics for main variables

Variable	<i>M</i>	<i>SD</i>	Observed range	Possible range	α
1. Number of other-oriented responses	1.35	1.78	0.00–9.00	0.00–10.00	–
2. Number of self-oriented responses	8.29	1.97	1.00–10.00	0.00–10.00	–
3. Empathic concern	28.29	4.38	10.00–35.00	7.00–35.00	0.78
4. Perspective-taking	25.26	4.37	13.00–35.00	7.00–35.00	0.76
5. Independent self-construal	60.59	9.59	35.00–84.00	12.00–84.00	0.74
6. Relational self-construal	53.28	8.64	26.00–70.00	10.00–70.00	0.82
7. Interdependent self-construal	59.55	9.19	23.00–84.00	12.00–84.00	0.74

responses. Consistent with the intent of the manipulation, a future orientation was reported by a greater percentage of hope participants (91.2 %) than gratitude participants (26.5 %), $\chi^2(1) = 144.74$, $p < .001$. Similarly, we compared participants in the two time frame conditions as to the time frame (i.e., month vs. year) adopted when responding to the open-ended hope or gratitude question. Consistent with the intent of the manipulation, a year interval was reported by a greater percentage of those in the year condition (92.6 %) than those in the month condition (48.2 %), $\chi^2(1) = 81.65$, $p < .001$. Finally, we compared participants in the primed and non-primed condition as to whether their orientation when responding to the open-ended hope or gratitude question was toward themselves or toward themselves *and* others. The percentage of primed (80.5 %) and non-primed participants (80.8 %) who reported adopting a *self-and-others* orientation did not differ, $\chi^2(1) = 0.01$, *ns*. While unanticipated, this finding likely reflects the fact that participants in the non-primed condition were not precluded from considering the plight of others when listing responses to the open-ended hope or gratitude question (recall that the manipulation involved either including the phrase “...for either yourself or others” or excluding this clause altogether); indeed, responses to this manipulation check item correlated positively with the total number of other-oriented responses generated, $r(345) = .26$, $p < .001$, so

that those who reported adopting a self-and-others orientation generated more other-oriented responses regardless of experimental condition. It is also likely that participants conceived of their responses as being oriented toward others even though many of those responses were ultimately classified as self-oriented, such as in the common case of hoped for events which included ongoing positive relationships with others.

6.2 Analyses Predicting the Occurrence of Vicarious Responses

Table 1 shows that, across all participants, the mean number of vicarious responses was 1.35 and the mean number of self-oriented responses was 8.29; therefore, on average 13.5 % of responses were other-oriented. Figure 1 presents the distribution of the total number of vicarious responses across participants. It shows that about 54 % of the sample had at least one response classifiable as other-oriented.

Logistic regression was used to analyze the effects of emotion type (hope vs. gratitude), task instructions (primed vs. non-primed) and time frame (month vs. year) on (1) the probability of participants generating any vicarious response and (2) the probability, out of all responses generated by a participant, of a response being vicarious. The third manipulation (time period of 1 month vs. 1 year) was not directly associated with our hypotheses and it showed no effects (main or interaction) on the probability of vicarious responses; we therefore report the results of analyses focused upon the two remaining independent variables. Neither gender nor age emerged as affecting the relationship between emotion type and task instructions and the likelihood of vicarious responses and are therefore not included in the models reported below.

The overall model of the probability of a participant including any vicarious response as a function of emotion type and task instructions showed acceptable model fit, likelihood ratio $\chi^2(3) = 88.95, p < .001$. Analysis of the model (see top portion of Table 2) showed that participants asked to list things for which they were hopeful were more likely to include vicarious responses compared to those asked to list things for which they were grateful, $b = 2.13, SE = 0.37, Wald \chi^2(1) = 32.97, p < .001, odds ratio (OR) 8.45$. And, participants for whom other-interest was made salient via task instructions were more likely to include vicarious responses compared to those not primed, $b = 0.88, SE = 0.34, Wald \chi^2(1) = 6.71, p = .010, OR 2.41$. No interaction effect between emotion type and task instructions emerged, $b = 0.13, SE = 0.51, Wald \chi^2(1) = 0.07, ns$, meaning that the effect of priming on the likelihood of a vicarious response was not dependent on emotion type or, put differently, that the effect of emotion type was not dependent upon priming.

Table 3 shows the distribution of participants who did or did not generate any vicarious responses as a function of experimental condition. The table shows, for example, that 55 % of non-primed participants did not include any vicarious responses, whereas 63 % of primed participants did include vicarious responses. Also, 69 % of gratitude participants did not include any vicarious responses, whereas 76 % of hope participants did include vicarious responses. About 20 % more participants generated vicarious responses when primed than when not primed, and about 45 % more participants generated vicarious responses when listing things for which they were hopeful rather than grateful. The highest rate of inclusion of vicarious responses occurred in the hope/primed condition, whereas the lowest rate occurred in the gratitude/non-primed condition.

As a further index of model fit, the results of this analysis can be used to classify participants as to both their actual and predicted inclusion of a vicarious response given their experimental condition. Adopting a decision threshold of 0.5, the current analysis yields a sensitivity rate of .71 (i.e., we would correctly classify 71 % of participants who

Table 2 Results of two logistic regression analyses predicting (1) the probability of participants including any vicarious response and (2) the probability of any response being vicarious

Predictor	b	95 % CI for b	SE	Wald χ^2	df	p
First analysis						
Hope versus gratitude	2.13	1.41–2.86	0.37	32.97	1	.001
Prime versus no prime of <i>other</i>	0.88	0.21–1.54	0.34	6.71	1	.01
Interaction term	0.13	–0.86–1.12	0.51	0.07	1	<i>ns</i>
Likelihood ratio test $\chi^2(3) = 88.95, p < .001$						
Second analysis						
Hope versus gratitude	1.60	1.31–1.89	0.15	118.36	1	.001
Prime versus no prime of <i>other</i>	1.12	0.64–1.61	0.25	20.71	1	.001
Interaction term	0.20	–0.74–0.34	0.27	0.53	1	<i>ns</i>
Likelihood ratio test $\chi^2(3) = 301.70, p < .001$						

N = 350. *CI* confidence interval

Table 3 Distribution of participants with or without vicarious responses by experimental condition

Emotion condition	Task instructions			
	Non-primed		Primed	
	<i>n</i>	%	<i>n</i>	%
Hope				
No vicarious	29	32.6	13	14.9
Vicarious	60	67.4	74	85.1
Total	89	100.0	87	100.0
Gratitude				
No vicarious	68	78.2	52	59.8
Vicarious	19	21.8	35	40.2
Total	87	100.0	87	100.0

included a vicarious response as having done so), a specificity rate of .74 (i.e., we would correctly classify 74 % of participants who did not include a vicarious response as not having done so), a false positive rate of .24 (i.e., we would incorrectly classify 24 % of participants as having included a vicarious response when they did not), and a false negative rate of .31 (we would incorrectly classify 31 % of participants as having not included a vicarious response when they did). The overall correct prediction rate was 73 %.

We conducted a similar logistic regression analysis modeling the probability of each single response of participants being vicarious as a function of emotion type (hope vs. gratitude) and task instructions (primed vs. non-primed). This analysis (see bottom portion of Table 2) made use of the total number of other-oriented responses generated by participants across the 10 opportunities to do so (i.e., the 10 “trials”, or responses, participants were invited to complete). The overall model suggested acceptable model fit, likelihood ratio $\chi^2(3) = 301.70, p < .001$. Analysis of the model showed that responses were significantly more likely to be vicarious when participants were asked to list things for which they were

hopeful rather than grateful, $b = 1.60$, $SE = 0.15$, Wald $\chi^2(1) = 118.36$, $p < .001$, OR 4.97. Responses were also significantly more likely to be vicarious when other-interest was primed via task instructions, $b = 1.12$, $SE = 0.25$, Wald $\chi^2(1) = 20.71$, $p < .001$, OR 3.08. No interaction effect between emotion type and task instructions emerged, $b = 0.20$, $SE = 0.27$, Wald $\chi^2(1) = 0.53$, *ns*. These findings are closely in line with those reported within the previous analysis on the probability of participants generating a vicarious response.

6.3 Individual Differences and the Prediction of Vicarious Responses

The first logistic regression analysis presented above (i.e., predicting the probability of a participant having any other-oriented response as a function of emotion type and priming condition) was re-conducted on two further occasions, on the first adding the two empathy scales as predictors and on the second adding the three self-construal scales as predictors, along with the hope versus gratitude and primed versus non-primed independent variables. While the models remained significant and the effects of emotion type and task instructions were unchanged, none of the individual differences scales predicted participants' probability of having generated a vicarious response.

The second approach to the logistic regression analyses (i.e., predicting the probability of each response of a participant being vicarious as a function of emotion type and priming condition), may be more sensitive to individual differences as it makes use of the full number of other-oriented responses generated by participants. We re-conducted this logistic regression on two further occasions, on the first adding the two empathy scales as predictors and on the second adding the three self-construal scales as predictors. For the model including the empathy scales, the overall model suggested acceptable model fit, likelihood ratio $\chi^2(5) = 312.23$, $p < .001$, and effects of emotion type and task instruction emerged as in the original analysis. In addition, responses were more likely to be vicarious when participants were higher in empathic concern, $b = 0.05$, $SE = 0.01$, Wald $\chi^2(1) = 11.04$, $p < .001$, OR 1.05, but not when participants were higher in perspective-taking, $b = -0.01$, $SE = 0.01$, Wald $\chi^2(1) = 0.28$, *ns*. The result for empathic concern means that a one unit increase in empathic concern is associated with a 5 % increased odds of a participant's response being vicarious; put differently, a person whose score on empathic concern is one standard deviation higher than the score of another person has a 24 % increased likelihood of a response being vicarious (i.e., given the odds ratio of 1.05 and the standard deviation on empathic concern of 4.40; $1.05^{4.40} = 1.24$). For the model including the self-construal scales, the overall model suggested acceptable model fit, likelihood ratio $\chi^2(6) = 325.97$, $p < .001$, and effects of emotion type and task instruction emerged as in the original analysis. In addition, responses were more likely to be vicarious when participants were higher in interdependent self-construal, $b = 0.01$, $SE = 0.01$, Wald $\chi^2(1) = 4.15$, $p = .042$, OR 1.01, independent self-construal, $b = 0.02$, $SE = 0.01$, Wald $\chi^2(1) = 9.81$, $p = .002$, OR 1.02, and (marginally) relational self-construal, $b = 0.01$, $SE = 0.01$, Wald $\chi^2(1) = 3.50$, $p = .061$, OR 1.01. Again, these findings suggest that a 1–2 % increase in the odds of including a response being vicarious occurs with a one unit change in self-construal type. These findings are not, however, in line with our prediction that only the interdependent and relational types of self-construal would predict vicarious responses.

6.4 Examples and Further Characteristics of Vicarious Hope and Gratitude

For illustrative purposes, we present examples of participants' vicarious responses in Table 4. Examples are from participants in both the hope and gratitude conditions, and are

Table 4 Examples of vicarious hope and gratitude responses of various types

Approach or avoidance	Known or unknown other	
	Known	Unknown
<i>Hope</i>		
Approach	“My sister to be able to figure out what she wants in life”	“For the betterment of my society”
	“My father finds a job”	“A lucky year for everyone”
	“My family’s health and well-being”	“World peace”
Avoidance	“That three of my family members can get past their sorrows”	“End hunger”
	“My brother to stay out of trouble”	“For human and drug trafficking to end worldwide”
	“My parents to resolve their issues”	“Cancer cure”
<i>Gratitude</i>		
Approach	“The well-being of my friends/family”	“All people willing to create a positive difference in the world”
	“A friend being able to work in Uganda”	
	“The amazing health my family has had”	“Everyone who has a heart for charities”
Avoidance	“A successful recovery for my wife after she had a major surgery”	“I’m glad we’re becoming a less ethnocentric community”
	“My girlfriend being okay after her car accident”	“That we get to live without war”

categorized as to whether they were approach- or avoidance-oriented and as to whether they concerned known others or unknown others. Overall, vicarious responses were significantly more likely to concern known others (72.2 %) than unknown others (27.8 %; McNemar test exact $p < .001$), and were significantly more likely to be approach-oriented (96.6 %) than avoidance-oriented (3.4 %; McNemar test exact $p < .001$).

7 Discussion

The current study is one of few empirical forays into the examination of vicarious hope (e.g., Averill et al. 1990; Bruininks and Malle 2005), and it is the only such foray into the examination of vicarious gratitude. We found that vicarious responses occurred at an average rate of about 13 % when participants were asked to complete an open-ended list of events for which they were hopeful or grateful. Our main prediction was that vicarious responses would occur more often when people are primed to consider others in relation to those things for which they are hopeful or grateful. As predicted, we found a higher likelihood of vicarious responses among those primed to consider others, showing that participants were responsive to a manipulation geared toward raising awareness that others’ good fortune could be the target of hopeful or grateful reflections. We also found a higher likelihood of vicarious responses among those in the hope relative to the gratitude condition. We also predicted that higher empathy and greater interdependent and relational self-construal would predict vicarious responses. We found that individual differences in empathic concern predicted the likelihood that a response generated by a participant would be vicarious and that, contrary to predictions, endorsement of each type of self-construal

(independent, interdependent, and relational) similarly predicted the likelihood of a response being vicarious. Each of these findings will be examined further, in turn.

The rate of vicarious responses in the current study fell between the rates found for other-oriented hope by Averill et al. (1990; i.e., about 9 %) and Bruininks and Malle (2005; i.e., 38 %). Of course, different methods employed across the studies preclude direct comparisons among them. For example, the rate of vicarious responses in the current study reflects a conservative definition of such responses; for a response to be judged as vicarious required that the most identifiable beneficiary of hope or gratitude was a person or persons other than the self. This definition exempted, for example, relational hopes (e.g., “I hope that my relationship with my partner continues as it has been”), as such hopes could reflect the person’s own interest in maintaining the relationship or an *on par* self- and other-interest. In absolute terms, our rate of vicarious responses seems sensible; that is, it would not be adaptive if the majority of participants’ responses were directed at others’ aspirations or good fortunes rather than their own, as the adaptive nature of self-oriented hopeful or grateful thinking is well-established (e.g., Emmons and Mishra 2010; Snyder 2002) and other-interest requires, first, sufficient self-interest (e.g., in the form of self-preservation; Mansbridge 1990). However, apportioning *some* of one’s gratitude or hope toward others also seems reasonable, given some evidence of benefits accrued from other-oriented hope (Faso et al. 2013; Wong and Heriot 2008). Overall, vicarious hope and gratitude may produce beneficial outcomes for the hopeful or grateful person, for those who are the targets of their hope and gratitude, and for the relationship between the parties. Finally, most of the vicarious responses concerned known rather than unknown others, presumably reflecting the fact that those who are most salient to us receive the majority of our care and concern (Slote 2007), and most of the vicarious responses were approach-rather than avoidance-oriented, presumably reflecting the active, appetitive nature of hope and gratitude (e.g., Lazarus 1999; Wood et al. 2010).

The higher rate of vicarious responses among those under task instructions intended to increase the salience of others suggests that situational manipulations can alter the frequency of vicarious hope and gratitude. Similarly, Gerbasi and Prentice (2013) showed that other-interest can be made more salient by manipulating the situational context of responding. In both the hope and gratitude conditions of the current study, about 20 % more participants generated at least one vicarious response if they had received the instructional prime; fully 85 % of those in the hope/prime condition did so. Given that research has shown some advantages for psychological well-being of the expression of hope and gratitude-like sentiments toward others (Faso et al. 2013; Gable et al. 2004, 2006; Wong and Heriot 2008), the current findings suggest the possibility of interventions aimed at boosting other-interest in the form of vicarious hope and, perhaps, vicarious gratitude.

The greater number of vicarious responses generated in the hope than in the gratitude condition was an even larger effect than that of the priming of an orientation toward others. On average, 76 % of hope participants generated at least one vicarious response as compared to 31 % of gratitude participants. Such a gap may reflect participants’ familiarity with, and preference for, a more traditional conceptualization of gratitude (i.e., thankfulness for another’s benevolence toward oneself) or artifacts in the research such as the precise phrasing employed in the two conditions. With respect to this latter point, theorists have pointed out that even subtle wording changes may affect responses (e.g., Emmons et al. 2003 contrasted what is elicited by the phrases *grateful for* and *grateful to*, and Godfrey 1987 contrasted what is elicited by the phrases *hopeful that* and *hopeful for*). The higher rate of vicarious hope relative to vicarious gratitude may reflect more substantive differences between hope and gratitude surrounding others’ good fortunes. First, potential

vicarious hopes are unlimited in number whereas vicarious gratitude requires the occurrence of the desired event. Second, there may be more to be gained through vicarious hope than through vicarious gratitude; that is, facilitating another's goal attainment through vicarious hope may be more important than appreciating another's already attained goals. Third, it may be less threatening to hope for others' future good outcomes than to celebrate others' current good outcomes. Appreciating another's current or past good fortune invites competing feelings such as envy, which might reduce the ease and frequency with which such forms of gratitude come to mind. Also, some good fortunes of others may not have been hoped for by us; as a result, we don't appreciate their occurrence. For example, we may not appreciate a good friend's success in a performance domain close to our own hearts, in line with Tesser's (1998) self-evaluation maintenance model.

Another finding concerned the relationship between individual differences in empathy and the generation of vicarious responses. As predicted, empathic concern correlated positively with the likelihood of participants' responses being vicarious. The fact that perspective-taking did not predict vicarious responses is compatible with the lesser emphasis placed upon the cognitive versus emotional aspects of empathy in explaining caring behavior toward others (Batson 2011). That the association between empathy and vicarious responses was limited in magnitude suggests that vicarious hope and gratitude differ from empathy; indeed, the former are focused upon the good fortunes experienced by or envisioned for others, whereas the latter typically focuses upon the plight of others under adverse circumstances. The concept of positive empathy (Sallquist et al. 2009), however, suggests greater overlap with the current concepts. One difference between vicarious hope and gratitude, on the one hand, and positive empathy, on the other, is that the former are not seen as automatically elicited by exposure to a person displaying a particular emotion but rather are seen as occurring more intentionally. For example, while positive empathy may elicit our own automatic response of pleasure to a friend's happiness concerning a recent success, the process of vicarious gratitude may allow us to continue to feel appreciation for the friend's good fortune even after his or her positive affect subsides, or when later recounting the friend's experience to others or contemplating it ourselves.

Concerning our second individual difference, self-construal, differential relationships did not emerge between vicarious responding and the more social forms of self-construal (i.e., interdependent and relational) compared to the independent form of self-construal. Rather, all three forms of self-construal revealed small, positive associations with the likelihood of vicarious responding. This may reflect that all three forms of self-construal are related to aspects of psychological health which, in turn, may be associated with vicarious hope and gratitude. Interestingly, Gerbasi and Prentice (2013) recently showed that individual differences in other-interest were positively related both to an independent and an interdependent self-construal. These findings support the current ones in suggesting that self-conceptions emphasizing independence, relatedness, and interdependence may all be realized by (or set the stage for) the cultivation of vicarious hope, vicarious gratitude or, more broadly, other-interest.

8 Limitations and Future Research

There are limitations to the current research. Our participants were young adults, and their rate of vicarious hope and gratitude likely differs from both younger individuals and older individuals. Indeed, we would predict a greater frequency of other-oriented responses as individuals mature and the ego "quiets" (e.g., Bauer 2008) or as self- and other-interest

begin to converge (Gerbası and Prentice 2013). Our participants reside in a Western culture, which may have affected their rate of vicarious responses as well as the nature of relationships emerging between vicarious responses and the three self-construal dimensions. Our participants were more likely to be female than male, which also could affect their rate of other-oriented responses. A further limitation is that the restricted nature of the open-ended responses solicited from participants limits the richness of the instances of hope and gratitude collected.

Our conceptualization of vicarious gratitude departs from the focus taken by those who view gratitude not as a generalized tendency to be appreciative but rather as a more specific response to benefits conferred by others (e.g., Emmons and Mishra 2010). Indeed, some may prefer the phrase *vicarious appreciation* when referring to the broader view of gratitude adopted herein. Another limitation concerns the extent to which vicarious hope and gratitude can be said to reflect altruism. We make no claims to have shown that the vicarious responses of our participants were wholly altruistic in nature; rather, we view vicarious responses in the current study as reflecting the presence of a motivational system geared toward other-interest, working alongside a system emphasizing self-interest (Brewer 2004; De Dreu and Nauta 2009; Gerbası and Prentice 2013; Korsgaard and Meglino 2008; Mansbridge 1990).

In terms of future research, it will be interesting to attempt to perturb the rate of vicarious hope and gratitude by manipulating such factors as the social context or the emotional state of participants prior to the generation of hopeful or grateful events. Future work should consider cultural differences in the frequency of vicarious hope and gratitude, including comparisons among those residing in cultures identified as collectivistic and individualistic (i.e., cultures in which people are, respectively, relatively more or less reliant upon and concerned about close others; Triandis et al. 1988). The overlap between, and distinctiveness of, the current concepts and related ones, such as empathy and social value orientation, will be important to examine in further work. And, whether other core concepts within the science of well-being have vicarious aspects merits exploration, including such concepts as optimism and acceptance. The development of self-report measures of vicarious hope and vicarious gratitude will facilitate exploration of their nomological webs as well as the ability to track changes in their development as a function of age or of specific life experiences. There is a need for research testing the possible temporal sequence whereby current vicarious hope leads to future vicarious gratitude. Finally, research could test the potential for positively affecting personal and social outcomes by deliberately facilitating a greater degree of vicarious hopeful and grateful thinking.

9 Conclusions

The current work sought to advance the conceptualization and empirical footing of vicarious hope and gratitude; as such, it responds to Wong's (2011) recent call for a greater orientation to *the other* within the field of positive psychology. Indeed, a burgeoning concern within the science of well-being for topics emphasizing the motivational dimension of other-interest is reflected in recent work on compassion (Goetz et al. 2010), kindness (Fredrickson et al. 2008), empathy (Batson 2011), the moral intuitions (Graham et al. 2011), the other-praising emotions (Haidt 2003) and selflessness (Dambrun and Ricard 2011). We hope that the current work encourages yet further study of the ways in which human behavior may be seen to reflect the premise that *other people matter*.

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