# Gratitude in Collectivist and Individualist Cultures

Lilian J. Shin<sup>1</sup>, Christina N. Armenta<sup>1</sup>, Shanmukh V. Kamble<sup>2</sup>, Sheng-Ling Chang<sup>3,4</sup>, Hsiang-Yi Wu<sup>3</sup>. & Sonia Lyubomirsky<sup>1</sup>

<sup>1</sup>University of California, Riverside

<sup>2</sup>Karnatak University

<sup>3</sup>Kaohsiung Medical University

<sup>4</sup>Claremont Graduate University

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## Author Note

Lilian J. Shin, Department of Psychology, University of California, Riverside; Christina N. Armenta, Department of Psychology, University of California, Riverside; Shanmuhk V. Kamble, Department of Psychology, Karnatak University; Sheng-Ling Chang, Department of Psychology, Kaohsiung Medical University; Hsiang-Yi Wu, Department of Psychology, Kaohsiung Medical University; Sonja Lyubomirsky, Department of Psychology, University of California, Riverside. Sheng-Ling Chang is now at the Department of Psychology, Claremont Graduate University

Correspondence should be addressed to Lilian J. Shin, Department of Psychology, University of California, Riverside, 900 University Ave., Riverside, CA 92521. Phone: 951-827-7738. Email: LShin004@ucr.edu.

#### Abstract

Although some research suggests that Eastern, collectivist cultures do not benefit as much from practicing gratitude compared to Western, individualist cultures, the reasons for these differences remain unclear. In a single time-point randomized controlled intervention, participants in India (N = 431), Taiwan (N = 112), and the U.S. (N = 307) were randomly assigned either to write a gratitude letter to someone who had done a kind act for them, to write a gratitude letter to themselves for a kind act they had done for another person, or to complete a neutral control writing activity. Immediately after completing their assigned writing activity, participants completed measures of state gratitude, elevation, and emotions (including guilt, indebtedness, embarrassment, overall positive affect [PA], and negative affect [NA]). Notably, we found that only U.S. participants who expressed gratitude reported greater state gratitude relative to controls, suggesting that writing letters of gratitude does not elicit felt gratitude in collectivist cultures. Although not explicitly grateful, however, Indian and Taiwanese participants who wrote gratitude letters reported higher elevation (and Indian participants, reduced overall NA) compared to control participants, likely as a result of having fulfilled expected role obligations and increased feelings of social harmony. Finally, compared to control participants, Taiwanese (but not U.S.) participants felt less guilty when writing a gratitude letter about a kindness they had done for others, perhaps because they felt they had fulfilled their duty to help others. The results provide new insights for why expressing gratitude may be a less effective happiness-promoting activity in collectivist cultures.

# Gratitude in Collectivist and Individualist Cultures

All major religions and philosophies, including Christianity, Islam, Hinduism, Buddhism, and Judaism, recognize the value of gratitude. Variously classified as an emotion, an attitude, a moral virtue, a habit, a personality trait, or a coping response, an oft-cited definition of gratitude is the acknowledgement of having received something of value from an external source (Emmons & McCulllough, 2003). Gratitude has been linked to a number of positive outcomes, including mental health, social relationships, psychological well-being, and physical health (for a review, see Emmons & Mishra, 2011; Nelson & Lyubomirsky, 2016). In recent years, psychologists have been studying the intentional practice of gratitude to increase well-being, such as by writing gratitude letters, in which people are directed to write to a benefactor thanking him or her for kindness received. Furthermore, the well-being benefits of writing gratitude letters for other people's kind acts have been found to be driven by increases in feelings of gratitude, connectedness to others, elevation (i.e., feeling inspired and uplifted), and even indebtedness (Armenta, Fritz, & Lyubomirsky, 2017; Layous, Sweeny, Armenta, Na, Choi, & Lyubomirsky, 2017).

#### **Gratitude in Individualist and Collectivist Cultures**

However, not all cultures may experience similar well-being benefits from practicing gratitude. Studies have found that Eastern, collectivist cultures do not benefit as much from practicing gratitude compared to Western, individualist cultures (Boehm, Lyubomirsky, & Sheldon, 2011; Layous, Lee, Choi, & Lyubomirsky, 2013). In individualist cultures, people see themselves as autonomous entities who assert their rights and act with personal agency (i.e., an independent self-view). In collectivist cultures, by contrast, people view themselves as connected members of a larger social group (i.e., an interdependent self-view; Markus & Kitayama, 1991).

Collectivists, who endorse values such as social harmony and role obligation, may not experience as many benefits from expressing gratitude because helping others is a cultural prescriptive. In other words, giving and receiving help is an expected part of daily life for members of collectivist cultures, rather than an uplifting surprise, as may be the case for those from individualist cultures.

Notably, the reasons why expressing gratitude may not confer as many benefits for members of collectivist cultures remain unclear. To illuminate these reasons, we conducted a study with the following elements: (1) inclusion of more than one collectivist culture, (2) inclusion of more than one type of gratitude (i.e., gratitude for others' kind acts versus for one's own kind acts towards others), and (3) inclusion of both traditional measures of well-being and those of interdependent states and emotions. We posited, for example, that although individualists may experience relatively more gratitude and well-being from expressing gratitude, they may report relatively low levels of indebtedness and guilt, as these interdependent feelings may be less relevant to them. Collectivists, on the other hand, may not report experiencing much gratitude and well-being after expressing gratitude, but being grateful for kind acts may still trigger feelings of indebtedness and guilt. Thus, in the current study, we first investigated whether expressing gratitude (relative to writing about neutral topics) would be effective in triggering feelings of gratitude, elevation, and positive and negative affect in individualist and collectivist cultures and, second, examined the effects of expressing gratitude on stimulating interdependent feelings, such as guilt, indebtedness, and embarrassment.<sup>1</sup>

### **Current Study and Hypotheses**

<sup>&</sup>lt;sup>1</sup> We also explored the effect of expressing gratitude for others' kind acts versus one's own kind acts to gain a better understanding of how the target of gratitude affects well-being and interdependent feelings in both cultures.

To this end, in a single time-point randomized, controlled intervention, participants in India, Taiwan, and the U.S. were randomly assigned either to write a gratitude letter to someone who had done a kind act for them, to write a gratitude letter to themselves for a kind act they had done for another person, or to complete a neutral control writing activity. Immediately after the intervention, participants completed measures of state gratitude, positive and negative affect, elevation, guilt, embarrassment, and indebtedness.

We predicted that participants from the individualist culture (the U.S.) would experience greater state gratitude and well-being (i.e., more positive affect and elevation, less negative affect) after expressing gratitude (towards others or self) than after completing a neutral control activity (Hypothesis 1a). On the other hand, we hypothesized that levels of interdependent feelings, such as guilt, indebtedness, and embarrassment, would not differ for individualist participants practicing gratitude compared to controls (Hypothesis 1b). In contrast, we predicted that participants from the collectivist cultures (India and Taiwan) would not experience different levels of state gratitude or well-being after expressing gratitude than after writing about neutral topics (Hypothesis 2a). In addition, we hypothesized that levels of interdependent feelings would differ in participants practicing gratitude compared to controls (Hypothesis 2b). See Table 1 for a summary of the hypotheses.

[Insert Table 1]

### Method

### **Participants**

Participants from the U.S. (N = 307) were recruited into the study via mTurk. The sample had a mean age of 33.7 (SD = 9.7), were 49% female, and were 76.9% White, 7.2% Hispanic, 5.9% Asian, 5.9% Black, 2.9% more than one, 1% Native American, and .3% other. Final

sample sizes per condition were as follows: Gratitude-to-Other (n = 95), Gratitude-to-Self (n = 101), and Control (n = 111).

Participants from India (N = 431) were recruited by posting flyers on notice boards of different departments at Karnatak University, a major university in India. The mean age was 20.2 (SD = 2.53), and 76% of participants were female. The ethnicity of the Indian sample was 78.9% South Asian, 4.4% other, .2% East Asian, and 16.5% unknown (no response). Final sample sizes per condition were as follows: Gratitude-to-Other (n = 151), Gratitude-to-Self (n = 136), and Control (n = 144).

In Taiwan, participants in this study were nurses from the Kaohsiung Medical University Hospital (N = 112), who were recruited through an in-person orientation for the study. Ninety-eight percent were female, with a mean age of 40.5 (SD = 7.9). Sample sizes per condition were as follows: Gratitude-to-Other (n = 36), Gratitude-to-Self (n = 37), and Control (n = 39).

# **Research Design and Procedure**

After participants in the U.S., India, and Taiwan gave informed consent and completed demographic information, they were prompted to spend a minimum of 8 minutes either writing a gratitude letter to someone who had done a kind act for them, writing a gratitude letter to themselves for a kind act they had done for another person, or completing a neutral control writing activity (i.e., list what they did over the past week). Appendix A includes the full prompts for all three conditions. U.S. and Taiwan participants completed this intervention and all subsequent measures through the Qualtrics online survey platform at any location convenient to them (e.g., computer or mobile phone in their home or workplace). Indian participants completed the intervention and measures with paper and pencil. Immediately after completing the gratitude letter or neutral writing activity, all participants completed measures of state gratitude, elevation,

and affect (including overall positive and negative affect, guilt, embarrassment, and indebtedness). After completing the questionnaires, they were debriefed about the purpose of the study.

### Measures

**State Gratitude.** Participants' state gratitude was assessed with a modified version of the Gratitude Quotient-6 (GQ-6; McCullough, Emmons, & Tsang, 2002) The GQ-6 consists of six items (e.g., "Right now I feel I have much in life to be thankful for") rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). The scale's reliability (Cronbach's alpha) was .80 for Taiwan, .61 for India, and .89 for the U.S.

**Elevation.** Feelings of elevation were assessed using an 8-item scale (Schnall, Roper, & Fessler, 2010). Using a 7-point scale (1 = *did not feel at all*, 7 = *felt very strongly*), participants rated the degree to which they felt each emotion (e.g., moved, uplifted, a warm feeling in your chest) while engaging in the writing task. Reliability (Cronbach's alpha) of the scale was .95 for Taiwan, .77 for India, and .94 for the U.S.

Positive and Negative Affect. Participants' affect was assessed using the Affect-Adjective Scale (AAS; Diener & Emmons, 1985), including 4 positive items (happy, pleased, joyful, enjoyment/fun) and 5 negative affect items (worried/anxious, angry/hostile, frustrated, depressed/blue, unhappy). Participants rated the extent to which they felt each emotion in the past week using a 7-point scale (1 = not at all, 7 = a great deal). Cronbach's alphas for the positive items in the scale were .94 for Taiwan, .77 for India, and .94 for the U.S. Cronbach's alphas for the negative items in the scale were .90 for Taiwan, .83 for India, and .91 for the U.S.

**Guilt, Embarrassment, and Indebtedness.** Individual items to capture participants' feelings of guilt, embarrassment, and indebtedness were completed. Participants rated the extent

to which they felt each emotion in the past week using a 7-point scale ( $1 = not \ at \ all$ ,  $7 = a \ great \ deal$ ).

#### Results

All hypotheses were tested first with a one-way ANOVA, and if the F-test was statistically significant (p < .05), the appropriate planned contrasts were conducted. Contrast 1 (Good-for-Other [+1], Good-for-Self [+1], Control [-2]) was used to test our primary hypotheses regarding the effect of gratitude on culture. Contrast 2 (Good-for-Other [0], Good-for-Self [+1], Control [-1]) and Contrast 3 (Good-for-Other [+1], Good-for-Self [0], Control [-1]) were used to test our exploratory hypotheses regarding the differences between gratitude towards others vs. oneself in each culture. The results of these analyses are shown in Table 2. [Insert Table 2]

### **Individualist Culture**

**Gratitude and Well-Being.** To test Hypothesis 1a regarding state gratitude and wellbeing, we conducted planned contrast analyses to compare the Gratitude-to-Other (+1), Gratitude-to-Self (+1), and Control (0) conditions in the U.S. Supporting Hypothesis 1a, U.S. participants who wrote letters of gratitude (to self or to others) experienced greater state gratitude and higher levels of elevation compared to controls,  $t_{\text{contrast}}(304) = 3.50$ , p < .001 and  $t_{\text{contrast}}(304) = 12.10$ , p < .001.

However, failing to support other aspects of Hypothesis 1a, U.S. participants who wrote letters of gratitude did not experience significantly higher levels of overall positive affect or lower levels of negative affect than control participants, F(2, 306) = 0.88, p = .42 and F(2, 306) = 0.72, p = .49.

**Interdependent Feelings.** The F-tests for guilt and embarrassment in the U.S. were not significant, F(2, 306) = 0.25, p = .78 and F(2, 306) = 0.42, p = .66, providing support for Hypothesis 1b that participants in the gratitude conditions would not differ from the control conditions.

However, participants who expressed gratitude to others (+2) experienced significantly greater feelings of indebtedness than those who expressed gratitude towards themselves (-1) and controls (-1),  $t_{\text{contrast}}(303) = 3.97$ , p < .001, failing to support this aspect of Hypothesis 1b.

### **Collectivist Cultures**

**Gratitude and Well-Being.** To test Hypothesis 2a, we conducted an F-test on state gratitude and well-being using the India and Taiwan groups. Consistent with Hypothesis 2a, India and Taiwan participants in the gratitude conditions did not experience significantly different levels of state gratitude, F(2, 430) = 0.01 and p = 1.00 and F(2, 110) = 0.99, p = .37, or positive affect, F(2, 430) = 0.99, p = .37 and F(2, 110) = 1.03, p = .36, from controls.

Offering partial support for Hypothesis 2a in collectivist cultures, Taiwan participants did not experience differences in negative affect between conditions, F(2, 110) = 0.21, p = .81, but Indian participants in the Gratitude-to-Self (1) but not Gratitude-to-Other (0) group experienced significantly less overall negative affect than those in the Control (-1) group,  $t_{\text{contrast}}(428) = -2.67$ , p = .01.

However, failing to support Hypothesis 2a regarding elevation, planned contrast analyses found differences between the gratitude and control conditions both in India,  $t_{\text{contrast}}(428) = 3.84$ , p < .001, and in Taiwan,  $t_{\text{contrast}}(108) = 3.21$ , p = .002.

**Interdependent Feelings.** To test whether collectivist participants in the gratitude conditions differed from the control conditions in interdependent feelings (Hypothesis 2b), we

conducted planned contrast analyses on the Gratitude-to-Other (+1) and Gratitude-to-Self (+1) vs. the Control (-2) groups. In Taiwan,  $t_{\text{contrast}}(106) = 2.28$ , p = .024 (but not in India, F[2, 430] = 0.28, p = .76), we found that the gratitude groups experienced significantly more indebtedness than the control group, providing partial support for Hypothesis 2b. Participants in the Gratitude-to-Self group (+1) (but not the Gratitude-to-Other group [0]), experienced significantly less guilt than the Control group (-1) in India,  $t_{\text{contrast}}(426) = -2.38$ , p < .02, but not in Taiwan, F(2, 110) = 1.31, p = .27.

For embarrassment, the F-tests comparing conditions in India, F(2, 430) = 1.27, p = .28, and Taiwan, F(2, 110) = 0.23, p = .80, were not significant, failing to support Hypothesis 2b.

### **Discussion**

# **Summary of Results**

We found that Americans who expressed gratitude reported greater state gratitude and elevation, but not increased positive affect or reduced negative affect. This finding, which provides partial support for Hypothesis 1a, is not surprising, as research exploring the effect of gratitude on positive and negative affect has been mixed (Emmons & McCullough, 2003; Fritz, Armenta, Walsh, & Lyubomirsky, 2018; Kashdan, Uswatte, & Julian, 2006; Kruse, Chancellor, Ruberton, & Lyubomirsky, 2014).

Hypothesis 1b was also partially supported, such that U.S. participants in the Gratitude-to-Other group reported feeling more indebted, but not significantly more guilty or embarrassed. These findings align with previous work showing that guilt and embarrassment are less relevant to individualist cultures, likely due to their highly interdependent nature. On the other hand, prior literature has shown that indebtedness is an interdependent feeling that is also relevant to

individualist cultures, perhaps due to a necessity to protect the ego (i.e., pay back people who help you; Layous et al., 2017).

Importantly, collectivists who practiced gratitude to self or others did not experience significantly different levels of state gratitude, positive affect, or negative affect (in Taiwan) from controls, likely due to the cultural prescriptive of interdependence (Hypothesis 2a).<sup>2</sup>

Contrary to our hypotheses, however, our collectivist participants in the gratitude conditions felt more elevated than those in the control condition. Although not explicitly grateful, collectivists may still experience benefits of decreased negative emotionality and increased elevation from practicing gratitude, likely as a result of having fulfilled expected role obligations and an increased sense of social harmony.

Finally, Indian participants in both gratitude conditions felt more indebted than those in the control condition, possibly because recognizing one's own or others' kindness may have triggered feelings of needing to be kind again. Taiwanese participants felt less guilt when writing a gratitude letter about a kindness they had done towards others, perhaps because they felt they had fulfilled their duty to help others. No differences in embarrassment between conditions were found for collectivist (or individualist) participants. These results offer partial support for Hypothesis 2b. Overall, our findings regarding gratitude in collectivists are consistent with existing knowledge, as well as providing new knowledge about how gratitude may impact one's emotions in collectivist cultures.

#### **Limitations and Future Directions**

Our study was limited by the fact that we used one-item measures of guilt, indebtedness, and embarrassment. Although such one-item measures are easy to administer, they are relatively

<sup>&</sup>lt;sup>2</sup> Indian participants, however, did experience significantly lower levels of negative affect in the Gratitude-to-Self condition compared to controls (perhaps because they felt they had fulfilled their duty to help others).

more prone to measurement bias and are generally less reliable and valid. To more accurately assess levels of guilt, indebtedness, and embarrassment, future studies will need to incorporate multi-item and multi-method measures of these constructs.

Another limitation of our study is that our sample size in Taiwan (N = 112) was relatively small, due to difficulty in recruiting participants from the field. Hence, the lower power for the Taiwanese sample may have prevented us from detecting some of the effects of the gratitude intervention (e.g., on feelings of indebtedness). Nevertheless, although the Taiwan results were underpowered, it is notable that the effects found for state gratitude, positive affect, elevation, guilt, and embarrassment mirrored those found in India.

Although including two different collectivist cultures was a strength of our study, it also presented a challenge, as these two cultures are characterized by different traditions and may interpret and experience gratitude interventions in unique ways. To increase understanding of a diverse set of collectivist cultures, future studies might more closely examine the ways specific collectivist cultures differ from one another in their experiences and benefits derived from practicing positive activities.

## **Implications and Concluding Words**

This study demonstrated that gratitude interventions may be less effective in collectivist than in individualist cultures. As such, positive activities should be designed from an emic perspective that accounts for collectivist values, such as prioritizing the needs of the group over the individual. One such positive activity that has begun to show promise is performing acts of kindness, although further research is needed to understand how the mechanisms by which kindness boosts well-being may differ cross-culturally (Layous, Lee, Choi, & Lyubomirsky, 2013; Shin, Layous, Choi, Na, & Lyubomirsky, under review).

Collectivist cultures constitute approximately 85% of the world's population (Population Reference Bureau, 2017). Hence, our findings provide much-needed insights regarding the effect of gratitude on the well-being (traditionally measured), as well as on interdependent feelings, of members of these cultures. With mental health concerns on the rise worldwide, we believe this study is timely for researchers wishing to design future well-being interventions for members of both collectivist and individualist cultures.

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Table 1. Hypotheses for Individualists and Collectivists on Gratitude, Well-Being, and Interdependent Feelings											
Hypotheses	1. Individualists	2. Collectivists									
a. Gratitude, well-being											
(elevation, increased PA,											
decreased NA)	Gratitude > Control	Gratitude = Control									
b. Interdependent feelings	<b>.</b>										
(guilt, indebtedness,											
embarrassment)	Gratitude = Control	Gratitude > Control									

Table 2. Descriptive statistics, F-tests, and t-contrast tests for India, Taiwan, and U.S.												
Experimental Conditions												
	Other		Self		Control							
t-contrast 1:	+1		+1		-2							
t-contrast 2:	0		+1		-1							
t-contrast 3:	+1		0		-1							
			India									
Dependent Variable	M (SD)	n	M (SD)	n	M (SD)	n	F-statistic	t-contrast 1	t-contrast 2	t-contrast 3		
State Gratitude	5.32 (0.98)	151	5.32 (0.84)	136	5.33 (0.92)	144	0.01					
Elevation	5.64 (0.81)	151	5.73 (0.89)	136	5.34 (0.96)	144	7.69***	3.84***				
Positive Affect	3.57 (1.20)	151	3.58 (1.24)	136	3.75 (1.22)	144	0.99					
Negative Affect	1.42 (1.26)	151	1.08 (1.05)	136	1.46 (1.24)	144	4.28*		-2.67**			
Guilt	2.80 (1.97)	149	2.28 (1.74)	136	2.69 (1.81)	144	3.11*		-2.38*			
Indebtedness	3.74 (1.85)	151	3.85 (1.95)	136	3.90 (1.87)	144	2.80					
Embarrassment	0.90 (1.22)	151	0.78 (1.15)	136	1.02 (1.42)	144	1.27					
Taiwan												
Dependent Variable	M (SD)	n	M (SD)	n	M (SD)	n	F-statistic	t-contrast 1	t-contrast 2	t-contrast 3		
State Gratitude	5.45 (1.02)	36	5.21 (0.88)	36	5.15 (0.92)	39	0.99					
Elevation	5.61 (1.10)	36	5.48 (0.88)	36	4.88 (1.10)	39	5.29**	3.21**				
Positive Affect	4.79 (0.97)	36	4.85 (0.91)	36	4.56 (0.89)	39	1.03					
Negative Affect	3.13 (0.73)	36	3.17 (1.15)	36	3.26 (0.82)	39	0.21					
Guilt	2.61 (1.05)	36	2.53 (0.91)	36	2.90 (1.14)	39	1.31					
Indebtedness	5.17 (1.30)	36	5.33 (1.27)	36	4.70 (0.97)	37	2.79†	2.28*				
Embarrassment	2.72 (1.00)	36	2.61 (1.23)	36	2.77 (0.84)	39	0.23					
			U.S.									
Dependent Variable	M (SD)	n	M (SD)	n	M (SD)	n	F-statistic	t-contrast 1	t-contrast 2	t-contrast 3		
State Gratitude	5.81 (1.07)	95	5.90 (1.09)	101	5.39 (1.18)	111	6.33**	3.50***				
Elevation	5.56 (0.99)	95	5.07 (1.33)	101	3.53 (1.33)	111	76.52***	12.10***				
Positive Affect	4.61 (1.50)	95	4.45 (1.58)	101	4.34 (1.33)	111	0.88					
Negative Affect	2.66 (1.43)	95	2.45 (1.25)	101	2.62 (1.25)	111	0.72					
Guilt	1.91 (1.22)	95	1.86 (1.36)	101	1.78 (1.16)	111	0.25					
Indebtedness	3.09 (1.49)	94	2.26 (1.51)	101	2.42 (1.53)	111	8.12***			3.97***		
Embarrassment	1.84 (1.26)	95	1.77 (1.07)	101	1.69 (1.16)	111	0.42					
M-4 A 1-11 E	4:_4:_ :	. 10	·11 4'	TEX	L1 4			-4 - 1 C 1	41 4 1 1			

*Note:* An ombibus F-statistic is reported for all emotions. The relevant t-contrasts are reported for emotions that had significant F-statistics. †p < .10. \*p < .05. \*\*p < .01. \*\*\*p < .001.

## Appendix A

#### GRATITUDE LETTER TO SELF

Please take a moment to think back over the past several years of your life and remember an instance when you did a kind act (or acts) for another individual. Think of the people – your parents, children, spouses/partners, relatives, friends, neighbors, teachers, employers, and so on – you have been especially generous and thoughtful towards. For example, you may have been there for a friend when they needed you, or you may have helped offer a new perspective on things when they were upset. Now, for the next 8 minutes, write a letter to yourself in which you describe the kind act you did and why you are grateful to yourself for having done it. You will not be able to advance to the next screen until 8 minutes have passed. Use the instructions below to help guide you through this process:

- 1. Use whatever letter format you like, but remember to write as though you are directly addressing yourself.
- 2. Do not worry about perfect grammar and spelling.
- 3. Describe in specific terms the kind act you bestowed upon another person and how the kind act affected that person's life.
- 4. Describe how often you think this person remembers your efforts and how grateful you feel to yourself for having made those efforts.
- 5. Remember: Anything you write will remain strictly confidential. Although you are welcome to show or give this letter to anyone you please, for the purposes of this study, the letter you write is a private document in which you can express your gratitude freely without intent to show it to anyone. Should an experimenter read this entry in the future, it will be identifiable only by a subject number and not by a name.

#### GRATITUDE LETTER TO OTHER

Please take a moment to think back over the past several years of your life and remember an instance when someone did a kind act (or acts) for you for which you are extremely grateful. Think of the people – your parents, children, spouses/partners, relatives, friends, neighbors, teachers, employers, and so on – who have been especially generous and thoughtful towards you. For example, you may feel grateful for a friend who was there for you when you needed them, or helped offer you a new perspective on things when you were upset. Now, for the next 8 minutes, write a letter to one of these individuals in which you describe the kind act they did for you and why you are grateful to them for having done it. You will not be able to advance to the next screen until 8 minutes have passed. Use the instructions below to help guide you through this process:

- 1. Use whatever letter format you like, but remember to write as though you are directly addressing the individual you are grateful to.
- 2. Do not worry about perfect grammar and spelling.
- 3. Describe in specific terms the kind act this person bestowed upon you and how the kind act affected your life.
- 4. Describe what you are doing now and how you often remember their efforts.
- 5. Remember: Anything you write will remain strictly confidential. Although you are welcome to show or give this letter to anyone you please, for the purposes of this study, the letter you write is a private document in which you can express your gratitude freely without intent to deliver it to anyone. Should an experimenter read this entry in the future, it will be identifiable only by a subject number and not by a name.

#### **CONTROL**

Please take a moment to think about what you did over the past 7 days. That is, create a mental outline of what you did during that time. Now, for the next 8 minutes, please write these activities out in a list format. You will not be able to advance to the next screen until 8 minutes have passed. Use the instructions below to help guide you through this process:

- 1. Use whatever writing style you please, but be as detail oriented as possible.
- 2. Try to leave out emotions, feelings, or opinions pertaining to your plans.
- 3. Focus on exactly what you did.
- 4. Do not worry about perfect grammar and spelling.
- 5. Remember: Anything you write will remain strictly confidential. Should an experimenter read this entry in the future, it will be identifiable only by a subject number and not by a name.