

Eastern Washington University EWU Digital Commons

EWU Masters Thesis Collection

Student Research and Creative Works

Spring 2017

A PROSPECTIVE INVESTIGATION OF JOY AND TRAIT GRATITUDE

Madeline R. Greaves

Eastern Washington University

Follow this and additional works at: <http://dc.ewu.edu/theses>

 Part of the [Psychiatry and Psychology Commons](#)

Recommended Citation

Greaves, Madeline R., "A PROSPECTIVE INVESTIGATION OF JOY AND TRAIT GRATITUDE" (2017). *EWU Masters Thesis Collection*. 459.

<http://dc.ewu.edu/theses/459>

This Thesis is brought to you for free and open access by the Student Research and Creative Works at EWU Digital Commons. It has been accepted for inclusion in EWU Masters Thesis Collection by an authorized administrator of EWU Digital Commons. For more information, please contact jotto@ewu.edu.

A PROSPECTIVE INVESTIGATION OF JOY AND TRAIT GRATITUDE

A Thesis

Presented to

Eastern Washington University

Cheney, Washington

In Partial Fulfillment of the Requirements

for the Degree

Master of Science in Psychology

By

Madeline R. Greaves

Spring 2017

THESIS OF MADELINE R. GREAVES APPROVED BY

PHILIP WATKINS, GRADUATE STUDY COMMITTEE

DATE _____

AMANI EL-ALAYLI, GRADUATE STUDY COMMITTEE

DATE _____

PETER SHIELDS, GRADUATE STUDY COMMITTEE

DATE _____

MASTER'S THESIS

In presenting this thesis in partial fulfillment of the requirements for a master's degree at Eastern Washington University, I agree that the JFK Library shall make copies freely available for inspection. I further agree that copying of this project in whole or in part is allowable only for scholarly purposes. It is understood, however, that any copying or publication of this thesis for commercial purposes, or for financial gain, shall not be allowed without my written permission.

Signature_____

Date_____

Table of Contents

Abstract.....	1
Introduction.....	2
Literature Review of Joy and Gratitude.....	4
Method.....	12
Results.....	15
Table 1.....	17
Table 2.....	19
Table 3.....	20
Discussion.....	21
References.....	29
Appendix A.....	33
Appendix B.....	48
Appendix C.....	50
Vita.....	51

Abstract

This prospective study examined the relationship between trait gratitude and future joy. The purpose was to determine if trait gratitude could predict future joy. Previously, studies have not examined the specific relationship between these two emotions, but there is good reason to believe that joy is a distinct positive emotion, and gratitude may be foundational for the experience of joy. The study was done with university students taking the GRAT, GQ-6, and measures of joy at two time points, seven to nine weeks apart. Data were analyzed from 149 participants recruited from psychology classes. Participants with higher trait gratitude at Time 1, as determined by the GRAT, tended to have more joy at Time 2. However, when measuring trait gratitude with the GQ-6, this trend did not reach significance. As an exploratory analysis, I analyzed the relationship between Time 1 trait joy and Time 2 state gratitude and found a similar relationship. These findings not only support that trait gratitude may be foundational for joy over time, but also suggest joy and gratitude can support each other in an upward spiral. Future directions are also discussed.

A Prospective Investigation of Joy and Trait Gratitude

People want to be happy. Many people have written about how to become happy, or how to feel happy more often (Robinson & Martin, 2008). In recent years, the growing field of positive psychology has tried to discover what can make an adequate life flourish. While psychology has historically dwelt on pathology, positive psychology has encouraged directing one's focus to well-being. In other words, the goal is to enhance the positive in life, rather than solely fixing dysfunctions (Seligman, 1998; Watkins, 2014). Some organizations, such as the Yale Center for Faith and Culture, (<http://faith.yale.edu/joy/virtues>) are actively pursuing what attributes and behaviors can be linked with human flourishing. One of several ways this can be done is through the investigation of positive emotions such as joy.

Although previous psychological research has focused on decreasing the impact of negative emotions such as anxiety, fear, sadness, or anger, enhancing positive emotions may also make a significant contribution to improving mental and physical health. These positive emotions can help individuals build on their existing mental resources, which can enhance human flourishing and well-being (Fredrickson, 2001). Unlike negative emotions, positive emotions are less likely to narrow thoughts and actions, often because they are not associated with a threat to neutralize. Broadening one's attention can lead one to explore more novel situations and become more aware of existing resources (Fredrickson, 2001). Research has found that positive affect makes people more flexible in categorization, suggesting a broadening in the scope of cognition (Murray, Sujan,

Hirt, & Sujan, 1990). In other words, people have more flexible thinking when they are experiencing more positive emotions. This expanded perspective may become useful in daily life and possibly contribute to well-being.

Joy is an example of a positive emotion that may enhance well-being. Although it is often seen as a synonym for happiness, it may be a specific emotion in its own right. Fredrickson (1998) notes that this feeling often occurs in situations and contexts where a person feels safe and that require low effort. Fredrickson adds that joy can also create the urge to play, which may promote skill acquisition. In the case of joy, it may broaden thoughts and actions, rather than prevent the narrowing perception seen with negative emotions or threatening situations. In addition, joy may help people progress towards goals. If joy is indeed related to skill acquisition and goal progress (Fredrickson, 1998), it may be important to well-being. However, despite the possible benefits of joy, scant research has been dedicated to defining joy or determining what factors relate to it. Gratitude may be an important foundation for the experience of joy (Gruszecka, 2015). However, how gratitude impacts future joy has yet to be investigated.

The question remains if gratitude is a foundation for joy. The purpose of this study was to determine if trait gratitude is a predictor of future joy. This may further establish the impact gratitude has on positive emotions and well-being. Furthermore, it will help expand what is known about joy and its relationship with gratitude.

Literature Review of Joy and Gratitude

Although joy is commonly thought of as synonymous with happiness, recent research has attempted to distinguish between different positive emotions. In the past, positive emotions have been studied together with little differentiation, though this may lead to the assumption that they all impact mental health in similar ways. However, each positive emotion appears to make distinct contributions to well-being and adaptive behavior (Egloff, Schmukle, Burns, Kohlmann, & Hock, 2003; Shimoni, Asbe, Eyal, & Berger, 2016). In this review, I will define joy and distinguish it from other positive emotions, such as pride. In addition, I will discuss gratitude and its role both in well-being and the experience of joy.

Distinguishing Features of Joy

Joy and happiness are not identical; indeed, happiness does not have a consistent definition in emotion research. Despite the difference between the emotions, joy still has a positive impact on well-being. Joy has been found to be related to many positive emotions, and even to better health outcomes (Consedine, Magai, & King, 2004). Furthermore, joy has been referred to as “the crown of the good life” and described as an emotion that goes beyond physical sensations (Volf, 2015). However, it can be difficult to explain how joy is different from other positive emotions. Research has found that joy and other positive emotions exist on a dimension independent from negative emotions (Diener & Emmons, 1984). In other words, joy cannot be described as the absence of

negative emotions, but rather as the positive presence of a specific affective state.

Recent studies have found differences between positive emotions based on how they influence behavior (see Egloff, et al., 2003; Shimoni, Asbe, Eyal, & Berger, 2016). Naturally, the first step in studying joy is to explain how it is different from other pleasant feelings. In general, there has been less research dedicated to differentiating positive emotions than negative ones (Egloff, et al., 2003). However, studies have been able to reasonably separate joy from emotions such as interest and pride.

Careful examination of emotional measures can aid in discriminating joy from other feelings. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) measures different aspects of both positive and negative affect. Egloff et al. (2003) examined three factors of positive affect in the PANAS, which have been labeled joy, activation, and interest. In some situations, joy and activation appeared to be negatively correlated. For example, activation rises during stressful situations, such as test-taking, whereas joy will decrease until the stressful event ends. Furthermore, while joy will go down in most stressful situations, activation and interest will only decrease if the person fails in the task. Thus, although all three are positive emotions, they manifest in different courses across certain situations. Activation can be useful in seeking goals and completing tasks, while joy appears to increase only after someone is successful in navigating a stressful situation.

Joy can also be reasonably separated from pride. Pride is an emotion linked to drive and accomplishment. It can be energized by conditions such as pursuit goals and social expectation. In other words, the positive experience is based on completing a job well. In contrast, joy is a more pleasurable emotion that can come from receiving a reward or good news. It is hedonic in nature, comparable to the concept of self-gratification, and is not necessarily associated with goal completion. With my proposed conceptualization of joy, joy is pleasurable; feelings of competency or feelings of accomplishment are not prerequisites for this emotion, as they are for pride. Pride comes from what one has done, whereas joy is seen as a gift or blessing, as explained later in this review.

Likewise, pride and joy impact behavior differently. When examining children performing a self-regulation task, pride was found to be harmful to self-regulation, while joy was not (Shimoni, Asbe, Eyal, & Berger, 2016). Although joy seems to be experienced early in life, distinguishing between joy and pride may be a more mature concept. It may be difficult to distinguish the good, hedonic feeling of joy from the accomplishment associated with pride. Pride and joy are not usually discriminated in early childhood, though older children can make the distinction between these two positive emotions.

For this study, I argue that joy has three main structural components. First, it is a positive hedonic response. In other words, when people experience joy their experience is pleasant in some way. Second, joy has an intentional object that is perceived as good. The good object is not just happenstance, but rather it

is perceived as intentional in some way. This implies that joy does not happen spontaneously or in the absence of something positive. There is a sense that the good events are seen as a gift, leading to experiencing joy. Finally, I propose that joy does not arise out of a sense of entitlement (Watkins & Emmons, 2015). In Volf's words, the object is perceived as "un-owed." In sum, when people experience joy, they are aware of the feeling, experience it as positive, see the object of joy as intentionally good, and do not demand it or feel it is owed to them. Since joy is both pleasurable and may be beneficial to well-being, this research aimed to find factors that can lead to experiencing joy over time. In particular, the present study focused on how joy relates to gratitude.

Gratitude

Gratitude is a topic that has received more attention in recent years (Watkins, 2014). For gratitude to occur, two conditions must be met. First, the person must acknowledge that something good has happened to them. Second, the good thing is recognized as coming from an outside source (Watkins & McCurrach, in press). This formulation refers to state gratitude, or the emotion of gratitude. In practice, there have been interventions developed to increase this kind of gratitude (for a review, see Davis, et al., 2016). Like many other emotions, however, there is more than one perspective from which to study gratitude.

In addition to analyzing gratitude as the state level, gratitude may also be studied as an affective trait. This study focuses on trait gratitude as a foundation for joy. Trait gratitude refers to the disposition for gratitude, or having a grateful personality. A person with a high level of trait gratitude will likely experience state

gratitude frequently in daily life across a variety of situations (see Watkins, 2014). To consider it in other terms, state gratitude is episodic, whereas trait gratitude is more chronic and pervasive. Both dimensions of gratitude have shown positive effects on well-being (Watkins, 2014). Watkins et al. (2003) developed a measure of trait gratitude, the Gratitude, Resentment, and Appreciation Test (GRAT), that was based on the theory that those high in trait gratitude have a mindset of viewing all of life as a gift. As will become apparent later, this mindset may be important for enhancing the likelihood of experiencing joy.

Gratitude has been conceptualized as both a protective factor, or lowering the impact of negative feelings, as well as a means of amplifying the good in life (Watkins, 2014; Watkins & McCurrach, in press). Gratitude may have a valuable impact on emotional disorders such as depression. Some research has found that experiencing and expressing gratitude is related to a decrease of depressive symptoms (Seligman, Steen, Park, & Peterson, 2005; Watkins et al., 2015), and this effect appears, in part, to be a result of encouraging positive emotions and positive reframing (Lambert, Fincham, & Stillman, 2012). Lambert et al. noted that gratitude prompted a reframing process that allowed clients to view negative experiences in a positive light. This, in turn, was related to lowering depression. This effect on depression symptoms has also been seen with trait gratitude (Krysinska, Lester, Lyke, & Corveleyn, 2015).

Because of these positive outcomes, gratitude interventions have been developed and put into practice. However, there have been mixed reviews of the effectiveness of these treatments (Wood, Froh, & Geraghty, 2010). The current

stance is that gratitude interventions may enhance well-being, but the observed effect sizes are small (Davis, et al., 2016). However, it has been noted that most of the studies do not feature those seeking treatment, and it is possible that clinical samples or more motivated participants may benefit more from gratitude interventions.

Despite the mixed reviews of gratitude interventions, they do appear to make a positive impact. Although treatment effects may be small (Davis, et al., 2016), gratitude does appear to enhance well-being. How does gratitude enhance well-being? One review of gratitude suggests that gratitude amplifies the good in life (Watkins & McCurrach, in press). In other words, gratitude calls attention to and enhances one's awareness of who and what is good in life. Because joy is conceptualized in my study as recognizing something as a gift, calling attention to the good in life could theoretically create more conditions leading to feeling joy. Naturally, the next step is to find whether this increased awareness translates to feelings of joy.

Relationship Between Joy and Gratitude

Previously, gratitude and joy have been studied together under the umbrella of positive emotions. Some research has shown impacts of these emotions on well-being when they are grouped in this way, though the specific relationship with each other has not been fully explored (Bell & Watkins, 2015). More recently, there has been some investigation on the impact gratitude has on joy.

Firstly, both gratitude and joy are related to subjective well-being. For example, they both are strongly and positively correlated with happiness (Gruszecka, 2015). In addition, they are important aspects of emotional flourishing (Russell & Fosha, 2008). Joy and gratitude can create a calm state that not only reduces anxious feelings, but also allows a person to engage in the world by taking note of available resources and exploring new situations (Fredrickson, 2001). Because they are two distinct emotions, gratitude and joy may influence well-being in different ways. Trait gratitude is seen as an adaptive virtue, while joy is a positive state that amplifies good feelings. When joy and gratitude combine with other factors, they can give people mental resources to deal with stressors, similar to the earlier discussion of Fredrickson's theory (2001). Thus, those who frequently experience joy and gratitude may be better equipped to confront life challenges and may be more likely to thrive.

Like other positive emotions, joy may not be voluntarily produced. One may not be able to "choose" to experience joy or feel safe in a particular moment. However, I submit that one may prepare for joy, or prime oneself through thoughts and behaviors to allow joy to more likely be experienced. One such way of preparing for joy might be in having a grateful mindset, or trait gratitude. In this sense, gratitude may be the foundation for joy. Because I propose that joy is experienced in response to good events, and that it comes from seeing these good times as a gift (Watkins, 2015), a disposition for gratitude may prepare people to feel joy. A pattern of recognizing good things coming from something else, which can describe trait gratitude, theoretically, can prime people towards

seeing any positive event as a gift, which should enhance the likelihood of experiencing joy.

Recently, there has been some investigation into the connection between joy and gratitude. Using the GRAT (Watkins, Woodward, Stone & Kolts, 2003), Bell and Watkins (2015) found positive relationships between joy and gratitude. This paper described two studies that measured initial levels of gratitude and joy, and measured joy at three subsequent time points. Gratitude predicted increased joy over time, but the reverse was not found. These two studies had notable limitations; joy was measured using the PANAS (Watson, et. al, 1988), which is used to measure multiple positive emotions. In addition, the lengths of both studies were quite short. The first study only had one and a half weeks between the initial and final assessment. In the second study, the assessments were only a few days apart (Bell & Watkins, 2015).

However, the findings of Bell and Watkins (2015) warrant further investigation. Trait gratitude, by definition, is characterized by a regular experience of gratitude. If gratitude indeed amplifies the good in one's life, this may enhance subsequent experiences of joy. In other words, being a grateful person can prepare an individual for joy. This may be a result of being more appreciative of others, of simple pleasures, and possibly giving people a sense of abundance. These factors may set people up for experiencing more joy over time.

Study Overview

The present study further examined the relationship between trait gratitude and joy. In order to see how gratitude predicts future joy, the study was prospective in nature. Participants were given measures to assess levels of trait gratitude and state joy at two time points, approximately seven to nine weeks apart. Based on the theory that a grateful mindset is a foundation for joy, I predicted that trait gratitude would predict future joy, after controlling for initial levels of joy. As previously discussed, a regular experience of feeling grateful may train a person to find appreciation in both others and simple pleasures. This reframing of life experiences as gifts may lead to more feelings of joy.

Method

Overview and Design

This was a two-month prospective design where measures of gratitude and joy were administered at two time points, seven to nine weeks apart. Other measures were administered during these time points for exploratory purposes.

Participants

Participants were recruited from undergraduate psychology courses in exchange for extra course credit. Time 1 had 220 total participants, Time 2 had 178 total participants. The final sample consisted of 149 participants who completed both assessments of the study after removing data from participants that did not pass data check items (47 males, 101 females, 1 other). Participants were included in the study if they were at least 18 years old and completed the measures of joy and gratitude at both time points (see Appendices B and C for

consent and recruitment forms). This study was reviewed and approved by the Institutional Review Board at Eastern Washington University.

Materials

Assessment of trait gratitude was done with both the short version of the Gratitude Resentment and Appreciation Test (GRAT-S, Watkins, et al. 2003) and the Gratitude Questionnaire (GQ-6, McCullough, Emmons, & Tsang, 2002). The GRAT-S consists of sixteen statements; the participant uses a Likert-type response indicating level of agreement with each statement, ranging from 1, “I strongly disagree” to 9, “I strongly agree with the statement.” The GQ-6 is a Likert-type measure that has participants indicate agreement to six statements regarding gratitude. Responses range from 1, “strongly disagree” to 7, “strongly agree.” State gratitude was assessed with the Gratitude Adjectives Scale (GAS, McCullough, et al., 2002). The GAS consists of three adjectives: grateful, thankful, and appreciative. Participants provide Likert-style responses based on their experience of these emotions. These adjectives were interspersed with the 60 adjectives of the PANAS-X, described below.

To clarify the findings, both trait and state joy were measured. To measure trait joy, participants filled out a previously designed 31-item Dispositional Joy Measure (DJS) that asks participants to rate agreement with statements using a seven-point Likert scale, such as “My life is always improving” and “I am a playful person.” Responses ranged from 1, “strongly disagree” to 7, “strongly agree.” Although I predicted that trait gratitude is foundational for joy, trait joy may also enhance trait gratitude; I included the DJS to evaluate this possibility. State joy

was assessed with a previously designed 35-item self-report measure asking about experiences in the past week. The measure had participants use a seven-point Likert scale to rate either frequency of feelings, with responses ranging from 1, “not at all” to 7, “frequently,” or agreement with statements, which ranged from 1, “completely disagree” to 7, “strongly agree.” Examples of statements include “I felt exuberant this week,” and “This week, my life went well.”

Additionally, the PANAS-X (Watson & Clark, 1994) was administered to measure feelings at the moment of examination. This scale has been used in previous joy research (Bell & Watkins, 2015). The PANAS-X consists of 60 adjectives describing several emotions, such as blue, happy, and at ease. Participants responded to these adjectives in Likert-type responses reflecting their experience with these emotions. Responses ranged from “1: very slightly or not at all” to “5: extremely.” The set of words is given twice: once to describe current feelings and once to describe feelings in the past few weeks.

Procedure

After providing their written consent (Appendix B), participants filled out their questionnaire packet in a group setting. This packet included the GRAT-S, GQ-6, and GAS to measure gratitude levels, as well as the PANAS-X, Dispositional Joy Measure, and state joy measure to measure joy. These measures were given in randomized order to account for order effects. For exploratory purposes, supplemental measures were also included. These measures are not related to the purpose of this study and will not be discussed (Appendix A). To control for socially desirable responses, the Balanced Inventory

of Desirable Responding (BIDR, Paulhus, 1991) was included. A small number of items were dispersed throughout the packet of measures that asked for a specific response, such as “Please mark 5 for this item.” These data-check items were added to check for validity in responses. A total of five participants were removed from the data set for answering at least two of these questions incorrectly. The participants were given identifiers so their responses from the two administrations could be linked.

Approximately seven to nine weeks later, at the end of their academic quarter, the participants completed the same packet again in relation to their feelings at the second time point. The data was collected, and a comparison was made between the responses on the two packets.

Results

Psychometrics of Primary Measures

I conducted reliability analyses on the measures of joy and gratitude, specifically the GRAT-S, GQ-6, Dispositional Joy Measure, state joy measure and the BIDR. The reliability analyses were done for both administration times using all the subjects that completed the administration, regardless of whether they completed the other administration. Examined measures typically had higher reliability for Time 2, likely due to a lower number of participants for the second administration, and therefore less possibility for extreme response patterns.

The GRAT-S was high in internal consistency reliability at Time 1 (Cronbach’s $\alpha = .84$, $M = 115.91$, $SD = 15.17$) and Time 2 (Cronbach’s $\alpha = .90$,

$M = 115.65$, $SD = 17.54$). The GQ-6 also had significant reliability (Time 1: Cronbach's $\alpha = .81$, $M = 35.87$, $SD = 5.31$; Time 2: Cronbach's $\alpha = .81$, $M = 36.05$, $SD = 5.28$).

Both joy measures used in this study had very high reliability. The Dispositional Joy Measure was reliable at Time 1 (Cronbach's $\alpha = .96$, $M = 126.80$, $SD = 28.79$) and Time 2 (Cronbach's $\alpha = .97$, $M = 127.99$, $SD = 30.20$). The experimental state joy measure also had high reliability at both administrations (Time 1: Cronbach's $\alpha = .950$, $M = 102.13$, $SD = 25.91$; Time 2: Cronbach's $\alpha = .96$, $M = 102.35$, $SD = 28.33$).

I controlled for socially desirable responding with the BIDR (Paulhus, 1991), which is split into two measures for impression management (Cronbach's $\alpha = .74$, $M = 77.82$, $SD = 15.65$) and self-deception (Cronbach's $\alpha = .67$, $M = 81.50$, $SD = 12.49$). These measures have less than adequate reliability.

Primary Analysis: Multiple Regression with Time 1 Trait Gratitude and Time 2 State Joy

For the primary analyses, I used multiple regression analyses to examine the relationship between Time 1 trait gratitude and Time 2 state joy after controlling for the effects of Time 1 joy and the two dimensions of socially desirable responding: self-deception and impression management. Both self-deception ($r = .33$, $p < .001$) and impression management ($r = .18$, $p = .028$) were significantly correlated with Time 2 state joy.

The analysis was accomplished with hierarchical regression; Time 1 state joy, self-deception, and impression management were entered for the first step

and Time 1 trait gratitude was entered in the second step to predict Time 2 state joy. Two analyses were done in this manner: one for each measure of trait gratitude presented to participants during the study.

Using the GRAT-S as the measure for trait gratitude, trait gratitude was associated with state joy at Time 2 ($R^2 = 0.38$, $\beta = .29$, $p < .001$; See Table 1) after controlling for Time 1 state joy ($\beta = .34$, $p < .001$), self-deception ($\beta = .09$, $p = .314$), and impression management ($\beta = .04$, $p = .561$). In other words, trait gratitude at Time 1 predicted more joy after seven to nine weeks, taking into consideration initial joy levels.

Table 1
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Change	F Change	df1	df2	Sig. F Change
1	.56	.31	.30	1.03	.31	20.28	3	133	<.001
2	.61	.38	.36	.99	.06	13.19	1	132	<.001

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65.02	3	21.68	20.28	<.001
	Residual	142.17	133	1.07		
	Total	207.20	136			
2	Regression	77.94	4	19.49	19.90	<.001
	Residual	129.26	132	.98		
	Total	207.20	136			

However, when analyzing data from the GQ-6, the same trend did not reach significance. Trait gratitude at Time 1 was not predictive of Time 2 state joy ($R^2 = 0.32$, $\beta = .12$, $p = .168$; see Table 2) after controlling for initial joy ($\beta = .45$, $p < .001$), self-deception ($\beta = .06$, $p = .534$) and impression management ($\beta = .06$, $p = .426$). Although the correlation was in the same direction, this measure of trait gratitude did not significantly relate to joy after seven to nine weeks. It should be noted that the responses for the GQ-6 were negatively skewed at Time 1 ($z = -2.62$, $p = .009$) with many participants reporting high levels of gratitude, which likely weakened the association between the variables. In contrast, responses on the GRAT for Time 1 were not significantly skewed ($z = -1.20$, $p = .117$).

Table 2
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.56	.31	.30	1.03	.31	20.28	3	133	<.001
2	.57	.32	.30	1.03	.01	1.92	1	132	.168

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65.02	3	21.68	20.28	<.001
	Residual	142.17	133	1.07		
	Total	207.20	136			
2	Regression	67.07	4	16.77	15.79	<.001
	Residual	140.13	132	1.06		
	Total	207.20	136			

Exploratory Analysis: Multiple Regression with Time 1 Trait Joy and Time 2 State Gratitude

I also examined the effect of trait joy on state gratitude over time using similar statistical methods. Once again, I controlled for socially desirable responding using the BIDR. The first step of the regression analysis included the measures for socially desirable responding and initial state gratitude. State gratitude was measured with the GAS. I had data for both state gratitude at the time of examination and in the past few weeks; the latter measurement was

chosen because this period was most similar to the state joy measure, which used a period of one week. Self-deception was significantly correlated with Time 2 state gratitude ($r = .28, p < .001$), though impression management was not ($r = .08, p = .307$). Trait joy at Time 1 predicted levels of state gratitude at Time 2 ($R^2 = 0.27, \beta = .34, p = .012$; see Table 3) after controlling for Time 1 state gratitude ($\beta = .34, p < .001$), impression management ($\beta = -.03, p = .696$), and self-deception ($\beta = .06, p = .484$). In findings mirroring the primary analyses, trait joy is positively associated with state gratitude after seven to nine weeks after controlling for social desirability and initial state gratitude.

Table 3
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.49	.24	.22	.94	.24	15.18	3	148	<.001
2	.52	.27	.25	.92	.03	6.49	1	147	.012

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.14	3	13.38	15.18	<.001
	Residual	130.42	148	.88		
	Total	170.57	151			
2	Regression	45.66	4	11.42	13.43	<.001
	Residual	124.91	147	.85		
	Total	170.57	151			

Discussion

The purpose of this study was to investigate the relationship between gratitude and joy over time. Specifically, I analyzed how trait gratitude, or having a grateful personality, would influence state joy, or joy felt in the moment, seven to nine weeks later. The results of this study suggest that there is an association between trait gratitude and state joy over time. In other words, trait gratitude predicted increases in state joy over time. I found that trait gratitude predicted state joy experienced in the future, after controlling for initial joy levels. In other words, being consistently grateful allows joy to be felt over time, after controlling for initial levels of joy. This suggests that gratitude may act as a foundation for feelings of joy. These findings were only supported with one of the trait gratitude measures (GRAT-S), and the limitations of using the GQ-6 should be considered.

The use of the GQ-6 should be highlighted in terms of this study's limitations. Indeed, the means for the GQ-6 were quite high and the distribution was very negatively skewed, which may explain why the analysis with the GQ-6

did not reach significance. It is possible the limited ability to significantly predict future increases in state joy was the result of the high scores and limited variance of the GQ-6. Further development of the GQ-6 to allow for more variance at the upper ends of the scale may improve its predictive ability. On the other hand, perhaps researchers should be cautioned about the GQ-6 in similar studies. Negative skew appears to be a problematic characteristic in all positive psychology measures, and this is an issue that researchers need to confront.

As an exploratory analysis, I also examined if trait joy predicted state gratitude over time. The purpose was to examine more dimensions of the relationship between gratitude and joy. The results appear to indicate that this relationship is also present; trait joy appears to be associated with greater state gratitude over several weeks. In other words, gratitude is experienced more often when one has a disposition for joy. As discussed earlier, experiencing gratitude is associated with improved well-being (Watkins, 2014) and expressing gratitude is related to alleviating depressive symptoms (Seligman, Steen, Park, & Peterson, 2005; Watkins et. al, 2015). The findings in these studies suggest gratitude improves well-being, and my findings suggest that gratitude is found in people who are regularly joyful.

The findings from these two analyses suggest a noteworthy relationship between joy and gratitude, namely that they both have positive influences on each other that last over time. In other words, the disposition for one of these emotions enhances the state of the other. Trait gratitude predicts enhanced joy and trait joy predicts enhanced gratitude. Thus, my results support the possibility

of an upward spiral between gratitude and joy: as gratitude increases, joy also increases, which leads to even higher levels of gratitude, and so on. If this upward spiral between gratitude and joy exists, it seems prudent to ask how one can instigate this cycle of virtue. Trait emotions are thought of as part of one's personality or disposition. Therefore, the upward spiral would involve a change in a personality trait. This possibly could be achieved when the state emotion is experienced to a degree that it becomes almost automatic, though whether frequency of an emotion can strengthen an affective trait remains unclear. It would seem to follow that an increase in one of these positive emotions would need to occur to begin this cycle. This may be achieved by some intervention that would increase the frequency of one or both emotions (for examples, see Emmons & McCullough, 2002; Watkins, et. al, 2015).

Strategies for impacting joy directly have not been developed, but researchers have developed some methods of enhancing gratitude. Although many studies have used techniques to enhance state gratitude, very little work has focused on cultivating the grateful disposition. Because this study focused on how the dispositions of gratitude and joy enhanced subsequent joy and gratitude, future research could be devoted to enhancing these dispositions (Watkins, 2014). One such way may be the development of new interventions designed to increase affective traits.

Because increased gratitude is associated with increased joy and improved well-being, it follows that increasing gratitude is one method of increasing joy. A number of gratitude interventions have been developed, such

as grateful recounting. This intervention usually involves participants writing down things in their lives that they are grateful for (e.g., Emmons & McCullough, 2002; Watkins, et. al, 2015). This process could train the person to recognize things to be grateful for, possibly leading people to identify these things without actively practicing grateful recounting. In other words, this process increases state gratitude, which could ultimately impact their disposition for gratitude, and thus ultimately enhance experiences of joy.

The present study focused on the relationship between state joy and trait gratitude, implying that those wanting to increase joy over time might benefit from cultivating a disposition for gratitude. However, the gratitude interventions that have been developed are designed to elevate gratitude in the moment, in an effort increase long-term subjective well-being. Interventions for trait gratitude have yet to be developed. Whether the existing interventions can lead to increases of joy as depicted in this study depends on whether increasing the frequency of state gratitude can lead to increased trait gratitude. Although there is a difference between state and trait versions of an emotion, theoretically, routine practice can lead to possible increases of trait gratitude. When one has a grateful disposition, identifying sources of gratitude, or what to be grateful for, should not be a laborious task. Routine practice could train a person to consistently find new things to be grateful for, eventually leading to this becoming a more automatic process, which probably characterizes trait gratitude. However, this connection remains speculative; research still needs to determine that feeling gratitude frequently leads to higher trait gratitude.

Just as gratitude and joy tend to exist together, these emotions appear to have similar theoretical characteristics. Considering the relationship between gratitude and joy, it is important to revisit how joy is conceptualized. Earlier I discussed a proposed definition of joy: a positive hedonic response associated with an intentional object perceived as a gift that does not come from a sense of entitlement. The second part of this definition of joy, perceiving something as a gift, has theoretical similarities to gratitude. Specifically, gratitude requires recognition of a good event coming from an outside source. In both emotions, there is a sense that something good is coming from outside oneself. The outside source for gratitude and the gift for joy may be the same thing in certain situations. The similar characteristics of joy and gratitude could possibly be the mechanism for the upward spiral. The act of recognizing something good from an outside source could possibly activate both joy and gratitude, which may be related to why trait gratitude enhances state joy over time, and vice versa. Joy and gratitude have a common component that can be used to fuel both feelings.

Although there are similar characteristics, it should not be assumed that gratitude and joy are different manifestations of the same positive emotion. Indeed, the psychometrics discussed in this study suggest that measures used for gratitude were measuring something different than the materials designed to measure joy. Thus, joy is distinct from gratitude in some way. Considering how these two emotions tended to co-occur for participants in this study, more research distinguishing joy from gratitude may be warranted. However, the

results of this study support the conclusion that joy and gratitude are indeed distinct.

One of the implications of this research is that joy can be enhanced by gratitude. Thus, one way that gratitude leads to improved subjective well-being and human flourishing might be through increasing experiences of joy. Considering that joy and gratitude appear to positively influence each other, this would lead to an increase in positive affectivity. As discussed previously, positive emotions can theoretically build mental resources that improve problem solving (Fredrickson, 2001). For example, people may be more able to cope with stress by having more joy, which may be a result of being a more grateful person. Although stressful events would still occur, individuals may be able to endure them better or possibly thrive in them. By developing a disposition for gratitude, and preparing for joy in the future, one could enhance the likelihood of flourishing.

Limitations

There are certain aspects of the study that should be considered when interpreting the findings. One of the limitations of this study is the sample was exclusively university students, many between the ages of 18 to 24. As previously noted, the sample reported very high levels of gratitude, particularly as reflected in the descriptive statistics of the GQ-6. Considering the population, it is possible that college students may inherently be very grateful, possibly due to the support of others, such as parents, teachers, or advisors, that allowed them to progress in their education. If this were the case, trait gratitude levels may be

more variable in other populations. However, there is nothing to indicate the impact of trait gratitude on state joy would be altered. This study also used a relatively small prospective time frame of seven to nine weeks. Future studies may want to investigate the relationship between gratitude and joy over longer time periods, such as six months or more.

Future Directions

A possible explanation for the cyclical relationship between joy and gratitude may be because they both involve positive affect. In other words, they enhance each other because they are both positive, pleasurable emotions, and positive emotions tend to activate other positive emotions. In other words, the relationship demonstrated here may not be unique to gratitude and joy; other positive emotional dispositions may also prepare the way for experiences of joy. Thus, future research could examine this relationship with other positive emotions, such as pride or interest. The results from this study cannot determine if the relationship between joy and gratitude is unique from those found between any two positive emotions. While there are characteristics of joy and gratitude that may enhance their association, relationships between other positive emotions need further investigation.

In conclusion, my results supported the theory that joy can be accessed through a grateful disposition. Given the pleasurable nature of joy, the ability to experience more joy is likely to be a desirable goal for most people. As Volf described it (2015), joy is the “crown of the good life.” Though everyone will inevitably experience negative emotions, they may also be able to access this

“crown” of well-being that Volf described. Through gratitude interventions or paying greater attention to gifts in life, my results suggest that more joy will be experienced in the weeks that follow. Furthermore, because of the apparent upward spiral demonstrated between gratitude and joy, if one incorporates a grateful approach to their everyday life, this should enhance joy which in turn should enhance gratitude. The increase in these two positive emotions could help to build mental resources (Fredrickson, 2001) and aid us in understanding how to enhance human flourishing.

References

- Bell, J., & Watkins, P. (2015, May). *Gratitude enhances future joy*. In P.C. Watkins (Chair), *Joy and gratitude: Exploration of a relationship important to well-being*. Symposium conducted at the meeting of the Western Psychological Association, Las Vegas, NV.
- Consedine, N. S., Magai, C., & King, A. R. (2004). Deconstructing positive affect in later life: A differential functionalist analysis of joy and interest. *International Journal of Aging and Human Development, 58*, 49-68. doi:10.2190/2M9F-7GN5-P4KA-WXED
- Davis, D. E., Choe, E., Meyers, J., Wade, N., Varjas, K., Gifford, A., & ... Worthington, E. J. (2016). Thankful for the little things: A meta-analysis of gratitude interventions. *Journal of Counseling Psychology, 63*, 20-31. doi:10.1037/cou0000107
- Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47*, 1105-1117. doi:10.1037/0022-3514.47.5.1105
- Egloff, B., Schmukle, S. C., Burns, L. R., Kohlmann, C., & Hock, M. (2003). Facets of Dynamic Positive Affect: Differentiating Joy, Interest, and Activation in the Positive and Negative Affect Schedule (PANAS). *Journal of Personality and Social Psychology, 85*, 528-540. doi:10.1037/0022-3514.85.3.528
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300-319. doi:10.1037/1089-2680.2.3.300

- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*, 218-226. doi:10.1037/0003-066X.56.3.218
- Gruszecka, E. (2015). Appreciating gratitude: Is gratitude an amplifier of well-being? *Polish Psychological Bulletin*, *46*, 186-196.
- Krysinska, K., Lester, D., Lyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior: An exploratory study. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *36*, 291-296. doi:10.1027/0227-5910/a000320
- Lambert, N. M., Fincham, F. D., & Stillman, T. F. (2012). Gratitude and depressive symptoms: The role of positive reframing and positive emotion. *Cognition & Emotion*, *26*, 615-633. doi:10.1080/02699931.2011.595393
- McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*, 112-127. doi: 10.1037//0022-3514.82.1.112
- Murray, N., Sujan, H., Hirt, E. R., & Sujan, M. (1990). The influence of mood on categorization: A cognitive flexibility interpretation. *Journal of Personality and Social Psychology*, *59*, 411—425.
- Paulhus, D. L. (1991). Measurement and control of response bias. In Robinson J. P., Shaver P. R., Wrightsman L. S. (Eds.), *Measures of personality and social psychological attitudes*. New York: Academic Press. 17–39.
- Robinson, J., & Martin, S. (2008). What Do Happy People Do? *Social Indicators Research*, *89*, 565-571. doi:10.1007/s11205-008-9296-6

- Russell, E., & Fosha, D. (2008). Transformational affects and core state in AEDP: The emergence and consolidation of joy, hope, gratitude, and confidence in (the solid goodness of) the self. *Journal of Psychotherapy Integration, 18*, 167-190. doi:10.1037/1053-0479.18.2.167
- Seligman, M. E. P. (1998). President's column: What is the good life? *APA Monitor, 29*(10), 1-2.
- Seligman, M. E. P., Steen, T., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist, 60*, 410-421. doi: 10.1037/0003-066X.60.5.410
- Shimoni, E., Asbe, M., Eyal, T., & Berger, A. (2016). Too proud to regulate: The differential effect of pride versus joy on children's ability to delay gratification. *Journal of Experimental Child Psychology, 141*, 275-282. doi:10.1016/j.jecp.2015.07.017
- Volf, M. (2015, August 20). Crown of the Good Life: Joy, Happiness, and the Life Well Lived- A Hypothesis. Retrieved from <http://www.abc.net.au/religion/articles/2015/08/20/4297032.htm>
- Watkins, P.C. (2014). *Gratitude and the good life*. New York, NY: Springer.
- Watkins, P.C. (2015, May). *Joy and gratitude: Exploration of a relationship important to well-being*. Symposium conducted at meeting of Western Psychological Association, Las Vegas, NV.
- Watkins, P. C., & McCurrach, D. (in press). Exploring how gratitude trains cognitive processes important to subjective well-being. In D. Carr (Ed.), *Gratitude: An interdisciplinary approach*. Oxford: Taylor and Francis.

- Watkins, P.C., Uher, J., & Pichinevskiy, S. (2015). Grateful recounting enhances subjective well-being: The importance of grateful processing. *The Journal of Positive Psychology, 10*, 91-98. doi: 10.1080/17439760.2014.927909
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationship with subjective well-being. *Social Behavior & Personality: An International Journal, 31*, 431-452.
- Watson, D., & Clark, L. A. (1994). The PANAS-X: Manual for the positive and negative affect schedule—Expanded Form. Iowa City: University of Iowa.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*, 890–905. <http://dx.doi.org/10.1016/j.cpr.2010.03.005>

Appendix A

Subject # _____ Date _____

PANAS-X

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate number in the space next to that word. Indicate to what extent *you feel that way right now, that is, at the present moment*, not necessarily how you feel generally or how you feel on average. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	a little	moderately	quite a bit	extremely
___ cheerful			___ joyful	
___ disgusted			___ nervous	
___ attentive			___ lonely	
___ bashful			___ sleepy	
___ sluggish			___ excited	
___ daring			___ hostile	
___ surprised			___ proud	
___ strong			___ appreciative	
___ scornful			___ jittery	
___ relaxed			___ lively	
___ irritable			___ ashamed	
___ delighted			___ at ease	
___ inspired			___ scared	
___ fearless			___ drowsy	
___ disgusted with self			___ angry at self	
___ sad			___ enthusiastic	
___ calm			___ downhearted	
___ afraid			___ grateful	
___ tired			___ sheepish	
___ feeling indebted			___ distressed	
___ amazed			___ blameworthy	
___ shaky			___ feeling obligated	
___ happy			to repay others	
___ timid			___ determined	
___ alone			___ frightened	
___ alert			___ astonished	
___ upset			___ interested	
___ angry			___ loathing	
___ bold			___ confident	
___ blue			___ feeling like I owe	
___ shy			others a favor	
___ thankful			___ energetic	
___ active			___ concentrating	
___ guilty			___ dissatisfied with self	

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate *to what extent you have felt this way the past few weeks*.

1	2	3	4	5
Very slightly or not at all	a little	moderately	quite a bit	extremely
<input type="checkbox"/> cheerful				<input type="checkbox"/> joyful
<input type="checkbox"/> disgusted				<input type="checkbox"/> nervous
<input type="checkbox"/> attentive				<input type="checkbox"/> lonely
<input type="checkbox"/> bashful				<input type="checkbox"/> sleepy
<input type="checkbox"/> sluggish				<input type="checkbox"/> excited
<input type="checkbox"/> daring				<input type="checkbox"/> hostile
<input type="checkbox"/> surprised				<input type="checkbox"/> proud
<input type="checkbox"/> strong				<input type="checkbox"/> appreciative
<input type="checkbox"/> scornful				<input type="checkbox"/> jittery
<input type="checkbox"/> relaxed				<input type="checkbox"/> lively
<input type="checkbox"/> irritable				<input type="checkbox"/> ashamed
<input type="checkbox"/> delighted				<input type="checkbox"/> at ease
<input type="checkbox"/> inspired				<input type="checkbox"/> scared
<input type="checkbox"/> fearless				<input type="checkbox"/> drowsy
<input type="checkbox"/> disgusted with self				<input type="checkbox"/> angry at self
<input type="checkbox"/> sad				<input type="checkbox"/> enthusiastic
<input type="checkbox"/> calm				<input type="checkbox"/> downhearted
<input type="checkbox"/> afraid				<input type="checkbox"/> grateful
<input type="checkbox"/> tired				<input type="checkbox"/> sheepish
<input type="checkbox"/> feeling indebted				<input type="checkbox"/> distressed
<input type="checkbox"/> amazed				<input type="checkbox"/> blameworthy
<input type="checkbox"/> shaky				<input type="checkbox"/> feeling obligated to repay others
<input type="checkbox"/> happy				<input type="checkbox"/> determined
<input type="checkbox"/> timid				<input type="checkbox"/> frightened
<input type="checkbox"/> alone				<input type="checkbox"/> astonished
<input type="checkbox"/> alert				<input type="checkbox"/> interested
<input type="checkbox"/> upset				<input type="checkbox"/> loathing
<input type="checkbox"/> angry				<input type="checkbox"/> confident
<input type="checkbox"/> bold				<input type="checkbox"/> feeling like I owe others a favor
<input type="checkbox"/> blue				<input type="checkbox"/> energetic
<input type="checkbox"/> shy				<input type="checkbox"/> concentrating
<input type="checkbox"/> thankful				<input type="checkbox"/> dissatisfied with self
<input type="checkbox"/> active				
<input type="checkbox"/> guilty				

DJS

Please respond to the following items in terms of how much you agree or disagree with each statement. With each item, please use the following scale:

1	2	3	4	5	6	7
<i>Strongly</i>						<i>Strongly</i>
<i>Disagree</i>						<i>Agree</i>

1. ___ I often feel bursts of joy.
2. ___ I consistently feel like my life is going well.
3. ___ I find that I am often excited about things.
4. ___ I can find joy in almost any occasion.
5. ___ I would say that most of the occasions in my life bring me joy.
6. ___ My life is always improving.
7. ___ Many things bring me delight.
8. ___ I would say that I am an enthusiastic person.
9. ___ I would say that I am a joyful person.
10. ___ Things are going as they should be in my life.
11. ___ Good things happen to me all the time.
12. ___ People have described me as a lively person.
13. ___ I tend to be an energetic person.
14. ___ I often feel blessed.
15. ___ I feel as though things in my life are going to plan.
16. ___ Even when things aren't going well, I can still feel joy.
17. ___ I am often completely overjoyed when something good happens.
18. ___ I feel as though my life has been well lived.
19. ___ Please mark 1 for this statement.
20. ___ I consistently receive blessings that seem undeserved.
21. ___ I frequently feel like rejoicing over something.
22. ___ I am a playful person.
23. ___ I often find myself amazed at all the good things I have received.
24. ___ Long periods of time go by in my life without experiencing joy.
25. ___ I am an intensely cheerful person.
26. ___ Even in the midst of bad situations, I can usually find something to rejoice about.
27. ___ I would say that joy characterizes my life.
28. ___ On a typical day, many events bring me joy.
29. ___ In a typical day, things often happen that tell me my life is working out the way it should.
30. ___ I consistently feel a subtle but enduring feeling of joy.
31. ___ I often feel overjoyed when something good happens.
32. ___ I only seem to be able to find joy in a few things.

OPINION QUESTIONNAIRE

Please provide your honest feelings and beliefs about the following statements which relate to you. There are no right or wrong answers to these statements. We would like to know how much you feel these statements are true or not true of you. Please try to indicate your true feelings and beliefs, as opposed to what you would like to believe. Respond to the following statements by filling in the number in the blank provided that best represents your real feelings. Please use the scale provided below, and please choose one number for each statement (i.e. don't write in two numbers), and record your choice in the blank preceding each statement.

1	2	3	4	5	6	7	8	9
I strongly disagree		I disagree somewhat		I feel neutral about the statement		I mostly agree with the statement		I strongly agree with the statement
_____	1.	I couldn't have gotten where I am today without the help of many people.						
_____	2.	Life has been good to me.						
_____	3.	There never seems to be enough to go around and I never seem to get my share.						
_____	4.	Oftentimes I have been overwhelmed at the beauty of nature.						
_____	5.	Although I think it's important to feel good about your accomplishments, I think that it's also important to remember how others have contributed to my accomplishments.						
_____	6.	I really don't think that I've gotten all the good things that I deserve in life.						
_____	7.	Every Fall I really enjoy watching the leaves change colors.						
_____	8.	Although I'm basically in control of my life, I can't help but think about all those who have supported me and helped me along the way.						
_____	9.	I think that it's important to "Stop and smell the roses."						
_____	10.	More bad things have happened to me in my life than I deserve.						
_____	11.	Because of what I've gone through in my life, I really feel like the world owes me something.						
_____	12.	I think that it's important to pause often to "count my blessings."						
_____	13.	I think it's important to enjoy the simple things in life.						
_____	14.	I feel deeply appreciative for the things others have done for me in my life.						
_____	15.	For some reason I don't seem to get the advantages that others get.						
_____	16.	I think it's important to appreciate each day that you are alive.						

Your Experiences Last Week

For the following items we would like you to indicate your opinions and experience *for the last week*, as honestly as you can. For each item, please circle the number that is associated with your response. Please note that the scale changes at item 9.

1. In the past week, how often have you felt joyful?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
2. In the past week, how often have you felt like playing?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
3. In the past week, how often have you felt like laughing?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
4. In the past week, how often did you feel like rejoicing over something?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
5. In the past week, how often have you felt like frolicking?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
6. In the past week, how often have you felt like celebrating?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
7. I felt exuberant this week.

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
8. In the past week, how often have you felt enthusiastic?

1	2	3	4	5	6	7
Not at all	Hardly at all	A few times	Several times	A number of times	Fairly Often	Frequently
9. This week something happened that I felt overjoyed with.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
10. Because of the joy I experienced this week, time just seemed to fly.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
11. This week, things just weren't working as they are supposed to work in my life.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
12. This week, I found myself amazed at the good things I received.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
13. This week, I felt like singing.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
14. This week, good things happened to me that I did not expect.

1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree			Strongly Agree
15. This week I found myself enjoying something so much that I lost track of time.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

Completely Disagree				Neither agree or disagree			Strongly Agree
16. This week I felt free.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
17. This week, my world was as I feel it is supposed to be.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
18. This week, I felt ready to enjoy whatever opportunity presented itself.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
19. This week I felt unconstrained.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
20. This week I enjoyed myself in a way that made me completely unaware of my self.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
21. I felt like dancing this week.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
22. Something happened this week that made me feel like celebrating.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
23. This week, the reality of my life was the way I feel it should be.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
24. This week, I felt the joy of imagining new possibilities.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
25. This week, I felt the urge to explore new things.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
26. This week, I felt as though things in my life were working as they should be.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
27. This week, I said to myself, "Will this week ever end?"	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
28. This week, I felt connected to something higher than or beyond my self.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
29. This week, time just seemed to drag.	1	2	3	4	5	6	7
Completely Disagree				Neither agree or disagree			Strongly Agree
30. This week, I felt free to play.	1	2	3	4	5	6	7

Completely Disagree				Neither agree or disagree				Strongly Agree
31. This week, my life went well.	1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree				Strongly Agree
32. This week, life just made sense to me.	1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree				Strongly Agree
33. This week, I felt the presence of something much bigger than my self.	1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree				Strongly Agree
34. This week, everything just seemed to go wrong.	1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree				Strongly Agree
35. This week, I was surprised by something good.	1	2	3	4	5	6	7	
Completely Disagree				Neither agree or disagree				Strongly Agree

GQ

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 = strongly disagree
 2 = disagree
 3 = slightly disagree
 4 = neutral

5 = slightly agree
 6 = agree
 7 = strongly agree

- ___ 1. I have so much in life to be thankful for.
- ___ 2. If I had to list everything that I felt grateful for, it would be a very long list.
- ___ 3. When I look at the world, I don't see much to be grateful for.
- ___ 4. I am grateful to a wide variety of people.
- ___ 5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
- ___ 6. Long amounts of time can go by before I feel grateful to something or someone.

BFI

Here are a number of characteristics which may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Please use the scale below in your responses.

1	2	3	4	5
Disagree strongly	Disagree a little	Neither agree or disagree	Agree a little	Agree strongly

I See Myself as Someone Who...

- | | |
|--|---|
| ___ 1. Is talkative | ___ 23. Tends to be lazy |
| ___ 2. Tends to find fault with others | ___ 24. Is emotionally stable, not easily upset |
| ___ 3. Does a thorough job | ___ 25. Is inventive |
| ___ 4. Is depressed, blue | ___ 26. Has an assertive personality |
| ___ 5. Is original, comes up with new ideas | ___ 27. Can be cold and aloof |
| ___ 6. Is reserved | ___ 28. Perseveres until the task is finished |
| ___ 7. Is helpful and unselfish with others | ___ 29. Can be moody |
| ___ 8. Can be somewhat careless | ___ 30. Values artistic, aesthetic experiences |
| ___ 9. Is relaxed, handles stress well | ___ 31. Is sometimes shy, inhibited |
| ___ 10. Is curious about many different things | ___ 32. Is considerate and kind to almost everyone |
| ___ 11. Is full of energy | ___ 33. Does things efficiently |
| ___ 12. Starts quarrels with others | ___ 34. Remains calm in tense situations |
| ___ 13. Is a reliable worker | ___ 35. Prefers work that is routine |
| ___ 14. Can be tense | ___ 36. Is outgoing, sociable |
| ___ 15. Is ingenious, a deep thinker | ___ 37. Is sometimes rude to others |
| ___ 16. Generates a lot of enthusiasm | ___ 38. Makes plans and follows through with them |
| ___ 17. Has a forgiving nature | ___ 39. Gets nervous easily |
| ___ 18. Tends to be disorganized | ___ 40. Likes to reflect, play with ideas |
| ___ 19. Worries a lot | ___ 41. Has few artistic interests |
| ___ 20. Has an active imagination | ___ 42. Likes to cooperate with others |
| ___ 21. Tends to be quiet | ___ 43. Is easily distracted |
| ___ 22. Is generally trusting | ___ 44. Is sophisticated in art, music, or literature |

The following is a series of statements with which you might or might not personally identify. To what extent do you identify with each of the following statements? Please indicate by using the rating scale below. Bubble in each item on the blue sheet provided.

	1 I do not at all identify with this item	2	3	4	5 I fully identify with this item	
1.	I generally have a good idea about the things I do well or do poorly.	1	2	3	4	5
2.	I have difficulty accepting advice from other people.	1	2	3	4	5
3.	I believe there are forces greater than my understanding and imagination.	1	2	3	4	5
4.	The only reality that exists is what we know from our senses, for example, what we can see or hear.	1	2	3	4	5
5.	I try my best in things, but I realize that I have a lot of work to do in many areas.	1	2	3	4	5
6.	In the broader scheme of things, what I will accomplish in the world is small.	1	2	3	4	5
7.	Please mark 4 for this statement.	1	2	3	4	5
8.	When I am treated unfairly, I have a hard time forgetting about it.	1	2	3	4	5
9.	I am constantly seeking ways to better myself.	1	2	3	4	5
10.	I can honestly assess my strengths and weaknesses.	1	2	3	4	5
11.	I resist change even if someone shows me a better way to do something.	1	2	3	4	5
12.	I think often about whether I am being treated fairly.	1	2	3	4	5
13.	I am more entitled to special privileges than others.	1	2	3	4	5
14.	The human mind can comprehend only a fraction of the vast reality that exists.	1	2	3	4	5
15.	I have a good sense of what I am not very good at doing.	1	2	3	4	5
16.	I tend to disregard people's suggestions on how I should do things if they differ from what I think.	1	2	3	4	5
17.	True happiness comes from meeting one's own needs.	1	2	3	4	5
18.	I know that I can learn from other people.	1	2	3	4	5
19.	I will never be happy until I get all that I deserve.	1	2	3	4	5
20.	I look at myself in front of the mirror more than most people.	1	2	3	4	5
21.	I sometimes marvel at the abilities of other people.	1	2	3	4	5
22.	I am blind to many of my personal limitations.	1	2	3	4	5
23.	It makes me feel uncomfortable when someone points out one of my faults.	1	2	3	4	5
24.	I think much about contributions that others make to the world.	1	2	3	4	5
25.	There are powers in the universe that are beyond comprehension or understanding.	1	2	3	4	5

26.	I recognize that there's more to life than the people and places I am familiar with.	1	2	3	4	5
27.	Much I what I do in life doesn't matter much in the "grand scheme of things."	1	2	3	4	5
28.	I am equally excited about a friend's accomplishments as I am about my own.	1	2	3	4	5
29.	I am keenly aware of what little I know about the world.	1	2	3	4	5
30.	My success is completely due to my own effort and ability.	1	2	3	4	5
31.	I often surprise myself by doing better at things than I thought I would.	1	2	3	4	5
32.	When presented with ideas different from my own, I feel enlightened.	1	2	3	4	5
33.	I have trouble believing there is a reality beyond what I can see.	1	2	3	4	5
34.	I am often disappointed with my performance in different situations.	1	2	3	4	5
35.	I have a hard time believing in things that I cannot see.	1	2	3	4	5
36.	I try to reflect on my shortcomings in order to improve myself.	1	2	3	4	5
37.	I see myself as a small part of the workings of the world.	1	2	3	4	5

5. ____ Because my life has been so bad, I have very little to thank God for.
6. ____ When I see the beauty of new life in the spring I feel very thankful toward God.
7. ____ Please mark 5 for this statement.
8. ____ More than my share of bad things have happened to me, and this makes me bitter toward God.
9. ____ When I think of what others have done to me in my life, it makes me feel bitter toward God.
10. ____ I really believe that God has rescued me from a horrible life and destiny.
11. ____ When I think of what others have done for me in my life, it makes me appreciate God even more.
12. ____ I feel very grateful to God when I think of my family.
13. ____ I think that it's important to regularly remember the good things God has done for me.
14. ____ My life is filled with God's grace.
15. ____ Life is a wonderful gift from God.

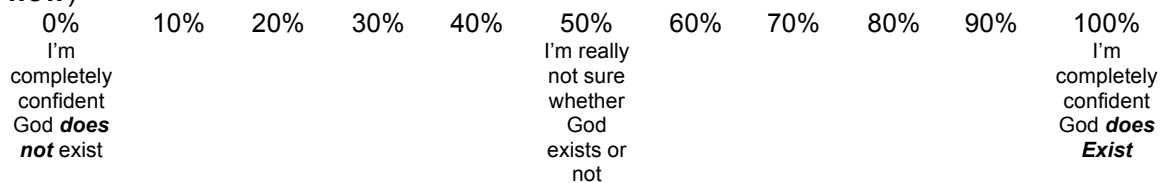
Instructions: The following is a survey to determine beliefs about grace. Carefully read each of the following statements and decide how strongly you agree or disagree with each. Please fill in the letter on the answer form that best corresponds to your views about grace using the following scale:

- A. Strongly Disagree**
- B. Disagree**
- C. Neither Agree nor Disagree**
- D. Agree**
- E. Strongly Agree**

1. ____ God's love for me is constant, no matter what I do.
2. ____ Those who sin less than others require less grace.
3. ____ I feel like I need to get things in order before I go to God.
4. ____ I need to see remorse before I offer forgiveness.
5. ____ I have trouble forgiving myself when I have done wrong.
6. ____ Knowing God will forgive lets me do anything I want.
7. ____ When I sin or do something wrong, I'm ashamed to go to God or be near God.
8. ____ I must work hard to experience God's grace and forgiveness.
9. ____ If someone wrongs me, they need to make it right.
10. ____ My behavior does not matter since I am forgiven.
11. ____ Because of God's forgiveness, I am free to live my life as I please.
12. ____ I can sin knowing God has to forgive me if I ask.
13. ____ My beliefs about grace encourage me to be forgiving of others.
14. ____ It is hard to forgive myself of the sin in my life even after giving it to God.

15. ___ I am afraid I am living out of God’s will for my life because of choices I made in the past.
16. ___ Grace is a gift of God; all I have to do is ask.
17. ___ I am able to forgive others when they hurt me.
18. ___ My acceptance of God’s grace has helped me love others more effectively.
19. ___ I accept my shortcomings.
20. ___ I continue to feel shame after confessing a sin.
21. ___ Because of grace bestowed to me, I am able to forgive others.
22. ___ I can live life my way as long as I ask forgiveness before I die.
23. ___ God’s grace is available to others, but I have sinned too much to experience it.
24. ___ I do not experience guilt for any of my actions.
25. ___ I have difficulty accepting forgiveness from others.
26. ___ The harder I work, the more I earn God’s favor
27. ___ My behavior does not affect my spirituality.
28. ___ Even when I have wrong attitudes, I feel I can still talk to God.
29. ___ Please mark B for this statement.
30. ___ If I work harder, I need less grace.
31. ___ God cares more about what I do than who I am.
32. ___ Others must earn my forgiveness.
33. ___ The more obedient I am, the more God loves me.
34. ___ I can be forgiven for all the wrongs I’ve done.
35. ___ Through God’s love, I can forgive others.

In terms of **how you’re feeling right now**, how confident are you that a loving personal God actually exists? (please circle the number that bests represents **your feelings right now**)



Gender (Circle one): Male Female Other

Age _____

Ethnicity (circle all that apply):

Hispanic or Latino American Indian or Alaska Native Asian White

Black or African American Native Hawaiian or Pacific Islander Other

Prefer to not say

Grade Level (Circle one):

Freshman Sophomore Junior Senior Graduate Other

Family Household Income (Circle one):

Less than \$30,000 \$30,000-\$49,999 \$50,000-\$74,999 \$75,000-100,000

\$101,000-150,000 \$151,000-200,000 >\$200,000

What Psychology courses have you taken?

Appendix B

Consent Form Psychology Experiment

Principal Investigator: Madeline R Greaves, Student, Psychology, Ph. 503-820-9632,
madelinegreaves@eagles.ewu.edu

Responsible Project Investigator: Philip C Watkins, Ph.D., Professor, Ph. 509-359-6174,
pwatkins@ewu.edu

Investigators statement

Purpose and Benefits

This is a study that intends to investigate how having a grateful personality can impact future feelings of joy. This study will help us obtain information about the relationship between joy and various personality traits. This study will be beneficial to you by helping you gain greater knowledge about yourself. This research is being performed for the principal investigator's Master's thesis.

Procedures

In this study you will be asked to complete a packet of questionnaires. The time required to complete these questionnaires should not exceed an hour. The questionnaires being administered ask you various questions about your current feelings and opinions on issues, for example how much you agree with the statement "I only seem to be able to find joy in a few things", "I think often about whether I am being treated fairly", and "Life has been good to me." After this initial session, we will administer the questionnaire packet again in two months. This packet will contain similar questions to those in the initial session, and will take 50 to 60 minutes to complete.

Risk, Stress or Discomfort

This experiment involves little or no risk to your emotional or physical well-being, and involves less than minimal risk to your well-being. Completing all of the questionnaires in full may be somewhat lengthy and you may find this to be tiring. Your participation in this experiment is confidential. You may find that some questions relate to sensitive issues (e.g., "I have done things that I don't tell other people about."), however, remember that all of your responses are confidential. You may choose not to answer any question that you find objectionable. Access to information is restricted to the principal investigator, the responsible project investigator, and his research assistants. You may choose to withdraw from this study at any time without penalty. The data obtained in this experiment will be used to promote our understanding of psychological traits. Five years after completion of this study your data will be destroyed via shredding.

Other Information

You will receive class credit for participating in this experiment. Credit received will be commensurate with time spent, and actual amount of credit awarded is up to the discretion of the faculty member who is awarding it. Remember that you have the option to choose another project that is not research oriented. Your participation is completely voluntary and you are free to withdraw at any time without penalty. If you have any concerns about your rights as a participant in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator (509-359-7971/6567), rgalm@ewu.edu

Signature of Responsible Investigator

Date

Subject's Statement

The study described above has been explained to me, and I voluntarily consent to participate in this study. I have had the opportunity to ask questions. I am aware that there are other options which I may receive credit besides participation in this study. I am not waiving any of my legal rights by signing this form. I understand I will receive a signed copy of this consent form.

Research Participant

Date

Appendix C

Study Announcement

This study is designed to investigate how different kinds of emotions can impact your future. This will help us obtain information how emotions and other personality characteristics impact you in the future.

If you choose to participate in this study on (date) you will be asked to complete some questionnaires. Some questionnaires will ask about how you are feeling now and how you have felt in the past week. Other measures will ask you to compare yourself and your views to provided statements. In total, this study should not exceed one hour. You will also be asked to complete similar questionnaires again at the end of the quarter, or in about two months. At this second administration, you can volunteer to take the same questionnaires again six months from now online, but this is not required for you to complete your participation in this study.

This study involves little to no risk to your well-being. Completing the questionnaires in full is a somewhat lengthy process and you may find this tiring. Your participation in this study is confidential, and your responses to the questionnaires are also confidential. You may choose to not answer any question or item that you find objectionable. The information can only be accessed by the principal investigator, the responsible project investigator, and the research assistants assigned to this study.

Do you have any questions?

**Madeline R. Greaves
Curriculum Vita**

Education

MS in Clinical Psychology	Eastern Washington University, Cheney, WA June 2017
BS in Psychology	Brigham Young University, Provo, UT April 2014 Cum Laude

Professional Experience

- Counseling Practicum Student, Counseling and Psychological Services at Eastern Washington University, Cheney, WA. March 2016-June 2017.
- Program Specialist, Eastern Washington University, Cheney, WA. June 2016-June 2017.
- Office Lead, Eastern Washington University, Cheney, WA. November 2015-June 2016.
- City Park Playground Activity Leader, Portland Parks & Recreation, Portland, OR. Summers 2011-2015.
- After-Care Specialist, Sunny Hills Preschool, Beaverton, OR. May 2014-June 2015.
- Teacher Assistant, Brigham Young University, Provo, UT. January-April, 2014.
- Research Assistant, Brigham Young University, Provo, UT. September 2011-April 2014.
- Volunteer Research Assistant, Oregon Health & Science University, Portland, OR. May-August, 2013.

Publications/Presentations

Greaves, M. R. (2016). Defining autism: Social influences and the need for new classification. *Intuition*, 10(2), pp. 2-15.

Lambert, M. J., Fidalgo, L., & **Greaves, M. R.** (2015). Effective humanistic psychotherapy processes and their outcomes. In Cain, D. J., Rubin, S. & Keenan, K. (Eds.) *Humanistic psychotherapies: Handbook for research and practice (2nd ed.)*.

Lambert, M. J. & **Greaves, M. R.** (2014). Routine outcome monitoring in anxiety disorders. In P. M. G. Emmelkamp & T. Ehring (editors), *The Wiley handbook of anxiety disorders, first edition (pp.706-714)*. New York, NY: Wiley.

Francis, S., **Greaves, M.**, Lobo, A., Perry, C., & Young, N. (April, 2012) *Outcome measures in therapy research*. Presentation at Mary Lou Fulton Conference, Brigham Young University, Provo, UT.

Academic Honors

- Nicholas T. Curtis Scholarship Eastern Washington University, Spring Quarter, 2017
- Academic Tuition Scholarship Brigham Young University, 2010-2014
- Dean's Honor List College of Family, Health, and Social Sciences Brigham Young University, Winter Semester, 2013
- Phi Kappa Phi Brigham Young University Chapter, senior inductee, 2013
- Psi Chi Brigham Young University Chapter, junior inductee, 2012
- Golden Key International Honor Society Brigham Young University Chapter, 2011
- Phi Eta Sigma Brigham Young University Chapter, 2011