

2015

Grateful recounting: do differences in participants' writing impact well-being?

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GRATEFUL RECOUNTING: DO DIFFERENCES IN PARTICIPANTS' WRITING
IMPACT WELL-BEING?

A Thesis

Presented To

Eastern Washington University

Cheney, Washington

In Partial Fulfillment of the Requirements

for the Degree

Master of Science

Experimental Psychology

By

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Spring 2015

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MASTER'S THESIS

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Abstract

Studies have shown gratitude treatments to successfully enhance well-being in participants. Of these treatments, the ones most frequently used are what Watkins (2014) referred to as *grateful recounting tasks*. These tasks generally involve participants writing down things in their life that they are grateful for. While some studies have found this task to be effective at enhancing well-being, others have had mixed results. A possible avenue for helping to understand these inconsistencies is that participants likely differ in how they write in these tasks. Using a grateful recounting treatment completed in a previous study (Watkins, Uher, & Pichinevskiy, 2015), participants' grateful listings were measured along six writing dimensions: human benefactors, interpersonal benefits, benefactor span, gratitude expression, specificity, and surprise. Watkins et al. (2015) found this task, compared to a placebo and pride condition, to significantly enhance well-being in participants at three post treatment assessments (immediately post treatment, one week post treatment, and five weeks post treatment). It was predicted that scores on each of the six dimensions would be positively associated with the increases in participants' well-being found in Watkins et al. (2015). Results indicated that gratitude expression, specificity, and surprise scores were positively correlated with increases in well-being immediately post treatment. These findings provide partial support that differences on these dimensions may moderate the effectiveness of grateful recounting tasks.

Keywords: gratitude, well-being, grateful recounting

Table of Contents

Abstract	pg. iv
List of Tables	pg. vii
List of Appendices	pg. viii
Introduction	pg. 1
Gratitude	pg. 3
Gratitude and well-being	pg. 5
Gratitude enhances well-being	pg. 7
Grateful recounting tasks	pg. 8
Grateful recounting: Some concerns	pg. 10
Current study	pg. 11
Writing dimensions	pg. 12
Method	pg. 17
Design	pg. 17
Participants	pg. 18
Materials	pg. 18
Procedures	pg. 19
Results	pg. 22
Discussion	pg. 27
References	pg. 41
Table 1	pg. 25
Table 2	pg. 26
Appendix A	pg. 49

Appendix B	pg. 50
Appendix C	pg. 51
Appendix D	pg. 52
Appendix E	pg. 53
Vita	pg. 55

List of Tables

- Table 1. Partial correlations, controlling for pretreatment trait gratitude, between writing dimensions and post treatment assessments of trait gratitude as measured by the GQ-6
- Table 2. Partial correlations, controlling for pretreatment trait gratitude, between writing dimensions and post treatment assessments of trait gratitude as measured by the GRAT-S

List of Appendices

- Appendix A. Satisfaction With Life Scale
- Appendix B. Positive and Negative Affect Schedule
- Appendix C. The Gratitude Questionnaire – 6 Item Form
- Appendix D. Gratitude, Resentment and Appreciation Test Revised Short Form
- Appendix E. Coding Instructions

Grateful Recounting: Do Differences in Participants' Writing Impact Well-being?

G. K. Chesterton wrote that “gratitude is happiness doubled by wonder.” His sentiments on gratitude reflect the general notion that being grateful is an admirable quality. This recognition of gratitude as a virtue seems to be almost universal across time and cultures (Emmons & Crumpler, 2000). Certainly, most people admit that to be grateful is a good thing. Yet in spite of the seemingly high importance placed on gratitude, some people may lose sight of that for which they are grateful. The focus instead turns to what is missing in their lives and the steps that they must take to achieve these wanted goals. This disconnect from gratefulness may come at a cost to happiness, as numerous studies have found gratitude to be one of the characteristics most strongly associated with well-being (McCullough, Emmons, & Tsang, 2002; Watkins, Woodward, Stone, & Kolts, 2003).

To counter absences in gratitude and better explore the relationship between gratitude and well-being, researchers have sought to develop various *gratitude treatments* designed to cultivate a grateful focus. These practices range from reflecting silently on the blessings in your life to delivering a letter to someone for whom you are grateful. These various gratitude treatments have been found to be successful at fostering gratitude and increasing well-being in participants; results that suggest a causal relationship between gratitude and well-being (e.g., Emmons & McCullough, 2003; Seligman, Steen, Park, & Peterson, 2005; Watkins, Cruz, Holben, & Kolts, 2008).

Of these gratitude treatments, the ones with the most empirical support are what Watkins (2014) referred to as *grateful recounting tasks*. These tasks generally involve participants writing down things that they are grateful for according to guidelines set by

the researchers. For example, researchers may have participants list five things they are grateful for each day for a period of one week. In addition to increasing well-being, studies have linked grateful recounting to a range of other benefits including better sleep, fewer depressive symptoms, and improved physical health (Emmons & McCullough, 2003). Due to these findings, grateful recounting has become somewhat of the gold standard for positive psychology interventions (Wood, Froh, & Geraghty, 2010). The growing popularity of grateful recounting can be evidenced by the increasing number of mainstream articles praising the benefits of this simple practice. Furthermore, grateful recounting has been suggested for use in clinical settings as a possible tool to help treat certain disorders like general anxiety and body dissatisfaction (Emmons & Stern, 2013; Geraghty, Wood, & Hyland, 2010-a; Geraghty, Wood, & Hyland, 2010-b).

The optimistic picture of grateful recounting, however, requires a somewhat critical eye. Although grateful recounting can be an effective practice to increase well-being, a thorough review of the literature reveals that grateful recounting has had varying degrees of positive impact between studies (Wood et al, 2010). Why does grateful recounting result in significant increases in well-being in some studies, whereas others find little to no effect? Clearly, there remain a number of unresolved issues concerning grateful recounting treatments and well-being (Watkins, Uher, & Pichinevskiy, 2015). One issue that has received little attention is that participants likely differ in how and what they write about in grateful recounting tasks. These differences may impact how effective the task is at increasing well-being. Therefore, the specific purpose of this study was to examine if differences in participants writing within a grateful recounting task were related to the treatment's positive impact on well-being. Generally, I sought to take

the initial steps towards identifying reliable writing techniques that people could use in order for grateful recounting tasks to provide the most consistent psychological benefit. I attempted to answer this question by examining a grateful recounting task administered by Watkins et al. (2015), whose study found the intervention to successfully enhance subjective well-being in participants. In the present study, grateful listings from Watkins et al. (2015) were measured along six writing dimensions: human benefactors, interpersonal benefits, benefactor span, gratitude expression, specificity, and surprise. It was predicted that scores on these dimensions would be positively associated with the increases in well-being found in Watkins et al. (2015). The specific nature of these dimensions will be discussed further, but first I turn to a more in-depth review of gratitude, its relationship with well-being, and grateful recounting tasks.

Gratitude

How has gratitude been conceptualized in psychological science? One useful way of conceptualizing gratitude has come from Rosenberg's (1998) work on emotional phenomena. She proposed that affective experiences can be divided into a three level hierarchy based on specificity, temporal stability, pervasiveness in consciousness, and effects on other psychological systems (McCullough et al., 2002; Watkins, 2014). The less specific, longer lasting, and in the background of awareness an affective experience is, the higher up it exists in the hierarchy. At the top of her hierarchy are *affective traits*, which are stable emotional predispositions that set the threshold for experiencing *moods* and *emotions*, the next two levels of the hierarchy (Rosenberg, 1998). Gratitude, like other affects, can be defined at each level of the hierarchy. As a trait, gratitude has been defined by McCullough et al. (2002, p.112) as "a generalized tendency to recognize and

respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains." Those individuals high in trait gratitude have as their foundation an attitude of "appreciation for all of life as a gift" (Watkins et al., 2003, p. 435). Trait gratitude lowers a person's threshold to experience gratitude as a mood or emotion. In line with Rosenberg's theory, grateful moods should be more transient than trait gratitude, less conscious than emotional gratitude, and should not be about anything in particular, but rather about a number of life circumstances (Watkins, 2014). Grateful mood should also lower the threshold to experience grateful emotions. Grateful emotions are experienced when someone feels that a good thing has happened in their life, and attributes the cause to an external source (Emmons, 2004). The good that someone experiences does not have to be limited to a specific time and place. Grateful emotions can arise when someone reflects on benefits from the past, or benefits that have been with them over a period of time (Watkins, 2014). For example, an individual may feel grateful for their parents, not because of any recent gift that they have bestowed, but for all the benefits they have provided over an extended period of time. Grateful emotions require that a person experiences being grateful at a conscious level.

Although Rosenberg's tri-level hierarchical theory is a useful way of conceptualizing gratitude, there still remain discrepancies in defining gratitude. Many definitions of gratitude describe the attributed external source as a human benefactor (Emmons, 2004; McCullough et al., 2002; Roberts, 2004). This implies that a person experiencing gratitude clearly identifies another person as the source of that gratitude. Others have defined gratitude more broadly to include other external sources in addition to humans. This allows for gratitude to be experienced towards benefits that involve no

obvious human benefactors (Adler & Fagley, 2005; Steindl-Rast, 2004). For example, Watkins, GIBLER, Matthews, and Kolts (2005), found that gratitude could be induced by exposure to natural beauty when no human giver was apparent. An interesting take on these viewpoints comes from Watkins (2014), who argues that it is less important that the benefactor be human, and more about whether the beneficiary has personalized the external source. In this sense, when somebody experiences gratitude, they have viewed the cause as an intentional agent, regardless if that cause is human.

Stemming from these discrepancies is discussion over whether there exist qualitatively different types of gratitude. In a study on how laypersons view gratitude, Lambert, Graham, and Fincham (2009) made a distinction between *benefit-triggered gratitude* and *generalized gratitude*. They defined *benefit-triggered gratitude* as an “emotion that results from an interpersonal transfer of a benefit from a benefactor to a beneficiary” (p.1194). These are benefits that somebody has bestowed on another person. *Generalized gratitude* was defined as “the emotion or state resulting from an awareness and appreciation of that which is valuable and meaningful to oneself” (p. 1194). This includes thankfulness for the loved ones in our lives in the absence of any particular benefit they have given us. Overlying this discussion of the conceptualization and definition of gratitude is the implication that different experiences of gratitude may affect the impact it has on well-being. I will now turn to a discussion of the relationship between gratitude and well-being.

Gratitude and Well-being

The positive relationship between gratitude and emotional well-being has been demonstrated in many correlational studies. Emotional well-being includes the presence

of high positive affectivity, low negative affectivity, and satisfaction with life (Wood, Joseph, & Maltby, 2008). McCullough et al. (2002) showed that high levels of trait gratitude correlated positively with life satisfaction, vitality, subjective happiness, optimism, hope, and positive affect. Watkins et al. (2003) found that in addition to positive affect, gratitude correlated positively with both the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffen, 1985) and the Fordyce Happiness Scale (Fordyce, 1988). These studies used separate measures of trait gratitude, the GQ-6 in McCullough et al. (2002), and the GRAT in Watkins et al. (2003). This indicates that the relationship between well-being and gratitude holds up across different measures of gratitude and well-being. Furthermore, these findings have been replicated across a number of different situations and populations, including children and adolescents (e.g., Chen & Kee, 2008; Froh, Yurkewicz, & Kashdan, 2009; Park & Peterson, 2006).

Gratitude has also been demonstrated to be inversely related to ill-being. People high in trait gratitude were found to have lower levels of depression and anxiety (Krause, 2007; McCullough et al., 2002; Toepfer, Cichy, & Peters, 2011; Watkins et al., 2003). Gratitude may lower someone's chance of having depression because it makes people look at negative experiences in a more positive way (Lambert, Fincham, & Stillman, 2011). Although these studies are correlational, in an experimental study Watkins, Cruz, Holben, and Kolts (2008) had participants find silver linings in unpleasant memories and then write about how they were now grateful for them. These participants reported less unpleasant emotional impact from the memories compared to two comparison groups. This supports the idea that grateful people reinterpret negative experiences to seem more positive, which may be one reason why gratitude is associated with less ill-being.

Lyubomirsky, Sheldon, and Schkade (2005) proposed that gratitude works by shielding us from the “hedonistic treadmill” in which well-being is contingent on the continued accumulation of goods. Being grateful makes us take one step back and appreciate what one has in one’s life and not what one might be missing. Support for this idea comes from a number of studies that have shown an inverse relationship between gratitude and materialism (Lambert, Fincham, Stillman, & Dean, 2009; McCullough et al., 2002; Polak & McCullough, 2006).

The Big-5 domains of extraversion, agreeableness, openness, conscientious, and neuroticism are known to be strongly predictive of a person’s happiness. Gratitude correlates positively with the first four domains, and negatively with neuroticism. It seems reasonable to suggest that gratitude’s impact on well-being could be due to its relationship with these traits, however, gratitude has been shown to impact well-being independently of these traits both by self-rated and informant reports. In fact, gratitude may be a better predictor of subjective well-being than any of the Big-5 personality traits (McComb, Watkins, & Kolts, 2004; McCullough et al., 2002; Wood et al., 2008). These findings point to gratitude as a unique predictor of happiness.

Gratitude Enhances Well-being

A causal relationship between gratitude and emotional well-being has been found in a number of experimental studies. Emmons and McCullough (2003, Study 1) randomly assigned participants to one of three conditions: a gratitude condition, a hassles condition, and an impactful events condition. Participants in the gratitude condition were told to reflect on the past week and write up to five things they were grateful for. In the other conditions, participants either wrote about things that had annoyed them, or events that

had made an impact on them in the past week. Participants completed these tasks once a week for nine weeks, along with measures of well-being. The study found that those assigned to the grateful treatment had higher levels of well-being compared to those assigned to the other conditions. Some have argued that this effect may have been due to the hassles condition actually lowering participants' well-being, however, no significant difference in well-being was found between participants in the hassles condition and participants in the impactful events condition (Emmons & McCullough, 2003).

Watkins et al. (2003) provided additional support for the significance of gratitude by using a more neutral control condition. Instead of having control participants write about things that had annoyed them, they simply wrote about the layout of their living rooms. One would not expect that writing about a living room would harm participants' well-being. The control condition was then compared to three grateful intervention conditions, and in all cases the grateful intervention conditions increased well-being relative to the control group. Taken together, these findings seem to indicate that gratitude enhances well-being; a theory that has since been replicated across a number of different studies using various grateful interventions, age groups, populations, and control conditions (e.g., Froh, Sefick, & Emmons, 2008; Lau & Cheng, 2011; Lyubomirsky, King, & Diener, 2005; Toepfer et al., 2011; Watkins, Neal, & Thomas, 2004; Watkins et al., 2015).

Grateful Recounting Tasks

Of the grateful interventions used in establishing a cause and effect relationship between gratitude and well-being, the most empirically supported are the grateful recounting tasks. These tasks are also referred to as *gratitude lists* or *grateful journaling*.

Like the conditions used in Emmons and McCullough (2003) and Watkins et al. (2003), these tasks involve participants reflecting on what they are grateful for and recording them in a type of grateful journal. For example, the specific instructions used by Emmons and McCullough (2003 p.379) were:

There are many things in our lives, both large and small, that we might be grateful about. Think back over the past week and write down on the lines below up to five things in your life that you are grateful or thankful for.

In the majority of studies grateful recounting tasks use similar guidelines. Instructions may differ on certain aspects (e.g., length of the treatment or number of listings), but the overarching theme is always for people to write about things in their lives that they feel gratitude towards.

Emmons and McCullough (2003) suggest that grateful recounting enhances well-being by encouraging people to focus on what they have in their lives and not what they are lacking. Watkins (2014) extends this idea in his amplification theory of gratitude. He proposes that gratitude enhances well-being by not only making us focus on the good in our lives, but that it actually “increases the perception of goodness in both the gift and the giver” (p. 249). In this sense, grateful recounting could work by turning up or amplifying what is good in our lives.

Another possibility is that it is simply the recalling of positive memories that enhances well-being, though findings by Watkins et al. (2015) seem to suggest that this is not case. In this study participants were randomly assigned to one of three different one-week treatment conditions. In the placebo condition, participants recalled a personal semantic memory. In the other two conditions participants were told to recall three things

that went well in the past 48 hours. The difference between these conditions was that one group was instructed to write about how these things made them feel grateful, while the other group was told to write about how these things made them feel better than others (called the “pride” condition). Emotional well-being was assessed before the treatment, immediately after the treatment, one week after the treatment, and five weeks post treatment. Compared to the semantic memory and pride conditions, the grateful condition was found to have a significantly higher impact on well-being at all post treatment assessment times. Given that the pride and gratitude conditions both involved recalling positive events, the results suggest that grateful processing indeed contributes to the positive effect grateful recounting tasks have on well-being.

Grateful Recounting: Some Concerns

That grateful recounting tasks can be effective at enhancing well-being is fairly well established, and it seems that the experience of gratitude is important with regards to their effectiveness (Emmons & McCullough, 2003; Watkins et al., 2015). There remain, however, some areas of concern regarding grateful recounting tasks. Grateful recounting has had varying degrees of effectiveness between studies, with some studies reporting strong increases in well-being, and others finding weaker impacts (for a review, see Wood et al., 2010). In fact, at least one study was unable to show that grateful recounting had any significant effect on well-being (Sheldon & Lyubomirsky, 2006). These mixed results suggest that there likely are certain factors that moderate the effectiveness of these tasks (Harbaugh & Vasey, 2014).

Some studies have looked at how different factors may moderate the relationship between grateful recounting treatments and well-being. Of these studies, some have

focused on factors related to differences in how participants engage in grateful recounting tasks. Reported in Lyubomirsky et al. (2005), data showed that participants who completed a grateful recounting task once a week for six weeks reported greater increases in happiness than participants who wrote three times per week for six weeks. A study by Koo, Algoe, Wilson, and Gilbert (2008) found that if participants wrote about how benefits were more surprising, or might not have occurred, then the intervention had a higher positive impact on well-being. Lyubomirsky, Dickerhoof, Boehm, and Sheldon (2011) found that individuals who engaged in grateful recounting tasks with more effort tended to reap higher rewards. Taken together, these results suggest that moderators of the effectiveness of grateful recounting may be identified from the differences in how participants engage in these tasks.

Current Study

Further differences in how participants engage in grateful recounting may be found in how they write and what they choose to write about. For example, participants may differ in the amount of detail they write and the types of things that they are grateful for. To date, these differences in writing have received little to no attention and could prove to be significant moderators of the effectiveness of grateful recounting. Determining effective writing techniques may be important for understanding the inconsistent findings between studies and aid in the design of grateful recounting instructions. As a step towards evaluating the impact participants' writing may have on the effectiveness of grateful recounting, the present study looked at differences in grateful listings across six writing dimensions: human benefactors, interpersonal benefits, benefactor span, gratitude expression, specificity, and surprise. Grateful listings were

taken from the treatment study completed by Watkins et al. (2015) described previously. The following is a discussion of these dimensions and their predicted impact on well-being.

Writing Dimensions

Human benefactors and interpersonal benefits. Well-being has been closely linked to the quality of our social environment. Happiness about our own lives appears to be intricately connected to our feelings about our relationships with others (Diener, Suh, Lucas, & Smith, 1999). Gratitude towards others has been shown to promote a number of positive interpersonal functions that help create, strengthen, and reaffirm our social bonds (Algoe, Haidt, & Gable, 2008; Watkins, Scheer, Ovnicek, & Kolts, 2006). This has led theorists to speculate that gratitude may contribute to well-being through the enhancement of our social lives (Emmons & Mishra, 2011). If this is the case, grateful recounting may be more effective at enhancing well-being in those participants who focus more on benefits that have clear human benefactors or are interpersonal in nature. By writing more about people and social interactions that one is grateful for, grateful recounting may cultivate the prosocial benefits of gratitude, leading to greater increases in well-being.

Human benefactor listings were operationalized as grateful listings in which the participant lists a benefit and clearly identifies a person or persons that they feel are responsible for that benefit and are grateful towards. For example, one participant wrote:

“My counselor helped me to fax something to another college. I am grateful because that was quite urgent and I did not know where I can fax that in Cheney. I was quite worried but I was grateful that he was able to help.”

This meets the criteria for a human benefactor listing because the participant has identified a benefit (faxing something to another college) and identified a person (the counselor) to whom they feel is responsible for that benefit and are grateful towards.

Interpersonal benefit listings were defined as grateful listings in which the benefit the participant was grateful for was shared with another person or persons, like a night out with friends or a movie date with a significant other. Interpersonal benefit listings and human benefactor listings were not considered mutually exclusive in that a grateful listing could have an interpersonal benefit and a clear human benefactor. For example, one participant wrote:

“Went to watch “Adventureland” with my boyfriend. I was grateful that he was thoughtful enough to pick a movie that he knew I would like.”

This meets the criteria for both an interpersonal benefit (watching a movie with her boyfriend) and a human benefactor listing (expresses gratitude towards and acknowledges her boyfriend as being partly responsible for that benefit).

Benefactor span. Watkins, Peria and McCurrach (*in progress*), suggest that grateful recounting may enhance well-being by training individuals to focus on positive events that may have otherwise gone unnoticed. Feelings of gratitude may come quite effortlessly towards certain people in our lives, but there may be others that we take for granted. By passing over the contributions of these people, we could fail to notice both well-wishers and positive social interactions. This could be as simple as experiencing gratitude towards someone who has let you merge in front of them in traffic. Those participants who have a greater benefactor span in their grateful journals, may have essentially *trained* themselves harder by writing about their gratitude in a variety of

relationships. In doing so, they may have noticed positive interactions and social support that would have otherwise gone unnoticed, a process that could lead to grateful recounting having a more beneficial impact on their well-being.

Benefactor span was operationalized as the number of different people or groups of people a participant was grateful for over the course of the treatment. In order to be deemed distinct, benefactors had to be clearly distinguishable. For instance, if participants expressed gratitude towards ‘friends’ in multiple grateful listings; ‘friends’ would only be counted as one distinct benefactor. Any delineation of ‘friends’ however would be counted as separate. For example, if a participant listed friends by names or affiliation (work friends vs school friends) then these would be counted as distinct benefactors.

Gratitude expression. During an initial read of participants’ grateful listings from Watkins et al. (2015), a distinction emerged between some of the participants’ grateful listings, in that some listings did not appear to be expressions of gratitude. Some of these listings may have been more accurately described as ‘happy listings’ or ‘proud listings’. For example one participant wrote:

“I bought something new. I am happy that I am going to have something new, and something I like.”

Another wrote:

“I feel really accomplished today because I was studying for my human psychophysiology class and I was able to get a lot done. I was behind for a while, but being able to complete a task made me feel good.”

This was interesting because the instructions given to participants were to write about how these particular events or experiences made them feel grateful. Given these

instructions, as in many grateful recounting studies, it is assumed that participants' writings are primarily expressions of gratitude. It is possible that although certain writings do not appear to capture gratitude, that the participant is still processing the benefit in a grateful manner. However, given Watkins et al.'s (2015) finding that the gratitude condition surpassed the pride condition in terms of increases in well-being, participants who more consistently express gratitude in their grateful listings should reap higher rewards from grateful recounting.

Specificity. Grateful processing is thought to increase the positive information associated with a memory, therefore enhancing its accessibility (Watkins et al., 2015). Enhancing the accessibility of positive memories may be one of the mechanism through which gratitude enhances well-being (Emmons & Mishra, 2011; Watkins, Grimm, & Kolts, 2004). If grateful recounting works in a similar manner, those participants who write in greater detail about their experiences of gratitude may see greater increases in well-being. Participants can differ substantially in the amount of detail that they write in. For instance one participant's three listings from day two journaling were:

"Went to Walmart, I was grateful because I had fun and it was relaxing."

"Made a pizza, I was grateful because I was with one of my favorite people."

"Watched a movie, I was grateful because it was fun and relaxing."

Compare this to a single listing from another participant's day two journal:

"I felt grateful this morning for my shower. Every morning, as I feel the warm water run over my body, a feeling of peace comes over me and I contemplate on how lucky I am to experience this wonderful luxury anytime I want. I feel grateful for the warm water, the beautifully scented soap and shampoo, and the fact that I

live in a day and age and place when I am one of the lucky people who gets to have a shower every morning. I become fully aware that if I had lived in another time or another place, I might never have this experience. I feel grateful that I can just step into my shower and turn a knob and I know that warm water will come out and cleanse me. I know that people all over the world never have this experience and I feel grateful”.

Specificity was defined as the amount of detail the participant uses to write about that for which they are grateful. Take the above participant’s ‘warm shower’ listing. In it, gratefulness is extended to various aspects of the experience, like the scent of the shampoo and the feeling of the water. In addition, there is recognition of the ‘luxury’ of the experience, and how things could be different and are different for other people. Through more elaborate grateful processing, the positive information associated with the experience is likely expanded, resulting in enhanced positive valence and increased accessibility for that memory.

Surprise. Surprise scores were coded for in order to further investigate findings by Koo et al. (2008), who provided initial evidence that writing about how benefits were surprising resulted in grateful recounting being more effective at enhancing well-being. Writing about how benefits are surprising may intensify the experience of gratitude. A number of research studies have provided evidence that affective experiences are intensified when there is an element of surprise (e.g., Berns, McClure, Pagnoni, & Montague, 2001; Mellers, Schwartz, & Ritov, 1999; Schultz, Dayan, & Montague, 1997). This may be particularly true for the experience of gratitude, as gratitude often emerges when benefits are unexpected or undeserved (Watkin, 2014). Participants who write

about surprising benefits may see higher increases in well-being as a result of being bestowed with deeper gratitude. Surprise scores were operationalized as the number of references that signified unexpectedness in a participant's journal. Examples of these references were "unexpected," "not expected," and "surprised." An example of a participant's grateful listing that met the criteria for a surprise reference was:

"I rented a movie from the Redbox. I was grateful to find the new transformers movie at the Redbox because I didn't expect it to be there. I wanted to get a movie, but this movie is pretty popular and just came out, so it was a surprise and made me feel grateful."

Methods

Design

The current study used archival data from a grateful recounting experiment completed by Watkins et al. (2015). In order to answer the research questions in the current study, participants' grateful listings from Watkins et al. (2015) were collected and scored along the six writing dimensions. Partial correlations were then computed between participants' scores on these dimensions and their scores on the three post treatment assessments of well-being measured by Watkins et al. (2015). Participants' pretreatment well-being measured in Watkins et al. (2015) acted as the control variable in each of these partial correlations. This allowed me to determine if participants' scores on these six dimensions correlated with changes in well-being from the pre to post treatment assessments. Exploratory analyses examined partial correlations between scores on the six dimensions and post treatment assessments of trait gratitude while controlling for

pretreatment trait gratitude. These analyses were performed to determine if scores on these dimension correlated with changes in trait gratitude.

Participants

Watkins et al. (2015) recruited participants from undergraduate psychology courses in exchange for partial course credit, and 129 participants completed the study (memory placebo=40, pride 3-blessings=42, gratitude 3-blessings=47; 92 females, 37 males). Data used in the current study came only from participants in the *gratitude 3-blessings condition* (3-blessings=47; 26 females, 21 males). Four of the participants' grateful journals were unable to be matched to their well-being scores. This resulted in only 43 of the 47 gratitude 3-blessing participants being used in the current study.

Watkins et al. (2015) and the current study were approved by the Institutional Review Board of Eastern Washington University.

Materials

Watkins et al. (2015) measured well-being using a composite measure that consisted of z-scores of the Satisfaction with Life Scale (Diener et al., 1985; appendix A), and the positive and negative affect scales from the PANAS (Watson, Clark, & Tellegen, 1988; appendix B). The negative affect scale was reverse scored, and the three z-scores were summed for a composite well-being measure. Two measures of trait gratitude were used in Watkins et al., (2015); the 6-item GQ-6 scale (McCullough et al., 2002; appendix C) and the 16-item Gratitude, Resentment, and Appreciation Test-Short (GRAT-S: Watkins et al., 2003; appendix D).

Procedure

The following is an outline of the procedures used by Watkins et al. (2015) to collect the data used in the current study:

After providing written consent, participants completed pretreatment measures of well-being. Participants were then randomly assigned to one of the three treatment conditions, one of which was the *gratitude 3-blessing condition*. Participants were told that this condition was designed to improve their happiness. They received an email regarding the gratitude treatment each afternoon for the next 7 days. The email instructed them to list three things that had gone well in the past 48 hours. They were then instructed to write about how these particular events or experiences made them feel grateful. The exercise was to be completed by 10 AM the following morning. After the treatment phase, participants then completed the same measures of well-being used in the pretest measure. These measures were given again one week and five weeks after the end of treatment. Using the pretreatment score of well-being as a covariate, analyses were run to examine the impact of the grateful recounting task at the three post treatment well-being assessments. Results showed that participants in the gratitude 3-blessings condition, on average, had significant increases in well-being at all three post treatment assessments when compared to the control and pride conditions. I will now outline the procedures used in the current study.

Email responses for the *gratitude 3-blessings condition* were collected along with participants' scores on well-being from the Watkins et al. (2015) study. Participants who had completed the grateful recounting task at least 4 of the 7 days were included in the current study. Because of this, participants' final scores on all of the six dimensions were

divided by the number of days they had completed the treatment. Three coders were used in order to determine scores on four dimensions: human benefactors, interpersonal benefits, benefactor span, and gratitude expression. A coding manual was developed (see appendix E) and brief training sessions held to ensure reliability of the evaluations across the four dimensions.

In order to determine a participant's human benefactor score, each coder counted the total number of listings in a participant's journal that they thought met the criteria for a human benefactor listing. Interpersonal benefit scores were measured in the same manner. Each coder counted the total number of listings in a participant's journal that met the criteria for an interpersonal benefit listing. Scores for benefactor span were determined by coders counting the number of distinct human benefactors they identified in a participant's journal. Gratitude expression scores were reached by each coder ranking the participants' grateful listings using the following scale: 1 – not an expression of gratitude; 2; 3 – somewhat an expression of gratitude; 4; 5 – an expression of gratitude. A participant's rankings were then totaled and divided by the number of days they had completed the grateful recounting task. A participant's final score for each of these four dimensions was determined by dropping the most outlying coder, and taking the average of the remaining two. In cases when there was no outlier, an average was taken using all three coders' scores.

Inter-rater reliability. Two-way mixed, consistency, average-measures Intra Class Correlations (ICC) were calculated for each of the four dimensions to determine Inter-Rater Reliability (IRR). The resulting ICC for human benefactors was in the good to excellent range, $ICC = .78$. The ICC for interpersonal benefits was in the excellent range,

$ICC = .85$. Similarly, benefactor span and gratitude expression both had resulting ICCs in the excellent range, $ICC = .86$, and $ICC = .95$ respectively. These results provided strong evidence for the consistency of scoring between coders on the four dimensions.

Furthermore, to determine the inter-rater reliability of absolute agreement between coders, two-way mixed, absolute, average-measures ICCs were calculated for each of the four dimensions. Human benefactors and interpersonal benefits had resulting ICCs in the good range, $ICC = .66$, and $ICC = .67$, whereas benefactor span and gratitude expression had ICCs in the excellent range, $ICC = .86$, and $ICC = .92$, respectively. Taken together, results from the ICCs supported that average scores taken from the coders on the four dimensions were reliable for use in subsequent analyses in the present study. Only a minimal amount of measurement error appeared to be introduced between the separate coders.

Specificity was measured using a total word count of a participant's journal divided by the number of days they had completed the grateful recounting task. Surprise scores were measured by a count of the number times a participant referred to being surprised in their grateful journal. References to surprise included terms like unexpected, not expected, and surprised. Word and reference counts were performed using tools in Microsoft Word 2013. Due to the use of computer software, additional coders were not used on these dimensions. In conclusion, this left participants with a score for each of the six dimensions. These scores were then correlated to the post treatment assessments of well-being from the original study while controlling for pretreatment well-being.

Results

To examine the relationship between participants' scores on the six dimensions and changes in well-being after the grateful recounting task, the primary analyses consisted of partial correlations between each of the six dimensions and the three post treatment assessments of subjective well-being while controlling for pretreatment subjective well-being. Significance was determined using two-tailed tests of significance.

Human Benefactors

Partial correlation analyses revealed no significant correlations between human benefactor scores and post treatment increases in well-being. The correlations between human benefactor scores and the three post treatment well-being assessments were as follows: immediately post treatment, $r(40) = .02, p = .900$; one week post treatment, $r(40) = .04, p = .812$; five week post treatment, $r(40) = .01, p = .959$. Contrary to the predictions of the study, human benefactor scores did not appear to have significant relationships with increases in well-being after the grateful recounting task.

Interpersonal Benefits

After controlling for pretreatment well-being, partial correlations between interpersonal benefit scores and the three post treatment assessments of well-being did not reveal any significant relationships: immediately post treatment, $r(40) = -.00, p = .995$; one week post treatment, $r(40) = .19, p = .227$; or five weeks post treatment, $r(40) = .07, p = .648$. Results did not support the prediction that higher interpersonal benefit scores would be positively correlated with increases in well-being.

Benefactor Span

Increased benefactor span was not correlated with increases in well-being at any of the post treatment assessment times: immediately post treatment, $r(40) = .04, p = .801$; one week post treatment, $r(40) = .09, p = .578$; or five weeks post treatment, $r(40) = -.03, p = .848$. Writing about a wider range of benefactors was not found to be related to increases in well-being resulting from the grateful recounting task.

Gratitude Expression

After controlling for pretreatment well-being, a significant relationship was found between gratitude expression scores and well-being immediately post treatment, $r(40) = .33, p = .036$. This supported the prediction that gratitude expression scores would be positively correlated with increases in well-being after the grateful recounting task. However, gratitude expression did not significantly correlate with increases in well-being one week post treatment, $r(40) = .03, p = .831$, or increases in well-being five weeks post treatment, $r(40) = -.03, p = .841$.

Specificity

Increased specificity was significantly correlated with increases in well-being immediately post treatment, $r(40) = .330, p = .033$, supporting the prediction that specificity scores would be positively related to increases in well-being from the grateful recounting task. Similar to gratitude expression however, this relationship did not hold up one week post treatment, $r(40) = .18, p = .257$, or at five week post treatment, $r(40) = -.03, p = .842$.

Surprise

In support of my prediction and findings by Koo et al. (2008), a higher number of surprise references in a participant's journal did have a significant relationship with increases in well-being immediately post treatment, $r(40) = .54, p < .001$. But again, this relationship was not found one week post treatment, $r(40) = .28, p = .073$, or at five week post treatment, $r(40) = .20, p = .217$.

Exploratory Analyses: Writing Dimension Scores and Trait Gratitude

To explore the relationship between participants' scores on the six writing dimensions and changes in trait gratitude after the grateful recounting task, analyses consisted of partial correlations, controlling for pretreatment trait gratitude, between each of the six dimensions and post treatment assessments of trait gratitude measured by the GQ-6 and GRAT-S. Significance was determined using a two-tailed test of significance. For results, see Table 1 and 2 on the following pages.

Table 1.

Partial correlations, controlling for pretreatment trait gratitude, between writing dimensions and post treatment assessments of trait gratitude as measured by the GQ-6

Writing dimensions	Post treatment assessments of trait gratitude		
	Immediately post treatment	One week post treatment	Five week post treatment
Human benefactors	-.188	-.048	-.123
Interpersonal benefits	.367*	.305	.416*
Benefactor span	.081	.236	.132
Gratitude expression	-.185	-.227	-.310
Specificity	-.039	-.048	-.111
Surprise	-.071	-.041	-.126

Two-tailed test of significance: * $p \leq .05$.

Table 2.

Partial correlations, controlling for pretreatment trait gratitude, between writing dimensions and post treatment assessments of trait gratitude as measured by the GRAT-S

Writing dimensions	Post treatment assessments of trait gratitude		
	Immediately post treatment	One week post treatment	Five week post treatment
Human benefactors	-.093	.038	.048
Interpersonal benefits	.223	.241	.348*
Benefactor span	.095	.241	.377*
Gratitude expression	-.111	-.117	-.120
Specificity	.313*	.283	.221
Surprise	.233	.312*	.178

Two-tailed test of significance: * $p \leq .05$.

Discussion

The primary aim of this study was to examine if differences in participants' writing within a grateful recounting task were associated with the treatment's effectiveness in enhancing subjective well-being. Although past studies have shown that certain factors can impact the effectiveness of grateful recounting, differences in participants' writing have been relatively unexplored as potential moderators. As a first step towards exploring the impact of writing differences on the effectiveness of grateful recounting tasks, participants' grateful listings from a previous study (Watkin et al., 2015) were measured across six writing dimensions: human benefactors, interpersonal benefits, benefactor span, gratitude expression, specificity, and surprise. I predicted that higher scores on these six dimensions would be correlated with increases in subjective well-being found in the original study. The results from the current study failed to support the prediction that human benefactor, interpersonal benefit, and benefactor span scores would be positively associated with increases in subjective well-being. Results from the study partially supported the prediction that gratitude expression, specificity, and surprise scores would be positively associated with increases in subjective well-being. These associations, however, were only found with the immediate post treatment assessment of well-being, and not for the follow-up assessments.

Human Benefactors and Interpersonal Benefits

Human benefactor scores were measured as the number of grateful listings in a participant's journal that clearly expressed gratitude towards another person or persons. Interpersonal benefit scores were measured as the number of grateful listings in a participant's journal that included a benefit that was shared with other people. Contrary to

my prediction, the number of human benefactor listings in a participant's journal were not associated with increases in well-being. Likewise, no relationship was found between a higher number of interpersonal benefit listings and increases in well-being.

There are a number of ways these results could be interpreted. First, it could be that gratefully recounting social benefits holds no significant advantage over writing about non-social benefits. Participants may be able to write about anything in their lives that they feel grateful towards, be it another person, a warm day, or a cup of coffee in the morning. In other words, the content of the grateful listings may have little impact on the effectiveness of the task. Secondly, there may be a ceiling effect, where increased writing on social benefits no longer becomes advantageous to the treatment. The design of the current study does leave open the possibility that recounting social benefits is still an important component of the treatment, but perhaps in combination with non-social benefits. In this case, journals that cover benefits from a variety of sources, including social ones, may be more predictive of increases in well-being than journals that focus primarily on social benefits. Given that the majority of participants included social benefits to some extent in their grateful journals, it may be worthwhile to look at changes in well-being for participants who used a more balanced approach.

Due to the design of my study, I had no control over the types of grateful listings participants wrote about. Therefore, the results may be explained by the makeup of participants who wrote more about human benefactors or interpersonal benefits. Taking this approach, a possible explanation for these results comes from McCullough, Tsang, and Emmons's (2004) resistance hypothesis, that predicts that gratitude exercises should be most effective for individuals low in trait gratitude. This prediction is based on the

idea that individuals high in trait gratitude may have little to gain from gratitude interventions because they already capitalize on the benefits of being grateful regularly. Gratitude has been suggested to enhance well-being by building and strengthening our social bonds (Diener et al., 1999; Algoe, 2012). Perhaps a greater number of human benefactor or interpersonal benefit listings is an indication of someone who is already experiencing significant gratitude in their social lives. If this is the case, these participants may have little to gain in terms of increasing well-being through a grateful focus on social benefits, as they are already reaping these rewards in their social lives. Grateful recounting directed towards people and interpersonal benefits may be more effective only for participants who are failing to experience gratitude in their social lives prior to the task.

Given the possible confounds, the advantage of gratefully recounting social benefits may be better explored using an experimental design. Participants could be randomly assigned to three grateful recounting conditions, where one group is instructed to focus on people and interpersonal benefits, a second group is instructed to focus on non-social benefits, and finally a third group is instructed to focus on both social and non-social benefits equally. The three groups could then be compared to see if there is any difference between the conditions in terms of increases in well-being.

Benefactor Span

Benefactor span was the number of different benefactors a participant was grateful towards throughout the grateful recounting treatment. Higher benefactor span scores were not found to be associated with increases in well-being. A greater benefactor span was suggested to be an indication of participants who had looked for gratitude in a

wider range of relationships. It was thought that this would be associated with increases in well-being by revealing positive interactions and well-wishers that would have otherwise gone unnoticed. Research has shown that gratitude promotes the amount of social support that we perceive to have in our lives (Wood et al., 2008). Given these results however, this may be an instance where more is not necessarily better. It may be just as valuable to focus on the numerous benefits of a few benefactors, then to write about the single benefits of numerous benefactors.

Support for this interpretation comes from studies that have shown that coping ability and well-being are related to the perceived quality of our social support, but not necessarily the quantity (Glass & Maddox, 1992; Porritt, 1979; Rigby, 2000). Therefore, gratefully recounting benefactors may be more effective when it enhances our perception of the quality of social support that we have in our lives. If this is the case, focusing on the benefits and support we receive from those closest to us may be the best way to achieve this. Additionally, it may be the benefits of the people closest to us that we tend to take for granted. Bar-Tal, Bar-Zohar, Greenberg, and Hermon (1977) found that people experienced less gratitude towards their mothers than towards a stranger for the identical benefit.

Gratitude Expression

Gratitude expression scores were measured by rating participants' grateful listings on the extent in which a listing was an expression of gratitude. Although many participants received high gratitude expression scores, some participants appeared to gloss over the concept of gratitude in some of their grateful listings. Participants recalled positive events in these listings, but tended to write about how these events made them

feel happy or proud about themselves rather than grateful. In support of my prediction, gratitude expression scores were found to significantly correlate with increases in well-being at the immediate post treatment assessment.

This result suggests grateful recounting is more effective for those participants who consistently write about benefits in a grateful manner. This finding is in line with the results of Watkins et al. (2015), where the gratitude 3 blessing condition was more effective at enhancing subjective well-being than the pride condition. Failure to write in a grateful manner may be an indication of a failure to gratefully process the benefit; a process that appears critical to the effectiveness of grateful recounting (Watkins et al., 2015). Previous work has suggested that it is simply the recall of positive memories that makes grateful recounting effective. If this is the case, gratitude expression would not be expected to have any association with increases in well-being. Remember that participants with low gratitude expression scores were recalling just as many positive memories as other participants. So why is grateful processing critical to the effectiveness of grateful recounting? Watkins et al. (2015) argues that when a positive memory is processed gratefully this expands on the good associated with that memory. This expansion may lead to the recall of the positive memory having a greater impact on well-being.

The finding from my study indicates the importance of participants consistently writing about benefits in a grateful manner throughout the treatment. To help ensure grateful writing, researchers could provide prompts at the beginning of each treatment session to remind participants to write about their feelings of gratitude. Prompts could

include clear definitions of gratitude or use words that invoke gratitude like gifts, blessings, or thankfulness.

Specificity

Specificity scores were determined by an average word count of the participants' daily journals. Consistent with my prediction, higher word counts were found to be positively associated with increases in well-being at the immediate post treatment assessment. This result suggests that it may be important for participants to write in adequate detail when performing a grateful recounting task.

One way that grateful recounting has been suggested to enhance well-being is by increasing the accessibility of positive memories (Emmons & Mishra, 2011). Watkins et al. (2015) found that participants in the gratitude 3 blessing condition subsequently recalled more positive memories than participants in the control conditions after completion of their respective tasks. Watkins et al. (2015) suggests this may be due to grateful recounting resulting in the deeper encoding of these memories. The process by which grateful recounting results in the deeper encoding of positive memories may be explained by Watkins's (2014) amplification theory of gratitude, which postulates that grateful processing not only encourages us to take notice of positive events in our lives, but also increases the positive valence of those events. Increases in positive valence may result in the deeper encoding of these experiences and thus enhanced accessibility. If grateful recounting works in a similar manner, elaborating on your experiences of gratitude may increase the depth of grateful processing, therefore enhancing the positive valence associated with those memories, strengthen their impact, and making them more retrievable in the future. Support for this comes from research on emotion and memory,

with studies showing that autobiographical memories are recalled more often when encoded with heightened emotionality (e.g. Bradley, Greenwald, Petry, & Lang, 1992; Hamann, 2001)

Future grateful recounting instructions may want to direct participants to elaborate on their feelings of gratitude. Of course there is a question of how much detail is required for the task to be most efficient. There may be a tipping point, where writing in too much detail could make the task overly difficult or result in participants writing about aspects other than their feelings of gratitude. These factors could take away from the effectiveness of writing in greater detail. Future studies could explore this question by assigning participants to different word count requirement conditions and examining at what word count grateful recounting appears most effective. The number of positive memories recalled by participants in different word count conditions could also be examined. This would provide a more direct look at the relationship between specificity and memory recall.

It is important to note that word count may have also been related to the amount of effort participants were putting in to the task. As mentioned previously, Lyubomirsky et al. (2011) found that participants who put more effort into grateful recounting tended to get better results from it. Participants with higher word counts would have likely invested more time into the task, a possible indication that they were putting more effort into the treatment.

Surprise

Surprise scores were measured by the number of times a participant referenced feeling surprised throughout their grateful journal. The number of surprise references in a

participant's journal were found to be positively associated with increases in subjective well-being at the immediate post treatment assessment. This finding provides additional support to findings by Koo et al. (2008) that writing about how benefits were surprising can make grateful recounting more effective at enhancing well-being. The experience of gratitude appears to be heightened if benefits are unexpected or undeserved (Koo et al., 2008). This may be due to feelings of expectedness inhibiting the experience of gratitude. This is evidenced in research showing that narcissism inhibits gratitude (Watkins, Solom, McCurrach, & Hutchison, 2014). People high in narcissism tend to expect to have benefits given to them as they see themselves highly deserving of these rewards (Watkins, 2014). However, one does not need to be high in narcissism to become immune to certain benefits. Lowering participants' expectations towards benefits may an important component of the effectiveness of grateful recounting tasks.

Watkins (2014) suggests that our expectations of others are flexible (they can increase or decrease), and that decreasing social expectations could lead to more frequent and intense experiences of gratitude. Grateful recounting may work more effectively when participants come to realize that many of the things they come to expect in life are actually gifts. In other words, grateful recounting reintroduces participants to the blessing in their lives. I would imagine that this expectedness extends beyond the benefits of others to many different sources. For instance, in our society we don't often feel grateful for running water because this is a benefit that we have become immune to.

If feelings of unexpectedness and surprise are important to the effectiveness of grateful recounting, perhaps the easiest way to help participants achieve this is to encourage the "George Bailey" effect (Koo et al., 2008). George Bailey was the main

character from *It's a Wonderful Life*, whose guardian angel showed him how life would have been different had he never been born. This is not to imply that participants should think about never being born, but to reflect on how their life would be if certain things were subtracted from it. For instance, in line with my previous example, imagine your life if your house had no running water. Koo et al. (2008) found that having participants write about how positive experiences could have never happened made those experiences seem more unexpected. Expanding on this, an interesting question would be to explore what effect writing about negative events that never happened would have on grateful recounting tasks. For example, expressing gratitude towards avoiding a serious car accident. I expect that this type of writing could lead to greater increases in well-being, but there is a concern that focusing on negative events, regardless if they were avoided, may lead to anxiety or worry.

General Discussion

Although gratitude expression, specificity, and surprise scores were found to be associated with increases in subjective well-being at the immediate post treatment assessment, a distinct pattern emerged. Significant associations were not found between scores on these dimensions and increases in well-being at either of the follow-up assessments. This is interesting, because the pattern of results from Watkins et al. (2015) was that the subjective well-being of the grateful recounting group continued to increase after post-treatment, whereas the well-being of those in the comparison groups went back to baseline. Indeed, the most notable differences between the treatments groups was at the follow-up assessments.

As it is unlikely that many participants continued on with the treatment on their own, this seems to indicate that gains in well-being found in the follow-up assessments may be less contingent on participants' writings and more on lasting changes that occurred as a result of the grateful recounting task. Watkins et al. (2015) suggests that the gratitude 3 blessing condition may have trained cognitive biases related to gratitude and well-being, and this is why increases in well-being were maintained after the grateful recounting treatment. Perhaps future studies could look to identify aspects of grateful recounting tasks that moderate changes in cognitive biases. Nonetheless, the significant findings from this study still have practical implications for people who regularly engage in grateful recounting. Furthermore, other studies have found that the maintenance of enhanced well-being is strongest for those who continue to engage in the treatment after completion of the study (Lyubomirsky et al., 2011; Seligman et al., 2005).

What stands out from these results overall is the possibility that the effectiveness of the task may lie not in the object of the grateful listings (e.g., writing about other people), but in participants writing about things that they were not experiencing gratitude towards prior to the treatment. For example, if someone is very grateful towards the people in their life, but are less grateful in other areas; grateful recounting may be most beneficial when the focus is directed towards those areas where there is a dearth of appreciation. This might be why participants low in trait gratitude have been found to benefit more from grateful recounting (Harbaugh & Vasey, 2014; Rash, Matsuba, & Prkachin, 2011), as they are more likely to be gratefully processing benefits that they were not doing so prior to the treatment. The dilemma is that participants with high or even moderate trait gratitude may be prone to write about benefits that they are already

experiencing gratitude towards and that easily come to mind. Recalling benefits that were processed gratefully prior to the task may have little added impact on well-being. This may be one of the challenges in designing future grateful recounting instructions, to encourage participants to write about benefits that they initially failed to process gratefully. Perhaps future grateful recounting designs could try including instructions that direct participants to reflect on certain things in their lives that they feel they have taken for granted or 'forgotten' to be grateful for.

Exploratory Analyses: Writing Dimensions and Trait Gratitude

The analyses looking at the relationship between the writing dimensions and changes in trait gratitude were exploratory, as Watkins et al. (2015) did not find significant increases in trait gratitude for the gratitude 3 blessing condition compared to the control conditions. These results may seem puzzling given that grateful processing appeared to be essential to the effectiveness of the task. However, though grateful processing may be essential to the treatment, this does not automatically apply that increases in trait gratitude are essential or even necessary. As Woods et al. (2010) points out, there is very little evidence that grateful interventions increase well-being through the process of increased gratitude. Still, I wanted to see what relationships, if any, scores on the writing dimensions had with changes in trait gratitude for participants in the gratitude three blessing condition.

A significant relationship was found between interpersonal benefit scores and changes in trait gratitude as measured by the GQ-6 at the immediate post treatment assessment. Furthermore, a significant positive relationship was found between interpersonal benefit scores and changes in trait gratitude at the 5 week follow up

assessment. This significant relationship was found with both measures of trait gratitude. A significant positive relationship was also found between benefactor span scores and changes in trait gratitude as measured by the GRAT-S at the 5 week follow up assessment. Higher scores on these writing dimensions appear to be associated with increases in trait gratitude, while having no association with increases in well-being. These results support that grateful recounting increases well-being through mechanisms other than changes in trait gratitude. A significant positive relationship was found between specificity scores and changes in trait gratitude as measured by the GRAT-S at the immediate post treatment assessment. However, specificity was the only writing dimension that significantly correlated with changes in both subjective well-being and trait gratitude at the same assessment time. Surprise scores positively correlated with changes in trait gratitude as measured by the GRAT-S at the one week post treatment assessment, but only significantly correlated with increases in well-being at the immediate post treatment assessment.

Although it's difficult to draw any clear conclusions from the overall pattern of these results, they do shed light on potential questions about moderators of grateful recounting tasks. What factors moderate the effectiveness of grateful recounting in increasing both gratitude and well-being? Do certain factors moderate increases in well-being but not gratitude? Results from the current study highlight the importance of the question put forth by Harbaugh and Vasey (2014) that if grateful recounting does not enhance well-being by increasing gratitude, then through what mechanisms does it work? Clearer understanding of these mechanisms will help to better predict what factors might moderate the effectiveness of grateful recounting.

Limitations

The obvious limitation of my study was in its correlational design. I had no control over what participants wrote about in their grateful journals. Participants' writings may have been influenced by personality factors or life circumstances that made the task more or less salubrious. The correlational design of my study limits the conclusions I am able to draw from my results, however, examining these relationships was an important first step in considering writing differences as potential moderators of grateful recounting tasks. As highlighted in the previous sections, future studies may want to consider experimental designs when looking at the impact of writing differences further.

Another limitation of my study was the number of participants. The participants' writings I examined came from a grateful recounting tasks used in an experimental study comparing three separate conditions (Watkins et al., 2015). Because I was only interested in the writings from the gratitude 3 blessing condition, I was limited to a smaller number of participants. Although I did find a considerable amount of variability across the writing dimensions I examined, a larger sample sized would have likely increased the range of those differences. This increased range may have revealed associations I was unable to detect due to my sample size.

Conclusion

My study was important in that it was the first to examine the relationship between the effectiveness of grateful recounting and writing differences across multiple dimensions. In my study I found some evidence that writing differences may moderate the effectiveness of grateful recounting in enhancing subjective well-being. Results indicated that gratitude expression, specificity, and surprise scores significantly correlated

with increases in subjective well-being immediately post treatment. Further studies are needed to clarify the exact nature of these associations. Additionally, because scores on these dimensions were not significantly correlated with increases in subjective well-being at the follow up assessments, the results do not support that higher scores on these dimensions played any role in increasing the long term effectiveness of the treatment. The findings from my study have implications for those who engage in grateful recounting on a regular basis. For example, in a clinical setting, grateful recounting may be used as part of an ongoing therapy plan. The results also suggest that researchers designing future grateful recounting instructions should consider the dimensions of gratitude expression, specificity, and surprise.

In today's world it is easy to become focused on what is missing from our lives. The next new thing required for happiness is presented to us almost daily. This focus minimizes the blessings that we receive and robs us of our appreciation for what we already have. Caught on this "hedonistic treadmill," we can find ourselves no closer to what we desire, yet further away from gratefulness. Fortunately, just as a compass directs us home when we are lost, grateful recounting can be a tool that we can use to find our way back to gratitude. But like any tool, it is important to understand what is needed to make it work effectively. A compass is of little use in the hands of someone who does not know the direction they want to go.

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Appendix A
SWLS

Below are five statements with which you may agree or disagree. Using the scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Slightly disagree
- 4 = Neither agree nor disagree
- 5 = Slightly agree
- 6 = Agree
- 7 = Strongly agree

- _____ 1. In most ways my life is close to my ideal.
- _____ 2. The conditions of my life are excellent.
- _____ 3. I am satisfied with my life.
- _____ 4. So far I have gotten the important things I want in life.
- _____ 5. If I could live my life over, I would change almost nothing.

Appendix B PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment OR indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)**

1	2	3	4	5
Very Slight or Not at All	A little	Moderately	Quite a Bit	Extremely
1. Interested _____				11. Irritable _____
2. Distressed _____				12. Alert _____
3. Excited _____				13. Ashamed _____
4. Upset _____				14. Inspired _____
5. Strong _____				15. Nervous _____
6. Guilty _____				16. Determined _____
7. Scared _____				17. Attentive _____
8. Hostile _____				18. Jittery _____
9. Enthusiastic _____				19. Active _____
10. Proud _____				20. Afraid _____

\Scoring Instructions:

Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19.

Scores can range from 10 – 50, with higher scores representing higher levels of positive affect. Mean Scores: Momentary = 29.7 (SD = 7.9); Weekly = 33.3 (SD = 7.2)

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect. Mean Score: Momentary = 14.8 (SD = 5.4); Weekly = 17.4 (SD = 6.2)

Appendix C
GQ - 6

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.

Appendix D GRAT – Short Form

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 circling the number that best represents your real feelings. Please use the scale provided below, and please choose one number for each statement (i.e. don't circle the space between 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 never seem to get the advantages that others get.
_____ 16.								
								I think it's important to appreciate each day that you are alive.

Appendix E Coding Instructions

Human Benefactor listings

The participant lists a benefit and clearly identifies a person/persons that they feel are responsible for that benefit and are grateful towards.

Example: *My counselor helped me to fax something to another college. I am grateful because that was quite urgent and I did not know where I can fax that in Cheney. I was quite worried but I was happy that he was able to help.*

This meets the criteria for clear interpersonal gratitude because the participant has identified a benefit (faxing something to another college) and identified a person (the counselor) to whom they feel is responsible for the benefit and are grateful towards.

Count how many of the participant's listings over the course of the treatment match the criteria for clear interpersonal gratitude and record it in the appropriate space

Interpersonal benefit listings

The participant lists a benefit and identifies a person/persons with whom the benefit was shared and enjoyed.

Example: *I finally had dinner with my whole family. My family are never at home the same time so we never get to eat dinner together. It was nice just having all of us sit around the table and eat dinner like we used to. It made me miss those days.*

This meets the criteria for an interpersonal benefit listing because the participant writes about a benefit that was shared with other people (dinner together with their family).

Count how many of the participant's listings over the course of the treatment match the criteria for Interpersonal benefits and record in the appropriate space.

Benefactors span

This is the number of different people or groups of people a participant is grateful for over the course of the treatment.

For example: Friends, parents etc.

Count the number of clearly distinct benefactors a participant lists over the course of the treatment and record in the appropriate space below.

Gratitude Expression

The instructions of the treatment were (1) *In your mind, go over the past 48 hours and recall three things that went well during this period of time. List them below.* (2) *Now*

*take a moment to reflect on the three things on your list. For each one of them, take some time to write about how this particular experience or event made you feel **grateful**.*

Is the listing an expression of gratitude? Read the listing slowly, is the participant expressing gratitude in their writing or are they focusing on other positive emotions?

Use the following scale to rate each of the participant's listings

- 1- not an expression of gratitude
- 2-
- 3- somewhat an expression of gratitude
- 4-
- 5- an expression of gratitude

Afterwards, add up the scores for each of the listings and record the total in the appropriate space below.

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EDUCATION

*Accepted to the PhD program in psychology at the **University of Northern British Columbia**, starting September 2015.

2013 - Expected graduation June 2015

MS Psychology
 Eastern Washington
 University

2013

BSc Psychology
 University of Victoria

HONORS & SCHOLARSHIPS

2015 UNBC Graduate Entrance Scholarship
 2015 UNBC Doctoral Tuition Scholarship
 2014 Nonresident Tuition Scholarship (NRTS) Eastern Washington University
 2013 Nonresident Tuition Scholarship (NRTS) Eastern Washington University
 2009 UVIC Dean's List Faculty of Social Science
 2009 UVIC Dean's List Award
 2008 UVIC Transfer Scholarship

AFFILIATIONS

2014 – Present Member of the Association for Psychological Science

2011 - Present Psi Chi Honors Society University of Victoria Chapter

RESEARCH EXPERIENCE

Lab Manager

Department of Psychology
 Eastern Washington University
 2014 – Present.

I am assisting Dr. Watkins in the running of his research Lab. The lab's main focus is on how gratitude enhances happiness and well-being. As lab manager, I have been involved in a number of research projects. My regular duties included training research assistants, collecting and coding data, and assisting in research design and analyses.

Research Assistant

Department of Psychology
University of Victoria
2012

I worked on a study for Ph.D. candidate Jessica Rourke that looked at the impact grateful journaling had on well-being. My main duty was to organize and transcribe qualitative data. I also participated in the data analyses and dissemination of our findings.

Teaching Experience

Psi Chi Tutor

University of Victoria
2011 – 2012

I ran tutorial sessions for first and second year psychology undergraduates from a number of different classes including: PSYC 100A, PSYC 100B, PSYC 210, PSYC 201, and PSYC 215A.

Instructor and Course Design: PSYC 498. The Psychology of Revenge and Forgiveness

Eastern Washington University: Jan.05/2015 – March.20/2015
20 Students
Supervisor: Philip Watkins

Posters & Presentations

McCurrach, D. (2015, May). *Phenomenology of Joy and Gratitude*. Paper presented to the annual convention of the Western Psychological Association in Las Vegas as part of the symposium: Joy and Gratitude: Exploration of a Relationship Important to Well-Being. Symposium Chair: Philip C. Watkins.

Solom, R., Pray, B., **McCurrach, D.**, Rehder, K., & Watkins, P.C. (2015, May). *Thieves of Thankfulness: Inhibitors of Gratitude*. Poster presented to annual convention of the Western Psychological Association in Las Vegas.

McCurrach, D., Budde, A., Rae, S. (2015, April). *Because I'm Happy: A Positive Interpretation Bias in Happy People*. Poster presented to the annual Graduate Research and Creative Works Symposium at Eastern Washington University.

Timbrook, T., **McCurrach, D.**, & Watkins, P.C. (2015, April). *Looking on the Brighter Side: A Positive Interpretation Bias in Grateful People*. Poster presented to 29th Annual National Conference on Undergraduate Research at Eastern Washington University.

Watkins, P. C., Solom, R., Hutchinson, D. E., & **McCurrach, D.** (2014, May). *Narcissism and cynicism inhibit gratitude: A prospective study*. Poster presented to the annual convention of the Association for Psychological Science, San Francisco, California

McCurrach, D., Hutchinson, D. E., & Watkins, P. C. (2014, April). *Seeing the best in others may help us see the best in ourselves*. Poster presented to the Annual Convention of the Western Psychological Association, Portland, Oregon.

Rourke, J., Newton, A., **McCurrach, D.**, & Gifford, R. (2012, April). *The effects of gratitude on well-being*. Poster Presented to the Western Psychological Association Annual Convention, San Francisco, California.

Publications

Watkins, P. C., & McCurrach, D. (*in review*). Progress in the science of gratitude. In S. Lopez, L. Edwards, & S. Marques (Eds.), *Oxford Handbook of Positive Psychology, third edition*. New York: Oxford University Press.

Watkins, P. C., & McCurrach, D. (*in review*). Exploring How Gratitude Trains Cognitive Processes Important to Well-being. In D. Carr & J. Madeley (Eds.), *Gratitude: An Interdisciplinary Approach*. Routledge publishing.