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What influence gratitude? The effects of type of benefactor, sense of entitlement and downward counterfactual thought

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of Entitlement and Downward Counterfactual Thought

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2017

What Influence Gratitude? The Effects of Type of Benefactor, Sense
of Entitlement and Downward Counterfactual Thought

By
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requirements for the Degree of Doctor of Philosophy in Psychology

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2017

What Influence Gratitude? The Effects of Type of Benefactor, Sense of
Entitlement and Downward Counterfactual Thought

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ABSTRACT

Research has shown that gratitude towards a benefactor positively predicts
subjective well-being and other outcomes such as reciprocity and helping
behaviours. However, previous research has not examined whether this effect is
consistent or will differ across benefactor type (i.e., individual versus group).
Research has also not examined the potential effects of accompanying thoughts
related to the benefit assessment. Through two experimental studies, the
hypotheses that gratitude towards benefactor is lower for group benefactor as
compared to individual benefactor, that self-entitlement thoughts and downward
counterfactual thoughts will have main effects on gratitude as well as moderate
the effect of benefactor type on gratitude, were tested. Results showed that the
hypothesised main effect of benefactor type on gratitude was supported in one of
the two studies (Study 2) but the other hypotheses were not supported. Contrary
to the hypothesised weaker positive effect, Study 1 found that self-entitlement
thoughts had a stronger positive effect on gratitude than neutral thoughts that
focused on the goodness of benefits. Contrary to the hypothesised stronger
positive effect, Study 2 found that there was no difference in effect between
downward counterfactual thoughts and neutral thoughts that focused on recalling
about benefiting experiences. Study 2 found that participants in the individual
benefactor condition reported higher intent to help than participants in the group
benefactor condition, and this effect of benefactor type on intent to help was
partially mediated by gratitude. In addition, trait gratitude was a moderator.
When trait gratitude was high, those who reflected upon the benefits brought
about by group benefactor experienced lower gratitude than those who reflected
upon the benefits brought about by individual benefactor. However, when trait
gratitude was low, the difference in the level of gratitude across benefactor type
was not significant. The findings also showed that gratitude and indebtedness, as
measured in both studies, were distinct constructs. Limitations of the current
research, as well as future research directions and potential contributions were
discussed.

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CHAPTER 1: INTRODUCTION

What is gratitude? What is the context in which it occurs? What does it mean to be a grateful person? These are questions that have occupied the minds of philosophers and thinkers alike in recent times (Emmons & Crumpler, 2000). Gratitude is highly regarded in nearly all major religious traditions such as Buddhism, Christianity, Islam, and Hinduism as a positive human quality to be cultivated (Emmons & Crumpler, 2000; McCullough, Kilpatrick, Emmons, & Larson, 2001). The word grateful likely originated in the sixteenth century (Ayto, 1990) and it was derived from the Latin "gratus" which means pleasing or thankful. Derivatives from this Latin root "have to do with kindness, generousness, gifts, the beauty of giving and receiving, or getting something for nothing" (Pruyser, 1976, p. 69). Watkins (2014) noted that often in sixteenth or seventeenth century literature, writers would use "grateful" whenever they felt pleased. The oxford English Dictionary defines gratitude as "the quality or condition of being thankful; the appreciation of an inclination to return kindness" (p. 1135).

Psychologists have largely neglected the study of gratitude until the 21st century (McCullough, Kimeldorf, & Cohen, 2008) especially with the emergence of the positive psychology movement and the focus on positive character traits and virtues (Gulliford, Morgan, & Kristjansson, 2013). Gratitude has received attention in research given considerable evidence that suggests that it is important for well-being and various positive outcomes (Lambert, Graham, Fincham, & Stillman, 2009). As will be explicated in greater detail in the next section, gratitude has been shown to predict higher levels of helping behaviours (McCullough et al. 2001), strengthened personal bonds (e.g. Algoe, Gable &

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Maisel, 2010) strengthened social bonds (e.g. Emmons & Shelton, 2002; McCullough & Tsang, 2004), lower depression (Woodward, Moua, & Watkins, 1998), generosity (Tsang, 2006), general psychological well-being (e.g. Emmons & Crumpler, 2000; Emmons & McCullough, 2003), and satisfaction with life (e.g. Lambert, Fincham, Stillman, & Dean, 2009). Although research on outcomes of gratitude abound with consensus regarding its positive effects and associations, many questions remain regarding the conceptualisation of gratitude.

The bulk of research on the antecedents and consequences of gratitude in the past were interpersonal in nature with the emphasis on the interpersonal transfer of benefit (Tsang & McCullough, 2004) involving a benefactor and a beneficiary who intentionally benefits. Consequently, it is not known conclusively if research findings relating to a single benefactor can be applied across other contexts such as group benefactors (e.g. policemen and firemen) where the transfer of benefit is not clear cut and the intention ambivalent. Some studies on lay understanding of gratitude have shown that people do experience thankfulness and appreciation that are directed at benefactors without involving any specific benefiting episodes (e.g. Steindl-Rast, 2004; Teigen & Jensen, 2010) but these studies did not investigate if differences in benefactor type lead to different gratitude experiences and outcomes. Moreover, given the growing interests in gratitude interventions because of the positive outcomes on well-being and helping motivations (e.g. Emmons & McCullough, 2003; Hill & Allemand, 2011), there is a need to be cautious regarding claims about the effectiveness of gratitude intervention practices that require participants to think about benefactors in the generic sense if different types of benefactors in fact lead to different gratitude effects and outcomes. Hence, the first goal of this research was to test

the main effect of benefactor type (individual vs. group) on the experience of gratitude through two experimental studies. Reflective writing exercise, created for this research but similar in nature to gratitude list approaches (Emmons & McCullough, 2003), was used to induce gratitude and was justified on grounds that brief gratitude induction methods have been shown to work in the past in eliciting gratitude experiences and helping motivation albeit in varying degrees (Davis et al. 2016). It was hypothesized that people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than compared to people who reflected upon the benefits brought about by individual benefactor. Individual benefactors in this research were those benefactors that the beneficiary knows personally such as family members, friends and individuals whereas group benefactors were represented by public service officers (e.g. police force, military, healthcare) chosen on the basis that unlike other group such as foreign workers who may be viewed negatively, public service officers are ubiquitous and incontrovertible in providing benefit to others in society. Individual benefactors differed from group benefactors primarily in the level of abstraction in features and the availability of individuating information. On a practical level, it is also important to study about public service officers since they play a critical role in citizen's lives on a day-to-day basis yet surprisingly there are no studies related to them in the gratitude field that shed light on their effects and possible ramifications on society. Qualitative analysis in this research gave insights on the kinds of benefits a sample of university students in Singapore feel they have benefited from by these public service officers. These were also compared against benefits provided by individual benefactors for similarities and differences.

The second goal of this research was to examine how thoughts related to benefit assessment that accompany a brief gratitude reflection process influence gratitude experiences. This has been an unexplored direction in research. Most research on gratitude adopts a static approach by examining associated effects after gratitude has been elicited when subjects are told to think about benefactors to be grateful to. The traditional assumption does not take into consideration the possibility that associated evaluative thoughts about benefits can influence gratitude. This research therefore attempted to show that the type of evaluative thought matters in influencing the perception of a benefit invoking situation and contribute to the understanding of how gratitude interventions might be enhanced or attenuated by consideration of evaluative thoughts. Since there have been studies showing that individual differences exist in benefit appreciation, specifically in psychological sense of entitlement and downward counterfactual thinking (Tomlinson, 2013; Koo, Algoe, Wilson, & Gilbert, 2008), this research proposed that self-entitlement thoughts and downward counterfactual thoughts are possible candidates as factors that influence gratitude reflection process and therefore the overall gratitude experience.

In addition to the first goal to test the main effect of benefactor type, the two studies conducted in this research therefore also aimed to show that there is a main effect of thought type on gratitude. In Study 1, it was hypothesised that people who engaged in self-entitlement thoughts will experience lower gratitude than those who engaged in neutral thoughts. Conversely, in Study 2, it was hypothesised that people who engaged in downward counterfactual thoughts will experience higher gratitude than those who engaged in neutral thoughts. A two-way interaction between benefactor type and thought type on gratitude was also

predicted to occur. In study 1, it was hypothesised that people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker in the presence of self-entitlement thoughts. In Study 2, it was hypothesised that people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker in the presence of downward counterfactual thoughts.

Finally, the auxiliary analyses in this research served to extend the understanding of gratitude in three areas. In the first area, trait effects were examined in relation to the hypotheses of this research. The second area is on outcome of gratitude. Research in the past primarily focused on only interpersonal forms of helping in experimental research. This research extends on the construct of helping motivation by including both interpersonal and impersonal forms of helping. Given limited evidence on whether gratitude and co-occur and also lack of consensus about the direction of the relationship, the third area in the exploratory research section made comparisons between the two constructs.

Having provided a brief overview of the goals of this research, the following sections will explicate details of the literature findings, means to address the gaps that will lead to the study hypotheses.

Definition of Construct in Literature

Overall, gratitude has been conceptualised as an emotion, a personality trait, a moral sentiment, a virtue, an attitudinal outlook, a thinking style, a coping

response and a mental habit (Emmons & Crumpler, 2000; Emmons, McCullough, & Tsang, 2003). Most researchers adopt a narrow definition of gratitude (Lambert et al., 2009) and this is best captured by Robert's conceptualisation of gratitude having three components: the benefit, the beneficiary, and the benefactor. Noted by Roberts, (2004), in this form of gratitude, one "construes himself or herself as the recipient of some good from a giver" (p. 61). Such good from the giver are usually costly, voluntarily and intentionally given (McCullough et al., 2008; Roberts, 2004). Wood, Brown, and Maltby (2011) considered benefits transferred in such interpersonal relationships to include kind gestures, positive responses and the direct provision of aid (Algoe, Haidt, Gable, & Phelps, 2008). Indeed, in a review of thirty-six studies that considered studies that best illustrated the nature and effects of gratitude, it was concluded that "people experience gratitude in response to a valued positive outcome that another individual intentionally caused. This grateful emotion leads people to desire to act prosocially themselves, at least in the short run. Feelings of gratitude are reported to be pleasant and are experienced often in the course of everyday life" (Tsang & McCullough, 2004, p. 291). The moral sentiment and virtuous dimension of gratitude comes from the altruistic motive from the giver behind the benefits transferred in such interpersonal relationships. Aptly defined by Emmons (2004), gratitude is "the recognition and appreciation of an altruistic gift" (p. 9). The definition by Emmons therefore has the added component of altruism. Overall, this narrow definition of gratitude has also been labelled as "interpersonal gratitude" or "grateful to someone".

The prevalence of interpersonal gratitude as a construct used in research identified in the review by Tsang and McCullough (2004) have presented

problems since it may not have been carefully considered prior to the conducting

of studies. Indeed, Gulliford et al. (2013) critiqued that in general, there was little

effort on the part of gratitude researchers to define the construct carefully to match

what they are measuring or to create appropriate scales that specifically measure

the type of gratitude under study in the first place. This is an important point

since researchers are potentially missing out on other varieties of gratitude that

can exist. Effects from these gratitude studies may also have been confounded.

In a review of 26 recent papers on gratitude written by psychologists, Gulliford et

al. (2013) discovered that 10 papers quoted definitions offered by Emmons and

colleagues and 12 took on definitions previously suggested by McCullough and

colleagues. The remaining four papers did not define gratitude at all. Only five of

the 22 papers made an attempt to introduce what form of gratitude was the

research about.

 Despite the emphasis on interpersonal gratitude, the key gratitude

researchers have acknowledged from that gratitude also includes feelings of

thankfulness and appreciation that are directed at benefactors or circumstances

(McCullough, et al., 2001; Wood, Froh, & Geraghty, 2010). In other words, the

experience of gratitude need not be restricted to an interpersonal exchange

between a beneficiary and a benefactor, as often put forward as the case. Scholars

have proposed that there are likely varieties of gratitude (e.g. Lambert et al., 2009;

Steindl-Rast, 2004, Teigen & Jensen, 2011) that has yet to be distinguished or

empirically established.

 Taking reference from Teigen (1997), "a generalised source" refers to the

notion that one is grateful for the gifts in life, and they can be found in state of

affairs (e.g. having admitted to a good school, blessed with healthy family)

particular episodes (e.g. incidents which turn out to be better than for the worse) or life in general (e.g. having a good job, friends, family). The generalised source of gratitude has also been labelled as "impersonal gratitude" (Lambert, et al., 2009; Teigen, 1997) and also "grateful for something or someone" (Adler & Fagley, 2005; Steindl-Rast, 2004). Empirical evidence has indicated that lay people do acknowledged this form of gratitude such as being grateful for health, family, and education (Lambert et al., 2009; Teigen & Jenson, 2011). Some higher spiritual forces, luck and good fortune is included in this kind of gratitude. For example, in a research on surviving the Tsunami disaster by Teigen and Jenson (2011), the authors noted that although survivors were grateful to people who helped them during the Tsunami, there was also the form of gratitude felt that was not directed toward anyone in particular, but was of a more existential kind, due to their good fortune. It should be clarified that even though agentic forces are included in this category, it differs from benefactor triggered or "grateful to" gratitude insofar as it is generalised and therefore there is no specific act from the benefactor directed only at the recipient. Differing from the narrow perspective from the Robert's (2004) definition of gratitude, the broader perspective can be encapsulated by Peterson and Seligman (2004) as "a sense of thankfulness and joy in response to receiving a gift, whether the gift be a tangible benefit from a specific other or a moment of peaceful bliss evoked by natural beauty" (p. 554).

A conceptual issue with the broader definition of gratitude is that the cause of gratitude becomes ambivalent since it means an agentive referent may not matter. Some researchers argued appraisal process eliciting gratitude should differ in the absence of non-agentive referent (Steindl-Rast, 2004; Lambert et al., 2009) and this leads to different action tendencies. For instance, it is difficult to

comprehend how feeling a sense of gratitude for the gift of nature (e.g. always getting fine weather) should encourage reciprocation of helpful gestures whereas that would be the case if one is the recipient of some good from agentive benefactors (e.g. service staff). This wider definition then may not be helpful in bringing clarity to the concept of gratitude. One may even go so far to challenge if it made sense to feel grateful for non-agentive transpersonal factors if we follow the narrow definition by Tsang and McCullough (2004) that there should be a "reciprocal" or "returning" dimension with the experience of gratitude. Arguably, the distinctive logical grammar of gratitude will be lacking without this dimension since the word gratitude can then be replaced by appreciation which is the recognition and enjoyment of the good qualities of someone or something.

Given the need to define and scope gratitude carefully to match the purpose of the research, the gratitude of interest will follow more closely with the narrow perspective of gratitude that only considers agentive benefactor. However, as explicated in the sections below, the definition differs from those of Emmons or McCullough by broadening the notion of a personalised benefactor to include more than a single individual. Specifically, gratitude in this research is defined as the following:

> A sense of thankfulness and joy in response to the recognition and appreciation of receiving a benefit, whether the benefit is from a specific individual or from a group of people. This grateful emotion encourages helping motivation, at least in the short run.

Differences Between Gratitude and Indebtedness

Watkins (2014) noted that some in the social sciences make no distinction between gratitude and indebtedness (e.g. Komter, 2004) but the majority view

both constructs as distinct. Both gratitude and indebtedness are reactions to favours but are qualitatively different emotions. Early research suggests being indebted to others was an unpleasant state (e.g. Greenberg, Bar-Tal, Mowrey, & Steinberg, 1982) whereas gratitude is perceived by clear majority of people as a happy state (Gallup, 1998). Watkins (2014) noted that some researchers have claimed that in more collectivist cultures gratitude and indebtedness are intertwined such that gratitude has more negative affective tones. However, others disagree and produced findings showing eastern cultures experiencing gratitude and indebtedness similarly to people in the West (Naito, Wangwan, & Tani, 2005).

Empirical evidence indicates there are distinctions between the two constructs. Whereas gratitude is a positive-valence emotion, indebtedness is accompanied by negative emotions such as regret, discomfort and uneasiness. McCullough et al. (2001) therefore argued that gratitude is conceptually distinct from indebtedness, based on the opposite affective tone between the two constructs.

Watkins, Scheer, Ovnicek, and Kolts (2006) found that gratitude was associated with prosocial action tendencies but indebtedness was not, thereby suggesting that gratitude is associated with a broader array of responses to a benefit. Others have shown that gratitude and indebtedness, though both potential reactions to the receipt of a benefit, are qualitatively different emotions that may lead to different behavioural reactions. For example, Naito et al. (2005) found that gratitude and indebtedness had different determinants and elicited different reactions from participants, again with gratitude being related to more prosocial response tendencies. This finding was also corroborated by Tsang (2007) with

results showing that gratitude and indebtedness are related but separate emotions, and that gratitude is favourable to facilitating prosocial reactions compared to indebtedness.

Some researchers have proposed whether indebtedness or gratitude is triggered depends on the intention of the giver. For example, Tsang (2006) found that participants reported more gratitude when a benefactor was perceived to have benevolent intentions for helping, but not so when benefactor was perceived as having ulterior motives. Indeed, gratitude was observed to decrease (and indebtedness increase) when givers expect more in return for a gift (Algoe & Standon, 2012; Watkins et al., 2006). Overall, available evidences suggest that gratitude and indebtedness are distinct psychological constructs. Subscribing to the view by Watkins and colleagues that both gratitude and indebtedness are potential reactions to the receipt of a benefit, and the possible co-occurrence of both emotions, this research considered both measures of gratitude and indebtedness.

Function of Gratitude

The experience of gratitude is not an end in itself. Some psychologists have proposed that gratitude serves to develop social relationship by encouraging reciprocal beneficial behaviour between a benefactor and recipient (Algoe & Haidt, 2009; Bartlett & DeSteno, 2006, Emmons & McCullough, 2004) leading to trust building and, consequently the preservation of relationships. Research by Grant and Gino (2010) showed that gratitude expressions increase prosocial behaviour by enabling the beneficiary to feel socially valued.

A number of studies have also found that benefit perception leads to helping responses through gratitude (e.g., Bartlett & DeSteno, 2006; Grant &

Gino, 2010; Watkins et al., 2006). In these experimental studies, helping

responses include the willingness to help the confederate complete another task at

no additional benefit or the willingness to volunteer time and effort for a task.

Coming from a well-being perspective, others have suggested that

gratitude is a positive emotion that brings happiness and other associated benefits

(McCullough, Emmons, & Tsang, 2002; Fredrickson, 2004; Fredrickson, Tugade,

Waugh, & Larkin, 2003). As a state, it was shown that counting one's blessings

can increase positive affect, subjective well-being and health (Emmons &

McCullough, 2003; Seligman, Steen, Park, & Peterson, 2005). Research into trait

gratitude has indicated that those high in trait gratitude tend to be happier and

associated with traits such as low in neuroticism and high in agreeableness and

extraversion (McCullough et al., 2002; McCullough, Tsang, & Emmons, 2004).

At this juncture, one may challenge that this helping or prosocial

behaviour is like any other outcome of experiencing positive emotions such as joy

and empathy. On this point, McCullough et al. (2008) argued that unlike other

positive emotions that can also promote helping or prosocial behaviour, gratitude

stimulates helping even when it is costly to the beneficiary. In this next two

sections, the functions of gratitude will be elaborated in greater detail.

Relational Aspects of Gratitude

Gratitude has been proposed to develop social relationship through

increasing the desire to reciprocate towards the benefactor (Bartlett, Condon,

Cruz, Baumann, & Desteno, 2012; McCullough et al., 2008) whenever it is felt.

Gratitude therefore to some degree produces a motivation that serves to advance

relationship with the benefactor (Algoe et al., 2010; Algoe & Stanton, 2012;

Bartlett & DeSteno, 2006; DeSteno, Bartlett, Baumann, Williams, & Dickens,

2010). This is done through opening one's eyes to the good qualities of the

interaction partner (Algoe & Haidt, 2009) or as Algoe (2012) puts it, "finds or

reminds" and intrinsically motivates a variety of prosocial behaviors back toward

the benefactor (Bartlett & DeSteno, 2006; DeSteno et al., 2010; Tsang, 2006;

Tsang, 2007; Watkins et al., 2006). It is useful to point out that in the gratitude

research field, prosocial behaviours are generally defined more loosely unlike

other fields such as industrial organisational psychology. Some researchers use

prosocial behaviours to refer to general helping behaviours reciprocated to

benefactor and also extended to unrelated third parties. In all, behaviours that are

considered prosocial behaviours refer to voluntary behaviours that can benefit

others (Holmgren, Eisenberg, & Fabes, 1998), and include helping, sharing,

comforting, cooperating, donating, being fair and volunteering (Zahn-Waxler &

Smith, 1992; Dunfield et al., 2011). In this research, the focus of the outcomes of

gratitude will be intent to help.

The effects of gratitude may go beyond strengthening social bonds in

relationships to include that of communities (Fredrickson, 2004). This has been

supported by some research. These prosocial responses include the inclination to

extend charity to third party (McCullough et al., 2008), increase offering of social

support (Emmons & McCullough, 2003), increase social justice behaviours

(Michie, 2009) and distributing monetary resources above and beyond feelings of

reciprocating for the benefactor (DeSteno et al., 2010; Tsang, 2006). The increase

in trust has also been reported (Dunn & Schweitzer, 2005).

Explanation for the reasons behind prosocial effects of gratitude has thus

far been speculative (McCullough et al., 2008; Nowak & Roch, 2007). Such

"upstream reciprocity" or "pay it forward effects" play a role in enhancing bonds

in communities and organisations (Ahrens & Forbes, 2014) through distributing resources to a third party after one has received a benefit from a benefactor (McCullough et al., 2008).

As already alluded to in the section on the construct of gratitude, one notable observation in the literature is that many of the helping or prosocial effects of gratitude involves interpersonal forms of gratitude with an identifiable benefactor or interaction partner. When this is the case, it is important not to generalise about the effects of gratitude to the varieties of gratitude other scholars have mentioned about (Lambert et al., 2009; Steindl-Rast, 2004, Teigen & Jensen, 2011). More empirical evidence is needed to establish whether helping responses will be the same regardless of the type of benefactor in question.

Gratitude and Emotional Well-being

Gratitude has been reported as a positive feeling, but it is not just another form of generic happiness. Indeed, prior work showed that gratitude is not reducible to general positive affect (Algoe & Haidt, 2009; Kashdan, Mishra, Breen, & Froh, 2009; McCullough, et al., 2002; McCullough et al., 2001).

Experiencing gratitude has also been positively associated with psychological well-being (Emmons & Crumpler, 2000; Emmons & McCullough, 2003; Kashdan, Uswatte, & Julian, 2006; McCullough et al., 2002; Park, Peterson, & Seligman, 2004; Seligman, et al., 2005; Watkins, 2004), satisfaction with life (Lambert et al., 2009; Wood, Joseph, & Maltby, 2008, 2009) and physical well-being (Bono & McCullough, 2006; Emmons, Wood, McCullough & Tsang, 2003). In a study by Hill and Allemand (2011), gratitude was found to be associated with greater well-being in adulthood (higher positive affect, higher optimism, lower pessimism and higher satisfaction with life) and the effects

remained significant predictors of well-being after controlling for the big five traits (Hill & Allemand, 2011). The association between gratitude on well-being have been proposed by Watkins (2014, p. 7) in his review as not merely correlation but causal in nature. The review suggested gratitude causes an increase in overall happiness. The strong association compared to other traits and virtues led to some calling gratitude the "poster child" of positive psychology (Wood et al., 2010).

Experimental studies have generally found that gratitude exercises enhance subjective well-being (e.g. Emmons & McCullough, 2003; Seligman et al., 2005; Watkins, Uhder, & Pichinevskiy, 2015; for reviews, see Watkins, 2014; Wood et al., 2010) although reviewers cautioned of the need to examine the quality of comparison groups in some of the studies (Wood et al., 2010). Gratitude interventions frequently compare against a hassle condition which Wood and colleagues argued is ambiguous since differences in results may possibly be attributed to negative effects of thinking about stressful events (i.e. from the hassle condition). Therefore, the authors concluded that future studies should use more appropriate comparison conditions. A more recent meta-analysis on the effects of gratitude interventions on well-being supported this position regarding the use of hassle conditions and results therefore suggest that evidence is actually not strong regarding the efficacy of gratitude interventions and there is a need to bolster effect sizes for future studies (Davis et al., 2016).

The Grateful Disposition

Gratitude, like other emotions, conceivably could exist as an affective trait, a mood, or an emotion. McCullough et al. (2002, p. 112) defined it as "a generalised tendency to recognise and respond with grateful emotion to the roles

of other people's benevolences in the positive experiences and outcomes that one obtains". Research into gratitude has also examined how individuals differ in their tendencies to experience gratitude. McCullough et al. (2002) proposed that people differ in intensity and frequency of experiences of gratitude. They should also differ in terms of span and density. Grateful people should experience gratitude more intensely after receiving a benefit than less grateful individual and grateful people should also experience gratitude more frequently than those less grateful. "Span refers to the number of life circumstances for which a person feels grateful at a given time" (p. 113). Finally, density refers to the notion that grateful people should attribute successful outcomes to a wider variety of sources.

In other approaches, Watkins (2009) conceptualised dispositional gratitude differently. Grateful individuals should have a strong sense of abundance (i.e., gifts of life have been abundant), appreciate simple pleasures and appreciate others (social appreciation). Overall, research found that those high in trait gratitude tend to be happier and experience lower negative emotions and higher positive emotions (McCullough et al., 2002; Breen, Kashdan, Lenser, & Fincham, 2010). Indeed, the link between gratitude and well-being has been shown to be consistent across diverse age groups (Froh, et al., 2011; Froh, Emmons, Card, Bono, & Wilson, 2011; Proctor, Linley, & Maltby, 2010; Scheidle, 2011, Watkins, Woodward, Stone, & Kolts, 2003). Two studies that examined non-Caucasian samples (students sample and athlete samples from Taiwan) provided evidence that dispositional gratitude is associated with well-being too although more research is needed to build on these early findings (Chen & Kee, 2008, Chen, Chen, Kee, & Tsai, 2009). The studies by McCullough et al. (2002, p. 124) are important because they showed that dispositional gratitude cannot be

accounted fully by the Big Five: "Big Five only accounted for approximately 30%

of the variance in the disposition toward gratitude. Even if one were to correct the

obtained associations for measurement error, the Big Five still would account for

no more than 40% to 45% of the variance in the disposition toward gratitude, so

the disposition toward gratitude is by no means reducible to a linear combination

of them."

Although McCullough et al. (2002) appeared to emphasize on the agentive

aspect in their definition, their conceptualisation of trait gratitude is in fact quite

holistic. In the widely used measure of trait gratitude *The Gratitude*

Questionnaire-6 (GQ-6), items were balanced insofar as both gratitude for

"someone or something" were measured. For instance, sample items included

"As I get older I find myself more able to appreciate the people, events, and

situations that have been part of my life history," and "Long amounts of time can

go by before I feel grateful to something or someone". Their definition of facets

of the grateful disposition, span (number of life circumstances for which a person

feels grateful at a given time) and density (the notion that grateful people should

attribute successful outcomes to a wider variety of sources) also point to this

encompassing definition of gratitude, avoiding the limitation that comes with

those interpersonal account of gratitude considering only the interpersonal

gratitude between beneficiary and benefactor. Given that GQ-6 is a holistic

measure, it is appropriate to use it for most research where concern may not be on

individual benefactors.

Addressing Gap 1: Benefactor Type and Gratitude

The literature review has shown that scholars in the past have attempted to

account for the varieties of gratitude through categorising gratitude research as

either adopting the narrow or broad perspective. To recap, the narrow perspective (or personalised) emphasised on the interpersonal exchange of benefits whereas the broad perspective (or generalised) emphasised on state of affairs, episodes or life in general. Overall, the bulk of empirical research has been in the domain of the narrow perspective (noted in review by Tsang & McCullough, 2004; Gulliford et al., 2013). Although classifying gratitude research into either perspective can be useful in making distinctions, such an approach cannot account for certain types of referents that fall into neither of the categories. An example of such a case would be group benefactors. Given that there are potentially many forms of group benefactors in society (e.g. public service officers, volunteers, foreign workers), this study will scope the research by focusing on public service officers and they were chosen on the basis that they are common in day-to-day living and therefore cannot be dismissed as a trivial or something inherently unimportant to research upon. For example, it is common for people to experience gratitude toward groups such as policemen, firemen, teachers, or nurses and doctors or service provided by any public service officers. In this paper, the subsequent use of the term group benefactor would be referring to this group.

Although a single benefactor and group benefactor are common insofar as they are agentive in nature, they differ in several respects and so cannot be clustered under personalised gratitude. Past research on gratitude involving agentive actors (i.e., those by Emmons and associates) have argued about the importance of benefit being freely given, altruistic with no ulterior motives for the experience of gratitude to occur. In the context of group benefactors, this is not always accurate. Gratitude derived from group benefactors suggest a responsive interaction partner need not matter. For instance, one does not need to have

personally interacted with firemen to experience gratitude for their service to society. The motive can also be ambivalent since actions that benefited the recipient can simply be something that is admirable and praiseworthy. For example, people can feel grateful to public service officers, who have been paid to do their job, regardless of whether there is the altruistic intention to specifically benefit others. People can feel grateful to public service workers having to work graveyard shifts or be away from loved ones periodically in order to keep service going and this is independent of the benefactor's intention to help. This is not arguing that perception of the motivation of group benefactors is unimportant. Indeed, people are likely feel gratitude for public service officers going beyond call of duty to render extra help or to put their own lives at risk because of this altruistic intention. Rather, the point is that the type of information sensitive to individual benefactors in eliciting gratitude may not be fully applicable to group benefactors and to therefore view them as similar in the personalised or agentive sense is problematic. If it was empirically established that different types of benefactors in fact lead to different gratitude effects and outcomes, conclusions about the effectiveness of gratitude interventions (e.g. Emmons & McCullough, 2003; Hill & Allemand, 2011) that did not make such distinctions with regard to benefactor type may have been premature.

Given this gap in the literature, the first goal of this research is to investigate through experimental studies whether gratitude experiences differ when the benefactor type involves public service officers (group), compared to individual. Construal level theory and parallel-constraint-satisfaction theory will be used to guide the development of hypothesis. Construal level theory builds on the basic idea that an object or event can be mentally represented (or construed) at

varying levels of abstraction (Medin, 1989; Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976; Trope & Liberman, 2003; Vallacher & Wegner, 1987). Higher-level construal involves mental representations that are relatively abstract and structured, extracting the central, superordinate, and goal-relevant features of an object or event and leaving out specific details. Higher-level representations are less likely to change across contexts. In contrast, lower-level construal involves constructing more concrete representations that include an object's detailed, subordinate, and context-specific features (Sodeberg, Callahan, Kochersberger, Amit, & Ledgerwood, 2015).

Kunda and Thagard's (1996) parallel-constraint-satisfaction theory argues that subjective individuating information plays an important information diagnosticity role. Individuating information indicates something about the personal characteristic of a particular individual (Crawford, Jussim, Madon, Cain & Stevens, 2011) with proponents arguing about the relative power of individuating information over the use of generic information or stereotypes in social judgements (Crawford et al, 2011; Jussim, 1991; Kunda & Thagard, 1996; Locksley, Borgida, Brekke, & Hepburn, 1980).

In the context of referents, group benefactors clearly should be more abstract with less individuating information compared to individual benefactors. Group benefactors are abstractly classified based on group features such as occupational role, features (e.g. use of certain tools or equipment) and appearance (e.g. wearing of uniforms) whereas this is not the case for individual benefactors. Since past research has shown that events that are objectively closer are typically more emotionally intense (Frijda, 1988, 1992; Loewenstin, 1996; Metcalfe & Mischel, 1999) and in the case of emotion, "near is more concrete, far is more

abstract", one might expect that a more concrete stimulus would bring a stronger response than an abstract one (Van Boven, Kane, McGraw, & Dale, 2010). There should also be less individuating information for group benefactors compared to individual benefactors on the basis that there is less personally relevant characteristics (e.g. names, facial features, personality quirks and habits, style of interaction, affective and character traits) tag to groups than compared to individuals. Based on the arguments provided, when reflecting upon the benefits brought about by people, it is expected that gratitude experiences will be lower for group benefactor compared to individual benefactor. Thus, it is predicted that:

> H_1: There is a main effect of benefactor type on gratitude. People who
> reflected upon the benefits brought about by group benefactor will
> experience lower gratitude than those who reflected upon the benefits by
> individual benefactor (see Figure 1).

Addressing Gap 2: Thoughts About Benefits

The review conducted in this research has noted that the bulk of research has been on effects of interpersonal benefactors, trait gratitude and gratitude effects of well-being and helping response. Studies pertaining to psychological factors about the beneficiary is noticeably limited. Although trait gratitude is about the beneficiary, there is little research beyond this. Studies on trait gratitude have primarily focused on how individuals differ in gratitude experiences and helping responses because of differences in trait gratitude. The emphasis has been only on the use of GQ-6 and although a useful measure, it only shed light on how people differ in specific ways. GQ-6 measures show how people differ in the domains of intensity (how strongly gratitude is felt), frequency (how often gratitude is felt), span (number of things to be grateful for at a given time) and

density (how much external attribution is made for beneficial outcomes one received). There could be other factors internal to the beneficiary related to the appreciation domain that can influence gratitude experiences. For instance, there have been studies showing that individual differences exist in benefit appreciation, specifically in psychological sense of entitlement and downward counterfactual thinking (Tomlinson, 2013; Koo et al., 2008). Thoughts about benefits from the beneficiaries' perspective are therefore a largely unexplored area of research. This is important since the traditional assumption does not take into consideration that in the naturalistic setting, other evaluative thoughts about benefits can occur beyond those about benefactors. That is, gratitude experiences cannot merely arise because of thoughts about the beneficial acts from the benefactors alone. Other appraisal or thoughts related to appreciation from the beneficiary should influence the overall gratitude experience and possibly the gratitude outcomes as well.

This research proposes two possible psychological constructs that can influence the perception of benefactors. Importantly they are introduced on grounds of their links to the domain of appreciation as will be elucidated in the following paragraphs. The first construct that will be examined in this research is self-entitlement thoughts and the second construct is downward counterfactual thoughts.

Self-entitlement thoughts. Psychological entitlement is the notion that one deserves more and is entitled to more than others (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). As a trait, people high in psychological entitlement believe that reward or other positive outcome is owed to the self. For instance, entitled people believed that they are more entitled to valuable resources

(e.g. higher pay or higher rank) regardless of amount of effort or performance put in relative to others (Twenge & Campbell, 2009). Campbell et al. (2004) suggest that entitlement typically reflects the expectation of a reward as a result of a social contract. Entitlement therefore stems from the actor's beliefs regarding his/her rightful claim of privileges (Tomlinson, 2013). Sense of entitlement although conceived as a trait, has also been conceived of as state whereby levels of sense of entitlement has been observed to vary at different times (Tomlinson, 2013). State entitlement has been observed to increased when people recall about an unfair event (Zitek, Jordan, Monin, & Leach, 2010), being ostracised and being exposed to entitled messaging (O'Brien, Anastasion, & Bushman, 2011).

Overall, studies suggest that entitlement beliefs are associated with negative interpersonal outcomes. Studies have found entitled individuals have higher conflict in their relationships (Moeller, Crocker, & Bushman, 2009) and are likely to treat their romantic partners in a selfish manner (Campbell et al., 2004) and prone to engage in opportunistic behaviours (Malhortra & Gino, 2011). Entitled individuals are also less likely to feel empathy and also less likely to engage in perspective taking (Strong & Martin, 2014) in addition to the lower tendency to help others (Zitek et al., 2010). Entitled individuals are more likely to complain if they do not get their way (Fisk & Neville, 2011) and they tend to believe they are being treated poorly by others (Harvey, Harris, Gillis, & Martinko, 2013). Even one of the key gratitude researchers Emmons (2008) in a book chapter commented that of a number of attitudes incompatible with a grateful outlook in life, sense of entitlement is one of them and warned that in a "culture that celebrates self-aggrandizement and perceptions of deservingness, gratitude can be crowded out" (p. 485). Despite the remarks, there is currently no

research on this construct in the gratitude field. Another gratitude researcher Watkins (2014) has also suggested that feelings of entitlement could be a factor that inhibits the experience of gratitude but again there is no research till date that examines the case.

Given the association with a variety of negative interpersonal outcomes shown in the various studies, self-entitlement thoughts should have links and effects on gratitude experiences. Those who hold self-entitlement thoughts should feel less appreciative and thankful to benefactors given the belief that they are entitled to these benefits and it is a right to claim them. In the context of this research, those who hold self-entitlement thoughts should therefore experience less gratitude than those who hold neutral thoughts. Thus, it is predicted that:

> H_2: There is a main effect of self-entitlement thought on gratitude. People who engaged in self-entitlement thoughts will experience lower gratitude than those who engaged in neutral thoughts (see Figure 2).

Although holding self-entitlement thoughts has been hypothesised to have lower gratitude experiences compared to neutral thoughts, it is important to compare interaction effects of thought type and benefactor type. Since people who reflected on group benefactors have been hypothesised to experience lower gratitude already, that in comparison to those who reflect about individual benefactor they don't feel much gratitude in the first place after thinking about group benefactors, it is predicted that any additive effects of entitlement thoughts (i.e. in reducing gratitude) may be limited than compared to those who reflected on individual benefactors. Thus, it is predicted that:

> H_3: There will be a two-way interaction between benefactor type (individual vs. group) and self-entitlement thought (neutral vs. self-

entitlement) on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker in the presence of self-entitlement thoughts (see Figure 3).

Downward counterfactual thoughts. Counterfactual thoughts occur when individuals engaged in thoughts about how a different outcome may have occurred if one's circumstances have been different (Kahneman & Miller, 1986; Markman, Gavanski, Sherman, & McMullen, 1993; Roese, 1994, 1997). Studies have shown that when people view a situation as mutable, they are more likely to engage in downward counterfactual thinking (e.g. Gavanski & Wells, 1989; Kahneman & Miller, 1986; Miller & Gunasegaram, 1990; Roese, 1997; Sanna & Turley, 1996).

Counterfactual thinking may be categorised a variety of ways such as direction, structure, and object of reference (Roese & Olson, 1995) and one useful way focuses on direction of comparisons, i.e. upwards versus downward. Upward counterfactuals describe "alternatives that are better than what actually happened" whereas downward counterfactuals describe "alternatives that are worse than reality" (Roese, 1994, p. 805). The links between gratitude and downward counterfactuals are supported on grounds that downward counterfactual thoughts are associated with sense of being fortunate and feeling blessed (Roese, 1997; Rye, Cahoon, Ali, & Daftary, 2008) and associated with positive affect (Roese, 1994) by providing a contrast that shows how one's actual situation is better in comparison to the imagined alternative.

Despite the case made by Tsang and McCullough (2004) to review the thinking processes associated with gratitude, there continues to be a paucity of studies examining the role of downward counterfactual thinking. In the counterfactual literature, there is also less research on downward counterfactual as noted by White and Lehman (2005) and earlier on by Roese and Olson (1997). This is especially the case regarding positive events. Koo et al. (2008) noted that the effects of counterfactual thinking about positive events have been neglected and theirs is probably the first study that did so in relation to gratitude.

In their studies, the authors argued that most studies focused on the presence of events (e.g. "I'm glad that Bod is part of my life") rather than the emphasis of the absence of the events (e.g. "imagine I had never met Bob!"). Although thinking about the presence of positive events can generate gratitude, habituation effects (Brickman & Campbell, 1971; Helson, 1964; Parducci, 1995) can possibly reduce this effect because of adaption. For instance, research has shown that the more people think and understand about positive events, the less positive affect these events elicit (Wilson, Centerbar, Kermer, & Gilbert, 2005; Wilson & Gilbert, 2008). The authors showed that thinking about the absence of a positive event from one's life would improve affective states more than thinking about the presence of a positive event (Koo et al., 2008). Two other research in the gratitude domain that the author is aware of that links gratitude to counterfactual thinking is that by Teigen (1997) and Frias, Watkins, Webber, and Froh (2011). The studies by Teigen (1997) suggest that envy is experienced when "things could have been better," whereas gratitude is experienced if "things could have been worse". Tsang and McCullough (2004) in their review of the studies by Teigen (1997) were probably the first reviewers to propose that because

gratitude arise from attributing positive outcome to external agents, gratitude may also be elicited by downward counterfactual thinking (i.e. thoughts that "if things could have been worse").

Although downward counterfactual thoughts is relatively uncommon in everyday life after a positive event; that is, people are unlikely to engage in "what if" reasoning after positive events than after negative events (Roese, 1997; Roese & Olson, 1997; Sanna & Turley, 1996), this form of thinking could be cultivated and may prove to be a useful form of induction method for gratitude intervention. Following from Koo et al. (2008) research showing that thinking about the absence of a positive event from one's life would improve affective states, those who hold downward counterfactual thoughts should feel higher sense of appreciation and thankfulness to benefactors. In the context of this research, those who hold downward counterfactual thoughts should therefore experience higher gratitude than those who hold neutral thoughts. Thus, it is predicted that:

> H_4: There is a main effect of downward counterfactual thought on gratitude. People who engaged in downward counterfactual thoughts will experience higher gratitude than those who engaged in neutral thoughts (see Figure 4).

To compare interaction effects of thought type and benefactor type, this research predicted that people who reflected upon the benefits brought about by group benefactor should experience lower gratitude than compared to people who reflected upon the benefits brought about by individual benefactor but the magnitude of difference should be weaker for people who engaged in thought on downward counterfactual thoughts compared to neutral thoughts. This is the case since people who reflected upon the benefits brought about by individual

benefactors have been hypothesised to experience higher gratitude already

compared to those who reflected upon the benefits brought about by individual

benefactor, sensitivity to valence suggests that any additional affective

enhancement effect (i.e. in increasing gratitude) from downward counterfactual

thoughts is likely to be limited. Thus, it is predicted that:

H_5: There will be a two-way interaction between benefactor type

(individual vs. group) and downward counterfactual thought (neutral vs.

downward counterfactual) on gratitude. Specifically, people who reflected

upon the benefits brought about by group benefactor will experience lower

gratitude than those who reflected upon the benefits brought about by

individual benefactor but the magnitude of difference is weaker in the

presence of downward counterfactual thoughts (see Figure 5).

Corroborating Past Research on Gratitude Effects

In addition to the above hypotheses, the current research included

additional study constructs to extend the understanding of gratitude in three areas

namely, trait gratitude effects, intent to help as a gratitude-relevant outcome, and

the distinction between gratitude and indebtedness.

Trait effects. Currently many of the experimental research on gratitude

focused on the effects of state gratitude on personal and social outcomes. Few

research examined in tandem the effects of trait factors on the constructs being

studied in the experiments. For instance, few studies examined the possibility of

trait gratitude moderating the effect of state gratitude on the dependent variable.

There could be instances whereby there is no cross-situational consistency in trait

gratitude. In other words, it is possible grateful people will not experience

gratitude equally in all contexts. This research therefore considered such

possibilities by including trait measures not only of gratitude but including self-entitlement thoughts and downward counterfactual thoughts. This is also possible on grounds that trait-like measures are available for self-entitlement thoughts and downward counterfactual thoughts.

Intent to help as outcome measure. The review conducted noted that the helping effects of gratitude has been widely established in a variety research setting. However, many experimental studies examined only a narrow range of helping response. This usually involves one form of measure such as (a) either willingness to help on the spot in response to request by confederate (e.g. to fill up a tedious survey), (b) willingness to help researcher in future (e.g. by leaving details to participate in a future study) or (c) willingness to donate a portion of the numeration from the study for a charitable purpose. The measures used are primarily interpersonal helping and in some instances impersonal helping (but only in the form of making a donation) and as far as the author is aware these two forms of helping are not examined at the same time in experimental studies. This research extended the investigations from those of the past by examining intent to help from a multi-dimensional perspective through examining both interpersonal and impersonal helping applicable to the local context for the participants in question. One research question of interest is whether the nature of benefactor type affect intent to help. Past research did not make distinction with regard to the type of helping response from gratitude experiences. This research, looking at benefactor type, argues that much like the differential effect of benefactor type on gratitude, benefactor type should influence the type of intent to help (i.e. either interpersonally or impersonally). Given the existence of matching effect, it was expected that compared to people who feel gratitude for individual benefactors,

people who feel gratitude for group benefactors should be more inclined to express greater intent to help impersonally since there is no specific benefactor in mind to give back to interpersonally. In addition, this would be the case because having appreciated the importance of benefitting impersonally from group benefactors in society, the beneficiary should thereby feel compelled to model such behaviour and likewise do the same thing. Conversely, it was expected that compared to people who feel gratitude for group benefactors, people who feel gratitude for individual benefactors should be more inclined to express greater intent to help interpersonally since they have in mind an interpersonal target to give back to. In addition, this would be the case because having appreciated the importance of benefitting interpersonally from personalised benefactors, the beneficiary should thereby feel compelled to model such behaviour and likewise do the same thing.

Co-occurrence of gratitude and indebtedness. The review noted that many studies on gratitude make the assumption gratitude invoking scenarios naturally produce gratitude experiences without considering the possibility of the co-occurrence of indebtedness as some proponents argued could be the case (Tsang, 2006; Watkins et al., 2006). Subscribing to this view of co-occurrence of affect, this research would show that gratitude and indebtedness can both occur in reaction to thought about benefactors and benefit. Given the lack of consensus, this research also investigated whether there existed a negative bi-variate relationship between state gratitude and state indebtedness or whether the bi-variate relationship was positive. Also, since past research has shown that state gratitude was positively associated with prosocial motivation but not state indebtedness, this study expected that there would be a positive bi-variate

relationship between gratitude and intent to help but the positive bi-variate relationship between state indebtedness and intent to help would be weak or non-existence.

Overview of Studies

To test the hypotheses of this research, two experimental studies were conducted. The first goal of both studies was similar in testing the main effect of benefactor type (individual vs. group). With the second goal, Study 1 focused on the self-entitlement thoughts whereas Study 2 focused on downward counterfactual thoughts. The neutral thoughts condition in both studies were also dissimilar. All other items measuring the dependent variables (gratitude, helping motivation and related experiences) and the correlates (individual difference variables) were similar in both studies.

CHAPTER 2: STUDY 1

Overview of Study 1

The goals of Study 1 were to test (i) the main effect of benefactor type (individual vs. group) on gratitude, (ii) the main effect of self-entitlement thought on gratitude (neutral vs. self-entitlement) and (iii) the two-way interaction effect between benefactor type (individual vs. group) and self-entitlement thought (neutral vs. self-entitlement) on gratitude.

Study Design

The study adopted a 2×2 fully-crossed factorial experimental design with random assignment of participants to the four experimental conditions. This design was implemented in a survey method where participants completed one of the four versions of the survey questionnaire corresponding to the condition that they were randomly assigned to by the experimenter. The manipulations of the two factors were through the instructions given to participants when they proceeded with the open-ended questions in the questionnaire, first asking them about their experiences with benefactor (Factor 1: individual vs. group), and then asking them about thoughts related to benefits (Factor 2: neutral vs. self-entitlement). The rest of the survey contained items measuring the dependent variables (gratitude, helping motivation and related experiences) and the correlates (individual difference variables).

Participants and Procedure

One hundred and forty-one undergraduate students from the Singapore Management University were recruited via the university online subject pool system for the study. Participants were compensated with 1 course credit in

exchange for half an hour of participation in the study. To ensure enough data in order to achieve 80% power for a medium effect size recommended for the social sciences research (Cohen, 2013), power analysis was conducted using statistical software programme G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) for a 2 × 2 factorial design. To reduce the chances of committing type II error to 20%, i.e. falsely concluding H_0 is true 20% of the time, analysis revealed that a total, sample size of 128 was required (32 participants per condition) for the study to be worthwhile to proceed and this study met the power requirement.

Of the participants recruited, one was excluded from the study for not following the instructions of the survey. The final sample size for analyses was 140 ($M = 21.28$ years of age[1], $SD = 1.62$). Out of this final sample, 69 % were female, 91% were Singaporeans and 71.4% reported having a religion (36 % Christianity, 18 % Buddhism, 6 % Roman Catholic) with 35 participants randomly allocated in each condition.

Approval was given by Singapore Management University's Institutional Review Board to conduct the study that involved human subjects (IRB approval number: IRB-17-106-A095[817]). This ensured that the study was conducted with diligence and integrity and in full compliance with internationally established standards of research ethical principles. To participate in the study, participants first read, completed, signed and submitted to the experimenter an informed consent form (and they retained a copy). In the informed consent form, participants were informed that their participation is strictly voluntary and that they may withdraw at any time by telling the researcher present that they wish to, and this will pose no penalty to them. They could also choose to skip any specific

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[1] One participant chose not to disclose her age.

questions that they felt uncomfortable to answer without penalty. In addition, they were informed that the decision to participate, decline, or withdraw from participation would have no effect on their status or future relations with all parties involved in the research. The participants were then given a copy of the survey questionnaire corresponding to one of the four conditions in the study. After they have completed and submitted the questionnaire, participants were given the standard credit acknowledgement form as proof of participation for their course credit participation. All participants were then debriefed and given a debrief form informing them about experimental manipulations and details of the research questions in the study.

Materials

Manipulations of the two factors and survey items for the dependent variables and the correlates can be found in the appendices.

Gratitude manipulation. A structured reflective writing exercise was created for this research and it is similar in nature to gratitude list approaches (Emmons &McCullough, 2003) that requires participants to reflect and list down the benefits they have received from people. Such reflective writing exercises on benefits have been shown in past research to be effective in eliciting emotional experiences (see Grant & Dutton, 2012). In the context of gratitude research, brief gratitude intervention that focuses on reflecting on positive experiences for a few minutes is justified for experimental research since they have been shown to be effective in raising immediate mood (Koo et al, 2008; Watkins et al., 2003; Wood et al., 2010). In the group benefactor condition, participants were told to think about the benefits that they have received from the actions or contributions of public service officers (e.g., police force, civil defence, military, education,

healthcare). They were then told to list down up to five benefits that they have received from these individuals. In the individual benefactor condition, participants were asked to think about the benefits that they have received from the actions or contributions of their family members, friends and individuals they know personally. They are then told to list up to five benefits that they have received from these individuals. In both conditions, participants were instructed not to spend more than 5 minutes in the writing activity and were to do so in the space provided in the questionnaire (refer to Appendix A).

Self-entitlement thoughts manipulation. As a follow up to the benefactor reflection exercise, a thought type writing exercise was created for this study. It was modelled after the dimensions behind the sense of entitlement construct (Campbell et al. 2004). In the self-entitlement thoughts condition, participants first read the statement "There are many situations where people deserve the good things they receive in their lives, deserve more good things, and deserve more good things than others, and the good things that they received should not be reduced or taken away from them." Next, they were told to write down why for each of the benefits they have listed in the previous section, they deserve the benefit that they received or why the benefits should not be reduced or taken away from them. In the neutral condition, participants first read the statement "There are many situations where people receive good things in their lives." Next, they were told to write down for each of the benefits they have listed in the previous section reasons why the benefit that they have received is considered a good thing. In both conditions participants were instructed not to spend more than 5 minutes in the writing activity and were to do so in the space provided in the questionnaire (refer to Appendix B).

Gratitude and indebtedness. Gratitude was measured using a 3-item measure developed by Tsang (2006). Sample items for state gratitude included "grateful" and "thankful" (refer to Appendix C). To account for the possible co-occurrence of indebtedness, state indebtedness was measured with a three-item measure developed for this study with two items adapted from Tsang (2006). Sample items for state indebtedness included "obligated" and "indebted". Respondents indicated the extent to which they experienced the feeling or emotion at the present moment on a 5-point scale with anchors ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The internal reliability of gratitude was good ($\alpha = .97$). The internal reliability of indebtedness was good ($\alpha = .85$).

Positive and negative emotions. Items on other positive and negative emotions were collected to validate past research findings on the positive association between gratitude and well-being. The positive and negative affect schedule (PANAS) developed by Watson, Clarke, and Tellegen (1988) was used to measure individual affect. The PANAS is a 20-item scale with 10 items measuring positive affect and the other 10 items measuring negative affect. Sample items for positive affect include "enthusiastic", "interested" and "excited" whereas sample items for negative affect include "irritable", "ashamed" and "jittery" (refer to Appendix D). For all the items on positive and negative emotions, respondents indicated the extent to which they experienced the feeling or emotion at the present moment on a 5-point scale with anchors ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The internal reliability of positive affect was good ($\alpha = .91$). The internal reliability of negative affect was good ($\alpha = .86$).

Intent to help. To measure intent to help, participants were told in the

instruction that there are various situations in which people may or may not

choose to help and examples of such situations will be presented to them. They

were told that there are no right or wrong answers and for each situation presented

to them, they were to indicate the extent to which they would help in each

situation on 5-point scale with anchors ranging from 1 (*very unlikely*) to 5 (*very*

likely). Importantly, participants were told to imagine that the situation in

question happened "today or tomorrow". The vignettes were created for this

study since helping situations should be realistic and relevant to university

students in Singapore (refer to Appendix E). Directly presenting helping

situations (e.g. organising a movement for a cause, helping someone to change

tires in the middle of a highway) meant for adults in the Western context may not

be applicable or common especially in the East-Asian context. Moreover, this

study differed from those conducted in the past by examining helping situations

from both an interpersonal and impersonal perspective. As far as the author is

aware, there are no available items in the gratitude field that present both forms of

helping situations to participants. Some of the vignettes were modelled after those

used in the literature (e.g. Amato, 1985; Aydinli, Bender, Chasiotis, Cemalcilar, &

van de Vijver, 2014; Carlo & Randall, 2002; Grant, 2008). Sample vignettes for

interpersonal helping included "The elevator is not working. A stranger, who has

difficulty carrying several boxes of printed materials up the staircase, asked you to

help. How likely will you help him/her?" and "In a group project, one of your

fellow group members had difficulty completing his/her assigned task on time and

asked you for assistance. How likely will you help him/her?". Sample vignettes

for impersonal helping included "You came across a university staff approaching

students to request for some urgent help from volunteers for a university event. You are available to help but it will require you to reschedule some of your routine activities. How likely will you help in this university event?" and "You came across a university staff looking for students to participate in a survey designed to find ways to or improve the quality of life of people living in Singapore. The survey will take one hour to complete and there is no compensation involved. How likely will you help by participating in this survey?". The internal reliability of interpersonal helping was poor ($\alpha = .45$) whereas the internal reliability of impersonal helping was moderate ($\alpha = .64$). The overall internal reliability of intent to help was moderate ($\alpha = .65$)

Trait self-entitlement thoughts. Trait self-entitlement thoughts was measured using 9-item psychological entitlement scale developed by Campbell et al. (2004). Participants were asked to indicate on a 5-point likert-type scale reflecting their extent of agreement with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were informed that the section was about "what you deserve". Sample items included "I honestly feel I'm just more deserving than others" and "I demand the best because I'm worth it" (refer to Appendix F). The internal reliability of psychological entitlement was good ($\alpha = .87$).

Reciprocity norm. Reciprocity norm was measured using 9-item reciprocity norm scale developed by Eisenberger, Lynch, Aselage, and Rohdieck (2004). Participants were asked to indicate on a 5-point likert-type scale reflecting their extent of agreement with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were informed that the section was about "doing things in return". Sample items include "If someone does me a

favour, I feel obligated to repay them in some way", and "If someone does something for me, I feel required to do something for them" (refer to Appendix G). The internal reliability of reciprocity norm was good ($\alpha = .82$).

Trait gratitude. Trait gratitude was measured using the 6-item GQ-6 trait gratitude scale developed by McCullough et al. (2002). Participants were asked to indicate on a 5-point likert-type scale reflecting their extent of agreement with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were informed that the section was about "being grateful". Sample items included "I am grateful to a wide variety of people" and I have so much in life to be thankful for" (refer to Appendix H). The internal reliability of trait gratitude was good ($\alpha = .81$).

Trait indebtedness. Trait indebtedness was measured using 6-item trait indebtedness scale developed by Naito, and Sakata (2010). Participants were asked to indicate on a 5-point likert-type scale reflecting their extent of agreement with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were informed that the section was about "being indebted". Sample items included "Owing someone a favour makes me uncomfortable" and "As a rule, I don't accept a favour if I can't return the favour" (refer to Appendix I). The internal reliability of trait indebtedness was moderate ($\alpha = .69$).

Trait downward counterfactual thinking. Trait downward counterfactual thinking was measured using an adapted version of counterfactual thinking for negative events scale developed by Rye et al. (2008). Items were developed for this study because only negative events were examined in the original scales and it is important to examine if thoughts can differ depending on whether the event is positive or negative. This was also important for this

research especially for Study 2 whereby participants were made to think about downward counterfactual thoughts after positive events and so possible traits were examined. Participants were asked to indicate on a 5-point likert-type scale reflecting their frequency of experiencing downward counterfactual thoughts with anchors ranging from 1 (*never*) to 5 (*very often*). Four items were for positive events and four items were for negative events. Sample items for positive events included "how often do you think about how much less positive things could have been" and "how often do you feel relieved when you think about how much less positive things could have been". Sample items for negative events included "how often do you think about how much worse things could have been" and "how often do you feel relieved when you think about how much worse things could have been" (refer to Appendix J). The internal reliability of trait downward counterfactual thinking for positive events was good (α = .81). The internal reliability of trait downward counterfactual thinking for negative events was good (α = .88).

Manipulation check. To ensure that manipulations in the study worked, responses provided by participants were coded into areas so that the areas between conditions could be contrasted for differences. Specifically, those in the group condition should clearly have written in reference to benefits from group benefactor whereas those in the individual condition should clearly have written in reference to benefits from individual benefactor. Likewise, those in thought condition should have clearly written in reference to what was required such that those in self-entitlement thoughts condition and neutral condition should have written about areas related to what the question was about.

Results

      Manipulation check. To recap, the manipulations of the two factors were through the instructions given to participants when they proceeded with the open-ended questions in the questionnaire, first asking them to reflect about their experiences with benefactor (factor 1: individual vs. group), and then them asking them about thoughts related to benefits (factor 2: neutral vs. self-entitlement). If the manipulations for factor 1 were effective, then participants should have written primarily about individual benefactor or group benefactor corresponding to the factor 1 condition they were assigned to. Similarly, if the manipulations for factor 2 were effective, then participants should have written primarily self-entitlement thoughts or neutral thoughts corresponding to the factor 2 condition they were assigned to. However, since participants were previously subjected to benefactor type manipulations, it should be expected that the content written within self-entitlement thoughts or neutral thoughts conditions were in relation to the benefactor type in question.

      Benefactor type manipulation. Analysis of the written responses (refer to Figure 6 and Table 1-3) clearly showed that the participants wrote accordingly to the benefactor type condition they were assigned to. Most of the participants in the group condition wrote about benefits received in the area of educational benefits (71%), health care (70%) national security (53%) and protection from crime (50%). Healthcare benefit was largely in relation to doctors and nurses, educational benefit was in relation to teachers, national security in relation to military and homeland security forces, and protection from crime was in relation to police. These responses were generalised at the group benefactors level with no individuating information about specific individual benefactors. This should be

expected given the nature of the manipulation. However, a few participants did mention about specific individuals in the domain of educational benefits (4%), public policy (1%) and other miscellaneous examples such as help from a specific public service officers to resolve an issue (6%). The hypotheses would therefore be separately tested with these cases dropped to determine if findings as a result would change since the possibility existed that these participants were not entirely thinking about benefactors at the group level. Most of the participants in the individual benefactor condition wrote about benefits in the area of family instrumental support (46%), family emotional support (40%), friends emotional support (41%) and friends instrumental support (43%). Overall, findings therefore showed that participants wrote according to benefactor type required of the manipulations.

Self-entitlement thoughts manipulation. Analysis of the written responses (see Figure 7 and Table 4-7) clearly showed that the participants wrote accordingly to the thought type condition they were assigned to. Those in self-entitlement thoughts condition writing about group benefactor felt that they deserved the benefits or that the benefits should not be reduced because it was the outcome of an equitable exchange (49%), was part of citizenship rights (43%) and part of universal rights (29%). Those in self-entitlement thoughts condition writing about individual benefactor felt that they deserved the benefits or that the benefits should not be reduced because it was essential for positive growth of self (51%), there has been a reciprocal exchange of benefits between self and target (49%) and that it was the right of dependents (31%) to be entitled to these benefits. Such entitled thoughts were not written down by participants in the neutral conditions. Those in neutral condition writing about why benefit from

group benefactor was a good thing reported that educational benefit was essential for positive personal development (71%), that they experienced peace of mind from security and police forces (69%), and healthcare benefit was important for one's personal health in staying fit and healthy (49%). Those in neutral condition writing about why benefit from individual benefactor was a good thing reported that they experienced positive emotions from emotional benefits brought by family and friends (74%), the benefit was important for positive personal development (74%) and the benefit was important for goal attainment in life (54%).

Preliminary analyses. The internal consistency, reliabilities, means, standard deviations, and inter-correlations of study variables are presented in Table 8. Zero-order bivariate correlations showed that gender was not related to gratitude (r_{obs} = - .02, p > .05) or intent to help (r_{obs} = .08, p > .05). In addition, whether participants had a religion or not was not related to gratitude (r_{obs} = .08, p > .05) or intent to help (r_{obs} = -.03, p > .05). In line with past research, there was a positive relationship between gratitude and PA (r_{cor} = .57; r_{obs} = .50, p < .01) and gratitude was not related to NA (r_{cor} < .01; r_{obs} < .01, p > .05).

Hypotheses testing. In order to examine the main and interaction effects hypothesised in this study, a 2 (benefactor type: individual vs. group) × 2 (self-entitlement thought: neutral vs. self-entitlement) fully crossed analysis of variance (ANOVA) with balanced design was conducted. In this study, α for significance testing was specified at the .05 level.

H1 states that there is a main effect of benefactor type on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than compared to people who reflected

upon the benefits brought about by individual benefactor. Findings did not show a main effect of benefactor type, $F(1, 136) = .26$, $p > .05$, $\eta_p^2 < .01$. Across benefactor type conditions, participants in the group benefactor condition ($M = 3.53$, $SD = .97$) did not experience gratitude that was significantly different from individual benefactor condition ($M = 3.62$, $SD = 1.15$). This hypothesis was not supported (see Figure 8).

H$_2$ states that there is a main effect of self-entitlement thought on gratitude. Specifically, people who engaged in self-entitlement thoughts will experience lower gratitude than people who engaged in neutral thoughts. Findings showed that there was a significant main effect of self-entitlement thought, $F(1, 136) = 4.25$, $p < .05$, $\eta_p^2 = .03$. Across thought type conditions, participants in the self-entitlement thoughts condition ($M = 3.76$, $SD = 1.06$) experienced higher gratitude than those in the neutral thoughts condition ($M = 3.39$, $SD = 1.03$). Since the main effect was not in the hypothesised direction, this hypothesis was not supported (see Figure 9).

H$_3$ states that there will be a two-way interaction between benefactor type (individual vs. group) and self-entitlement thought (neutral vs. self-entitlement) on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than compared to people who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker for people who engaged in self-entitlement thoughts as opposed to neutral thoughts. Findings did not show an interaction effect, $F(1, 136) = .04$, $p > .05$, $\eta_p^2 < .001$. Therefore, self-entitlement thoughts did not moderate the relationship between benefactor type and gratitude. This hypothesis was not supported (see Figure 10).

Since a few participants wrote about individuating information in the group condition, it was possible that they were not fully thinking about group benefactors. Hypotheses 1, 2 and 3 were therefore tested again with these 10 cases dropped. However, the findings should be viewed with caution given that dropped cases meant the data was insufficient to achieve 80% power for a medium effect size. The overall pattern of findings did not change. Findings did not show a significant main effect of benefactor type, $F(1, 126) = .004$, $p > .05$ and thought type remained significant, $F(1, 126) = 4.72$, $p < .05$. The interaction term between the two factors was similarly not significant, $F(1, 126) = .001$, $p > .05$. These findings suggest it was unlikely that the hypotheses were not supported because of the few participants who wrote about individuating responses in the group conditions. However, findings from the dropped cases should not be favoured over the original analyses with 35 participants per condition since dropping cases meant reducing statistical power of the analyses (i.e. not being able to achieve 80% power for a medium effect size).

Auxiliary analysis. One of the goals of the study was to extend the understanding of gratitude in three areas. To recap, the first area examined if individual difference variables related to the study constructs can influence the findings, the second area examined gratitude effects on intent to help and the third area examined the relationship between gratitude and indebtedness.

Trait effects. To investigate whether the effect of benefactor type on gratitude can possibly change depending on the level of trait gratitude, hierarchical regression analysis was conducted. Benefactor type and trait gratitude were entered in step 1 of the regression and the interaction term was entered in step 2. Results showed that the interaction term was not significant ($b =$

-.57, $t(136) = -1.16$, $p > .05$). The same analysis was re-ran with trait gratitude treated as a dichotomous variable whereby participants with trait gratitude score that is above median coded as high. Results showed that the interaction term when from such a procedure was also not significant ($b = -.66$, $t(136) = -1.91$, $p > .05$).

The effect of trait gratitude as a possible moderator on the relationship between thought type and state gratitude was also considered using the same hierarchical regression procedures and the interaction term was not significant ($b = -.02$, $t(136) = -.07$, $p > .05$). In addition, the trait effect of self-entitlement thoughts as a moderator was also examined. Results did not show a significant interaction between trait self-entitlement thoughts and thought type on gratitude ($b = -.05$, $t(136) = .85$, $p > .05$) and neither was there a significant interaction between trait self-entitlement thoughts and benefactor type ($b = .24$, $t(136) = .87$, $p > .05$).

Intent to help. When examining the effects of gratitude on intent to help, both the composite measure of intent to help and its subscales were used in the analyses. For the subscales, the internal consistency reliability coefficient for low for interpersonal helping ($\alpha = .45$) and moderate for impersonal helping ($\alpha = .64$). For the composite measure, the internal consistency reliability coefficient was moderate ($\alpha = .65$). It should be noted that the magnitude of internal consistency reliability for both the composite measure and the subscales were not appropriate indices of psychometric qualities of the measures of intent to help. This was because neither the multiple-item composite nor each of the multiple-item subscales were assumed to a single factor measure of a unidimensional construct. Specifically, this research assumed that for any individual, there are various

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dimensions of help which may or may not be correlated. Thus, the multiple items were meant to cover multiple dimensions to provide a composite index, as opposed to being used as multiple indicators of a single common variance factor. Overall, participants expressed higher intent to help interpersonally ($M = 4.22$, $SD = .52$) than to help impersonally ($M = 2.80$, $SD = .87$). Hypotheses 1 to 3 were tested again with intent to help as dependent variable. Findings did not show a significant main effect of benefactor type, $F(1, 136) = .08$, $p > .05$ nor was thought type significant, $F(1, 136) = .002$, $p > .05$. The interaction term between the two factors was also not significant, $F(1, 136) = .52$, $p > .05$.

Gratitude and indebtedness. Examining the zero-order bivariate correlations between gratitude and indebtedness, results showed that there was a positive relationship between gratitude and indebtedness ($r_{cor} = .41$; $r_{obs} = .38$, $p < .01$). Zero-order bivariate correlations also revealed that the two constructs had different relationships with intent to help. The positive relationship between gratitude and intent to help was significant ($r_{cor} = .33$; $r_{obs} = .25$, $p < .01$) whereas indebtedness was not significantly correlated with intent to help ($r_{cor} = .15$; $r_{obs} = .13$ $p > .05$).

Since gratitude and indebtedness are both potential reactions in response to receiving gifts, benefits or favours from others, analyses were conducted to investigate whether there were any significant findings in the hypotheses with indebtedness replacing gratitude as the dependent variable. Findings did not show a significant main effect for either of the two factors, benefactor type, $F(1, 136) = 1.28$, $p > .05$ or thought type $F(1, 136) = .21$, $p > .05$. The interaction term was also not significant, $F(1, 136) = .50$, $p > .05$.

Discussion

All hypotheses in Study 1 were not supported. The following paragraphs will discuss possible reasons on the findings.

One of the unexpected findings was the direction of main effect of self-entitlement thought on gratitude. Those who engaged in self-entitlement thoughts experienced higher gratitude than those who engaged in neutral thoughts. Self-entitlement thoughts in this instance had a positive quality and this run contrary to the bulk of research findings showing the association between sense of entitlement and a variety of negative life outcomes. One plausible account why gratitude was not reduced was because self-entitlement thoughts induction made participants realised the importance of the benefactors through the process of acknowledging the sacrifices made for the benefits. For instance, in the group condition, some wrote they worked hard in return for the efforts by the teachers whilst others wrote they have contributed to national service in return for the benefits from public service officers. For those in the individual condition, reasons given include having given back to those who benefitted them (friends, teachers, and benefactors) in similar ways such as through emotional support of giving care, love and affection.

Another plausible account on this finding is that making people reason about why they deserved the benefits from their benefactors create the realisation that there are in fact no good reasons, other than a natural right, for receiving them. This natural right also implies they could have otherwise not received them if not for circumstance, fate or fortune. As a consequence, such a realisation enhances gratitude experience. The responses provided by the participants lend credence to this account. For both conditions, participants wrote that they

deserved the benefits on the basis that it was simply a right. Those in group benefactor condition mentioned that the benefits enjoyed was the right of citizenship or some universal rights whereas those in the individual benefactor condition mentioned that it was the right of the dependent to receive the care and support from parents.

The third plausible account is unique to group benefactors. Many wrote that they deserved the benefits from public service officers on the basis that it was a fair exchange. Many wrote about how their parents had contributed to the situations for the benefits to come about and consequently they should be entitled to the benefits. There was the sense that entitlement was valid since one's parents played a big part in return for these societal benefits (through working hard, paying of taxes and paying for the medical treatments). Therefore, for those in the group condition, it was possible entitlement induction made them realised that their entitlement was possible because of their parents and this consequently led to the experience of gratitude.

Explanations now turn to neutral thoughts condition. In neutral thoughts condition of this study, subjects were instructed to write down why the benefit they have mentioned in relation to either individual or group benefactor was a good thing. Content analysis showed that benefits were elaborated in relation to the self and in both conditions, the emphasis was about personal gains and the perspective involving benefactor, required for the experience of gratitude, was noticeably absent. In the group condition, the thoughts were focused on peace of mind, positive personal development and gains in personal health. In the individual condition, the thoughts were focused on positive emotion experienced, positive personal development and personal goal attainments. In both conditions,

contents were about elaboration of benefits and there were no written responses that drew links between benefit, beneficiary and the benefactor. The excessive emphasis on benefits and absence of thoughts construing oneself as a recipient of some benefit from a benefactor, critical for the experience of gratitude, might have explained why gratitude experiences were comparatively similar in both conditions.

Regarding the finding that there was no main effect of group type, this was again unexpected. It would either suggest that the difference was due to the way the effect of the manipulation or that in fact the theoretical basis about abstraction and individuating information behind the hypothesis on benefactor type was problematic and that people experience gratitude without distinction whether it if was either group or individual benefactor. The similarity in the types of content within each of the thought conditions shown in the preceding paragraphs may explain the findings. This discussion would be revisited in the general discussion section when findings from Study 2 would be compared with Study 1.

In the auxiliary analysis, helping behaviour did not differ between group conditions. This was the case whether the outcome variable was the composite measure or the subscales. This finding could again be possibly explained by the fact that there was no main effect of group type on gratitude.

Findings from the auxiliary analyses supported the contention that gratitude and indebtedness are related but separate emotions. Gratitude and indebtedness can both occur in reaction to thought about benefactors and benefits. Findings did not support the contending claim forwarded by Watkins and associates about the existence of a negative relationship between gratitude and indebtedness. Finally, indebtedness was not shown to be a more applicable

dependent variable as hypotheses remained insignificant when gratitude was

replaced with indebtedness.

CHAPTER 3: STUDY 2

Overview of Study 2

The goals of Study 2 were to test (1) the main effect of benefactor type (individual vs. group) on gratitude, (2) the main effect of downward counterfactual thought on gratitude and (3) the two-way interaction effect between benefactor type (individual vs. group) and downward counterfactual thought (neutral vs. downward counterfactual) on gratitude.

Study Design

The study adopted a 2×2 fully-crossed factorial experimental design with random assignment of participants to the four experimental conditions. This design was implemented in a survey method where participants completed one of the four versions of the survey questionnaire corresponding to the condition that they were randomly assigned to by the experimenter. The manipulations of the two factors were through the instructions given to participants when they proceeded with the open-ended questions in the questionnaire, first asking them about their experiences with benefactor (Factor 1: individual vs. group), and then asking them about thoughts related to benefits (Factor 2: neutral vs. downward counterfactual). The rest of the survey contained items similar to Study 1 measuring the dependent variables (gratitude, helping motivation and related experiences) and the correlates (individual difference variables).

Participants and Procedure

One hundred and forty-one undergraduate students from the Singapore Management University were recruited via the university online subject pool system for the study. Similar to Study 1, participants were compensated with 1

course credit in exchange for half an hour of participation in the study. Power analysis was similarly conducted to ensure enough data in order to achieve 80% power for a medium effect size in a 2×2 factorial design. A sample size of 128 was required (32 participants per condition) for the study to be worthwhile to proceed and this study met the power requirement.

Of the participants recruited, one was excluded from the study for not following the instructions of the survey. The final sample size for analyses was 140 ($M = 21.22$ years of age, $SD = 1.73$). Out of this final sample, 73 % were female, 92 % were Singaporeans and 69 % reported having a religion (30 % Christianity, 16 % Buddhism, 9 % Roman Catholic, and 9 % Islam) with 35 participants randomly allocated in each condition.

Approval was given by Singapore Management University's Institutional Review Board to conduct the study that involved human subjects (IRB approval number: IRB-17-106-A095[817]). The protocol and procedure of the study were as described in Study 1.

Materials

With the exception of downward counterfactual thoughts manipulation, all other manipulations and measures used in Study 2 were similar to Study 1. Manipulations of the two factors and survey items for the dependent variables and the correlates can be found in the appendices.

Gratitude manipulation. The gratitude manipulation was similar to Study 1 (refer to Appendix A).

Downward counterfactual thoughts manipulation. As a follow up to the benefactor reflection exercise, a thought type writing exercise was created for this study. It was modelled after the dimensions behind trait downward

counterfactual thoughts by Rye et al. (2003). In the downward counterfactual

thoughts condition, participants first read the statement "People often have

thoughts like "If not for …" after positive events such as receiving a benefit, in

that they could see how the benefit or positive event might not have happened or

could have turned out less positive."   Next, they were told to write down for each

of the benefits they have listed in the previous section how the benefit that they

received might not have happened or could have turned out less positive. In the

neutral condition, participants will first read the statement "People often have

some thoughts after positive events such as receiving a benefit." Next, they were

told to write down a thought that they had after receiving the benefit that they

listed in the previous section. In both conditions, participants were instructed not

to spend more than 5 minutes in this activity (refer to Appendix K).

Gratitude and indebtedness. Items were similar to Study 1 (refer to

Appendix C). The internal reliability of gratitude was good ($\alpha = .98$). The internal

reliability of indebtedness was good ($\alpha = .88$)

Positive and negative emotions. Items were similar to Study 1 (refer to

Appendix D). The internal reliability of positive affect was good ($\alpha = .93$). The

internal reliability of negative affect was good ($\alpha = .91$).

Intent to help. Items were similar to Study 1 (refer to Appendix E). The

internal reliability of intent to help was moderate ($\alpha = .62$). The internal reliability

of interpersonal helping was poor ($\alpha = .34$). The internal reliability of impersonal

helping was moderate ($\alpha = .68$).

Trait self-entitlement thoughts. Items were similar to Study 1 (refer to

Appendix F). The internal reliability of trait self-entitlement thoughts was good (α

$= .82$).

Reciprocity norm. Items were similar to Study 1 (refer to Appendix G). The internal reliability of reciprocity norm was good ($\alpha = .80$).

Trait gratitude. Items were similar to Study 1 (refer to Appendix H). The internal reliability of trait gratitude was good ($\alpha = .81$).

Trait indebtedness. Items were similar to Study 1 (refer to Appendix I). The internal reliability of trait indebtedness was good ($\alpha = .75$).

Trait downward counterfactual thinking. Items were similar to Study 1 (refer to Appendix J). The internal reliability of trait downward counterfactual thinking for positive events was good ($\alpha = .83$). The internal reliability of trait downward counterfactual thinking for negative events was good ($\alpha = .87$).

Manipulation check. To ensure that manipulations in the study worked, responses provided by participants were coded into areas so that the areas between conditions could be contrasted for differences. Specifically, those in the group condition should clearly have written in reference to benefits from group benefactor whereas those in the individual condition should clearly have written in reference to benefits from individual benefactor. Likewise, those in thought condition should have clearly written in reference to what was required such that those in downward counterfactual condition should have written about areas related to it.

Results

  Manipulation check. To recap, the manipulations of the two factors were through the instructions given to participants when they proceeded with the open-ended questions in the questionnaire, first asking them to reflect about their experiences with benefactor (Factor 1: individual benefactor vs. group benefactors), and then asking them about thoughts related to benefits (Factor 2: neutral vs. downward counterfactual). To demonstrate that the manipulations for factor 1 worked, participants should only write about the benefactor type in question. To demonstrate that the manipulations for factor 2 worked, participants should only write in relation to downward counterfactual thoughts or neutral thoughts depending on the condition they were in. However, since participants were previously subjected to benefactor type manipulations, it should be expected that the content written within self-entitlement thoughts or neutral thoughts conditions were in relation to the benefactor type in question.

  Benefactor type manipulation. Analysis of the written responses (see Figure 11 and Table 9-11) clearly showed that the participants wrote accordingly to the benefactor type. Most of the participants in the group condition wrote about benefits received in the area of educational benefits (83%), healthcare (63%), protection from crime (57%), and national security (47%). Similar to Study 1, educational benefit was largely in relation to teachers, healthcare benefit in relation to doctors and nurses, protection from crime was in relation to police and national security in relation to military and homeland security forces. These responses were at the generalised group level. However, there were instances where participants wrote about individuating benefactors primarily in healthcare (10%) and other miscellaneous examples (3%) whereby some form of help was

provided by specific public service officers. The hypotheses would therefore be separately tested with these cases dropped to determine if findings as a result would change since the possibility existed that these participants were not entirely thinking about benefactors at the group level. Most of the participants in the individual benefactor condition wrote about benefits in the area of family instrumental support (51%), family emotional support (31%), friends emotional support (50%), and friends instrumental support (46%). Overall, findings therefore showed that participants wrote according to benefactor type required of the manipulations.

Downward counterfactual thoughts manipulation. Analysis of the written responses (see Figure 12 and Table 12-15) clearly showed the participants wrote accordingly to the thought type. Those in downward counterfactual thoughts condition writing on how the benefits from group benefactor that they have received might not have happened or could have turned out less positive mentioned that the reduced benefits will have consequences for one's physical security (48.6%), will lower one's competence (48.6%) and will have consequences for everyone and the society (42.9%). Those in downward counterfactual thoughts condition writing on individual benefactor mentioned that those benefits if they did not happen or turned out less positive will lower one's competence (57%), reduce one's emotional well-being (46%) and also lead to financial woes (46%). Such downward counterfactual thoughts were evidently absent in the neutral conditions whereby participants were to write about thoughts they have after receiving benefits. Those in the group benefactor condition mostly reported feeling gratitude (66%), experiencing positive emotions (31%) and feeling lucky/blessed/fortunate (31%). Those in the individual benefactor

condition mostly reported feeling gratitude (66%), experiencing positive emotions (51%) and the positive feelings of being cared for and being shown concerned (51%).

Preliminary analyses. The internal consistency, reliabilities, means, standard deviations, and inter-correlations of study variables are presented in Table 16. Zero-order bivariate correlations showed gender was not related to gratitude (r_{obs} = .13, p > .05) or intent to help (r_{obs} = .05, p > .05). In addition, whether participants had a religion or not was not related to gratitude (r_{obs} = .16, p > .05) or intent to help (r_{obs} = .01, p > .05). In line with past research, there was a positive relationship between gratitude and PA (r_{cor} = .61; r_{obs} = .57, p < .01) and gratitude was not related to NA (r_{cor} = - .02; r_{obs} = - .02, p > .05).

Hypotheses testing. In order to examine the main and interaction effects hypothesised in this study, a 2 (benefactor type: group vs. individual) × 2 (downward counterfactual thought: neutral vs. downward counterfactual) fully crossed analysis of variance (ANOVA) with balanced design was conducted. In this study, α for significance testing was specified at the .05 level.

H$_1$ states that there is a main effect of benefactor type on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than compared to people who reflected upon the benefits brought about by individual benefactor. Results show that there was a significant main effect of benefactor type, $F(1, 136) = 5.41$, $p < .05$, $\eta_p^2 = .04$. Across benefactor type conditions, participants in the group benefactor condition ($M = 3.55$, $SD = .94$) experienced lower gratitude than those in the individual benefactor condition ($M = 3.95$, $SD = 1.05$). This hypothesis was supported (see Figure 13).

H$_4$ states that there is a main effect of downward counterfactual thought on gratitude. Specifically, people who engaged in downward counterfactual thoughts will experience higher gratitude than people who engaged in neutral thoughts. Results did not show that there was a main effect of downward counterfactual thought on gratitude, $F(1, 136) = .04$, $p > .05$, $\eta_p^2 < .01$. Across thought type conditions, participants in the downward counterfactual thoughts condition ($M = 3.73$, $SD = 1.07$) did not experience gratitude different from those in the neutral thoughts condition ($M = 3.77$, $SD = .96$). This hypothesis was not supported (see Figure 14).

H$_5$ states that there will be a two-way interaction between benefactor type (individual vs. group) and downward counterfactual thought (neutral vs. downward counterfactual) on gratitude. Findings did not show an interaction effect, $F(1, 136) = 0.23$, $p > .05$, $\eta_p^2 < .01$. Therefore, downward counterfactual thoughts did not moderate the relationship between benefactor type and gratitude. This hypothesis was not supported (see Figure 15).

Since a few participants wrote about individuating information in the group condition, it was possible that they were not entirely thinking about group benefactors. Hypotheses 1, 4 and 5 were tested again with these 8 cases dropped. The overall pattern of findings did not change. Findings showed a significant main effect of benefactor type, $F(1, 128) = 4.02$, $p < .05$ and thought type remained insignificant, $F(1, 128) = .001$, $p > .05$. The interaction term between the two factors was similarly not significant, $F(1, 128) = .08$, $p > .05$. These findings suggest it was unlikely that the hypotheses were not supported because of the few participants who wrote about individuating responses in the group conditions. However, findings from the dropped cases should not be favoured

over the original analyses with 35 participants per condition since dropping cases meant reducing the statistical power of the analyses (i.e. not being able to achieve 80% power for a medium effect size).

Auxiliary analysis. Similar to study 1, study 2 sought to extend the understanding of gratitude in three areas. To recap, the first area examined if individual difference variables related to the study constructs can influence the findings, the second area examined gratitude effects on intent to help and the third area examined the relationship between gratitude and indebtedness.

Trait effects. To investigate whether the effect of benefactor type on gratitude can possibly change depending on the level of trait gratitude, hierarchical regression analysis was conducted. Benefactor type and trait gratitude were entered in step 1 of the regression and the interaction term was entered in step 2. Results showed that the interaction term was significant, $b = -2.29$, $t(136) = -4.25$, $p < .01$. Simple slopes analysis for the significant interaction between benefactor type and trait gratitude (see Figure 16) showed that when trait gratitude is high, those who reflected upon the benefits brought about by group benefactor experienced lower gratitude than those who reflected upon the benefits brought about by individual benefactor, $b = .93$, $t(136) = 4.56$, $p < .01$. In contrast, when trait gratitude is low, there were no difference in the level of gratitude experienced between those who reflected upon the benefits brought about by group benefactor and those who reflected upon the benefits brought about by individual benefactor, $b = -.30$, $t(136) = -1.46$, $p > .05$. The effect of benefactor type on gratitude therefore changed depending on the level of trait gratitude. For participants with high trait gratitude, they experienced lower gratitude if they reflected upon the benefits brought upon by group benefactor

than if they reflected upon the benefits brought upon by individual benefactor but for those with low trait gratitude, the difference between the benefactor conditions was not affected.

The effect of trait gratitude as a possible moderator on the relationship between thought type and state gratitude was also considered using the same hierarchical regression procedures and the interaction term was not significant ($b = .38$, $t(136) = 1.38$, $p > .05$). In addition, the trait effect of downward counterfactual thoughts (positive and negative) as a moderator was examined. The interaction between positive downward counterfactual thoughts and thought type on gratitude ($b = .02$ $t(136) = .10$, $p > .05$) and the interaction between negative downward counterfactual and thought type on gratitude ($b = -.09$ $t(136) = -.43$, $p > .05$) were both not significant. Likewise, the interaction between positive downward counterfactual thoughts and benefactor type on gratitude ($b = -.21$, $t(136) = -.97$, $p > .05$) and the interaction between negative downward counterfactual thoughts and benefactor type on gratitude ($b = -.34$, $t(136) = -1.69$, $p > .05$) were both not significant.

Intent to help. As mentioned earlier in Study 1, intent to help were analysed using both the composite measure and its subscales. The internal consistency reliability coefficient was low for interpersonal helping ($\alpha = .34$) and moderate for impersonal helping ($\alpha = .68$) and the composite measure was moderate ($\alpha = .62$). As explained earlier in study 1, the magnitude of these internal consistency reliability coefficients were not appropriate as indices of the psychometric quality of these measures of intent to help because the items were used to derive a composite score and not meant as multiple indicators of a single common variance factor measure of a unidimensional construct. Overall,

participants expressed higher intent to help interpersonally ($M = 4.12$, $SD = .52$) than to help impersonally ($M = 2.78$, $SD = .84$). Hypotheses of the study were tested again with intent to help as dependent variable. Analysis revealed a significant main effect of benefactor type, $F(1, 136) = 7.54$, $p < .01$, $\eta_p^2 = .05$. Across benefactor type conditions, participants in the group benefactor condition expressed lower intent to help ($M = 3.31$, $SD = .52$) than those in the individual benefactor condition ($M = 3.56$, $SD = .56$). Examining the subscale measure impersonal helping, there was also a significant main effect of benefactor type, $F(1, 136) = 5.07$, $p < .05$, $\eta_p^2 = .02$. Matching effect was not observed since across benefactor type conditions, participants in the group benefactor condition ($M = 2.61$, $SD = .82$) expressed lower intent to help impersonally than those in the individual benefactor condition ($M = 2.92$, $SD = .84$). Examining the subscale measure interpersonal helping, the main effect of benefactor type was also significant, $F(1, 136) = 5.07$, $p < .05$, $\eta_p^2 = .04$. Overall, findings showed that helping responses were different for benefactor types with lower intent to help for those who reflected on group benefactors than those who reflected on individual benefactors.

Since benefactor type has been shown in this study to predict intent to help, it was important to conduct follow-up analysis to show that this effect was explained mainly through gratitude, and that the effect of gratitude on intent to help should be stronger than the effect of benefactor type on intent to help. Reversal regression was conducted to examine the contribution of the proportion of variance in intent to help that is predictable from each of the independent variables. For the first model, benefactor type (individual) was entered into step 1 of the regression and gratitude entered into step 2. In step 1 when intent to help

was regressed on benefactor type, the relationship was significant ($\beta = .23$, $p < .05$). With the addition of gratitude in step two, intent to help was still significant but the standardised beta coefficient decreased ($\beta = .17$, $p < .05$). The standardised beta coefficient of gratitude in step 2 was larger and significant ($\beta = .28$, $p < .05$). The relationship between all the variables could also be equally explained through a mediation model (see Figure 17) using PROCESS procedures (model number 4, bootstrap samples 5000) ran in SPSS (Hayes, 2013). Returning to the reversal regression analysis, the addition of gratitude resulted in an R-squared change of 7.5%. For the second model, gratitude was instead first entered into step one of the regression and benefactor type (individual) entered into step 2. The addition of benefactor type resulted in an R-squared change of only 2.9%. The R-squared change indicated that the proportion of variance in intent to help predictable from gratitude was higher than that of benefactor type.

Gratitude and indebtedness. Examining the zero-order bivariate correlations between gratitude and indebtedness, results showed that there was a positive relationship between gratitude and indebtedness ($r_{cor} = .37$; $r_{obs} = .33$, $p < .01$). Zero-order bivariate correlations also revealed the differences between the relationship of gratitude and indebtedness to intent to help. The positive relationship between gratitude and intent to help was significant ($r_{cor} = .39$; $r_{obs} = .31$, $p < .01$) whereas indebtedness was not significantly correlated with intent to help ($r_{cor} = .06$; $r_{obs} = .04$, $p > .05$).

Since gratitude and indebtedness are both potential reactions in response to receiving gifts, benefits or favours from others, analyses were conducted to investigate whether there were any significant findings in the hypotheses with indebtedness replacing gratitude as the dependent variable. Findings did not show

a significant main effect for either of the two factors, benefactor type, $F(1, 136) = .38$, $p > .05$, or thought type $F(1, 136) = .11$, $p > .05$. The interaction term was also not significant, $F(1, 136) = .38$, $p > .05$.

Discussion

Only hypothesis 1 was supported in Study 2. It was shown that there was a main effect of benefactor type on gratitude experiences. People who reflected upon the benefits brought about by group benefactor experienced lower gratitude than those who reflected upon the benefits brought about by individual benefactor. The following paragraphs will discuss possible reasons on the findings.

Content analysis of the open-ended responses for benefactor type showed that those in the individual condition reported more personally relevant emotions compared to the group condition. The responses were also largely individuating in nature. Although in both neutral conditions feeling grateful was the most commonly reported emotion, gratitude reports for individual benefactor differed from group benefactor insofar as it was in relation to both instrumental and emotional benefits whereas for group benefactor it was in relation only to instrumental benefits. The positive emotions experienced were also different with affective emotions such as feeling touched, loved and being appreciated prevalent for individual benefactor whereas such affective emotions were noticeably absent for group benefactor with some reports of confidence and pride. Feeling cared for and being shown concern for individual benefactors were also common for those in individual benefactor condition but not group benefactor condition. For those engaged in downward counterfactual thoughts, nearly half the participants in the individual benefactor condition reported that they would have been emotionally lost without friends and family members whereas this was not the case for those in

the group benefactor condition. Those in the downward counterfactual condition also reported outcomes that were more distal in nature such as negative societal consequences and security consequences should the benefits from group benefactor be reduced or consequences for both the self and Singaporeans. These reports tallied with the theoretical basis behind the hypothesis that benefactor type influences gratitude experiences since group benefactors are more abstract and contain less individuating information compared to individual benefactors and are therefore less concrete and less emotive as a stimulus.

Overall, those in downward counterfactual thoughts condition experienced gratitude no different from those in the neutral thoughts condition. Those in the individual benefactor condition who held downward counterfactual thoughts focused on the negative consequences to the self, whereas those in the group benefactor condition focused on the negative consequences to the self and others in society. In neutral conditions, participants in both benefactor type condition wrote about gratitude experiences and positive emotions. This suggests that use of downward counterfactual thoughts is similar and may not have additional benefits compared to the regular practice of gratitude expression after recollecting about the benefits brought by benefactors. Although the hypothesis was not supported, the qualitative finding implies there are different pathways that lead to the experience of gratitude. Recognising the potential loss of benefits (and benefactors) in one's life therefore can be an equally effective approach in eliciting gratitude as recognising the presence of benefactors in one's life through recollection of past experiences.

The auxiliary analysis showed that the effect of benefactor type on gratitude changed depending on the level of trait gratitude and the interaction was

significant. It was shown that for participants with high trait gratitude, they experienced lower gratitude if they had reflected upon the benefits brought about by group benefactor than if they had reflected upon the benefits brought about by individual benefactor. However, the effect of benefactor type on gratitude was not affected for those with low trait gratitude. Two individuals, equally high in trait gratitude, therefore will not experience the same level of gratitude and it depends on the benefit brought upon by the type of benefactor they are reflecting upon. The benefit brought upon by the type of benefactor however will not matter for those low in trait gratitude.

In this study, benefactor type was shown to predict intent to help. Helping responses were different for benefactor types with lower intent to help in group benefactor condition than in individual benefactor condition. This was the case for both the subscales and composite measure although it should be qualified that the subscale interpersonal helping was not reliable. Matching effect was not observed since those who reflected on group benefactors did not show higher impersonal helping. It was also shown that the effect of benefactor type on intent to help was explained mainly through gratitude and that the effect of gratitude on intent to help was stronger than the effect of benefactor type on intent to help. Findings therefore corroborated past research showing benefit appreciation leads to higher intent to help through gratitude.

Similar to Study 1, findings from the auxiliary analyses support the contention that gratitude and indebtedness are related but separate emotions. Gratitude and indebtedness can both occur in reaction to thought about benefactors and benefits. Findings also did not support claims of a negative relationship between gratitude and indebtedness. Finally, indebtedness was not

shown to be a more applicable dependent variable as hypotheses remained

insignificant when gratitude was replaced with indebtedness.

CHAPTER 4: GENERAL DISCUSSION

The current research is the first attempt to examine the effects of benefactor type and the influence of accompanying thoughts related to benefit assessment on gratitude. The following sections discussed this research's limitations, future research directions as well as potential contributions.

Absence of Main Effect of Benefactor Type in Study 1

Since Study 1 showed that gratitude was not affected by benefactor type, it is important to account for this finding and argue in favour of that of Study 2. With regard to recalling about benefits from benefactors, comparing the responses in both studies revealed similarities. Moreover, dropping cases where responses included individuating responses did not change the findings in both studies. Hence the cause of the findings could not be attributed to the types of benefactors recalled and likely was because of the differences in benefit evaluations.

In Study 2, findings show there were differences in the responses between the benefactor conditions. For those in the individual benefactor × neutral thoughts condition, reasons given were personally relevant and emotive in nature such as (i) experiencing gratitude for the emotional and instrumental benefits and (ii) experiencing positive emotions related to love and appreciation. Similarly, for those in the individual benefactor × downward counterfactual thoughts conditions, it was more proximate focusing on consequences only for the self. For those in the group benefactor × neutral thoughts condition, reasons given were less emotively charged, such as (i) experiencing gratitude for the instrumental benefits and (ii) experiencing positive emotions related to pride and confidence as a citizen. For those in the group benefactor × downward counterfactual thoughts

condition, reasons given were also comparatively more distal in nature such as (i) negative societal consequences and (ii) security consequences for both the self and Singaporeans. The differences in responses were as expected given the theoretical basis behind the hypothesis on benefactor type that group benefactors are less concrete and less emotive as a stimulus compared to individual benefactors.

On the contrary, the responses in Study 1 did not show such distinctions in the group condition. For those in the individual benefactor × self-entitlement thoughts condition, reasons given were as expected personally relevant with high proximity to self. These included reasons such as (i) positive growth for the self, (ii) having engaged in reciprocal behaviours and (iii) the benefits were the rights of the dependent. For those in the individual benefactor × neutral thoughts condition, reasons given were equally personally relevant with high proximity to self. These included (i) positive emotions, (ii) positive personal development and (iii) goal attainment. Unexpectedly, unlike in Study 1 where those in the group condition wrote about more distal reasons, those in the group benefactor × self-entitlement thoughts condition also gave reasons with close proximity to the self. These included (i) contributions of one's parents, (ii) it was one's right and (iii) one has contributed to national service or has work hard in return for the educational benefits. The same can be said for those in the group benefactor × neutral thoughts condition where responses were referenced with proximity to the self, such as (i) positive personal development, (ii) peace of mind, (iii) personal health (iv) positive future self. Although the manipulations in Study 1 worked insofar as participants wrote according to the instructions, the nature of the question in the group condition inadvertently meant that the thoughts expressed were proximate and emotive much like those in the individual condition. The way

participants reasoned, caused by the manipulation in both the self-entitlement and neutral thoughts condition in Study 1, therefore must have eliminated any benefactor type effects that was shown to be present in Study 2. To add, the overall mean gratitude for those in the neutral condition of Study 2 was the lowest across both studies and this suggests that making participants focus on giving reasons why benefit was a good thing was not an effective manipulation. In sum, it can be concluded that the manipulations in Study 1 were not effective in drawing out distinctions in thoughts between the benefactor conditions and this explained the non-significant findings. On this basis, findings on the insignificant effect of benefactor type was rejected in favour of Study 2.

Limitations, Implications and Future Directions

Sample characteristics & intent to help. The present research utilised undergraduate students as participants. Arguably, the gratitude experiences of relatively well-educated young adults with little financial independence and limited life experiences will likely differ from those coming from different segments of society such as working adults or those with children. The generalisability of the findings in this study therefore should be viewed with circumspection. In the group condition of both studies, participants were told to think about the benefits received from the actions or contributions of public service officers. As young adults, many may lack the experience interacting with public service officers as compared to more mature adults with greater life experiences. Participants therefore might have a biased idea of their encounters, failed to recall the benefits accurately or were describing the benefits based on common sense notions what public service officers do. There is therefore the

possibility gratitude toward group benefactors may differ compared to older adults.

In both studies, many in the individual benefactor condition wrote about their parents and the emotional and instrumental support provided. Unlike mature working adults, participants in this sample were highly dependent on their parents especially in the financial sense. Parents played a key part as benefactors in the lives of the participants and so gratitude invoked may be much stronger than those in the working adult sample. Notwithstanding, working adults especially in the Asian context may still pay as much emphasis on the importance of their parents in their life or the focus can still be about family members such as one's spouse. Therefore, the differences in responses may exist but not drastically wide.

Another limitation presented by the sample is that helping behaviours may be somewhat limited compared to a working adult sample. For a working adult sample, the forms of helping behaviour may be more varied and realistic. To illustrate, actual workplace helping behaviours could be used as vignettes and also willingness to contribute to charitable causes. However, this is a concern only if the goal is to apply the findings for the purpose of well-being intervention or support research conclusions about the effects of gratitude on helping behaviours in contexts other than those of an academic setting. This limitation meant that practitioners will need to be mindful and not be quick to apply any gratitude intervention techniques presented in this paper for coaching purposes or therapeutic applications on grounds that there is no harm trying a novel technique; given little adverse side effects associated with gratitude interventions. Beyond the potential for lost time and resources, recent reviews of experimental evidence demonstrate that implementing well-intended gratitude intervention practices can

have other unintended negative consequences for the participants (Algoe & Zhaoyang, 2015; Wilson, 2011).

Notwithstanding the abovementioned limitations, the data provided by the student sample in this research appeared to be sufficiently useful for performing the analyses as reported to test the various hypotheses. Many in the sample gave thoughtful responses reflective of their current life situation such as mentioning about the various forms of benefits and heartfelt yet reasonable responses pertaining to their benefactors. The students participating in research as part of the subject pool system were aware of the importance of their participation and were therefore not doing so out not out of motivation driven by pecuniary interest which can be a problem for studies involving paid participants from online data providers that recruit working adult participants. As reported in both studies, participants were dutiful in completing the questionnaires with only 2 participants in total being dropped for not complying with the instructions. Thus, there is little or no reason to believe that the student participants were not taking the tasks in the experiment seriously.

In this research, measures on interpersonal and impersonal helping were created for this study and it can be argued such an attempt was important to further the understanding on the types of helping behaviours. Indeed, one of the goals of this research was to demonstrate that there are different forms of helping responses and they should be investigated in gratitude research. This is especially pertinent given the widespread claims of the effects of gratitude on helping responses and prosocial effects but yet the review in this research showed there were no consistent measures of helping responses and experimental findings in the

past often relate to specific forms of helping behaviour, namely, to help the confederate on some task.

Mentioned in the earlier sections, many of the helping situations used in previous studies may not be applicable to the local context (e.g. organising a movement for a cause, helping someone to change tires in the middle of a highway). Helping items in this research were calibrated with appropriate cost to the participants since helping behaviours are by nature costly, requiring some form of sacrifice on the part of the giver. The measures were designed to be comprehensive in measuring a variety of helping behaviours applicable to student participants that were different in nature. Given this variety, intent to help need not be a unitary pure factor and the items were meant to reflect this. Although reported, the reliability was not an important or relevant psychometric property and taking the mean to form a composite score for intent to help was appropriate. Given the holistic nature of the helping measures, future gratitude studies involving university student samples can consider using the helping items created in this study (replacing Singapore with the relevant country name) as outcome measures of gratitude.

In both studies of this research, participants were observed to be less willing to engage in impersonal forms of helping compared to interpersonal forms of helping. As far as the author is aware, this is a novel finding in gratitude research involving experiments. This finding suggests that researchers and practitioners alike should therefore be cautious on promoting claims that gratitude predicts helping responses without clarifying the form of helping in question. Since the helping measures created is limited only for use in student samples, future research may consider developing an appropriate scale on helping

behaviour that is multi-dimensional in nature for non-student samples. This will allow researchers to tease out the type of helping responses that result from gratitude. For instance, it is possible that gratitude as a relational emotion may promote only interpersonal forms rather than impersonal forms of helping.

Benefactor type. Group benefactor in this research was represented by public service officers. They were chosen based on their importance in the day-to-day lives of citizens and that they are ubiquitous and incontrovertible in providing benefit to others in society. A criticism however can be made on the selection of public service officers as an appropriate comparison group. Since public service officers are paid for their work, there could potentially be a confound involved in this research since it would be difficult to disambiguate 'being paid' from 'abstractness'. In other words, a possibility existed that the perception of public service officers having been paid for their work influenced the experience of gratitude instead of the theorised factors such as the abstractness of the referent or the lack of individuating information. Future research should therefore consider examining the roles of unpaid group benefactors such as those working in voluntary welfare organisations.

Public service officers are also by no means the only type of benefactors in society. Ideally, if not for limited access to participants, this research should have included examining benefactors who may be perceived ambivalently, such as foreign blue-collar workers and service staff. Doing so would have strengthened the theoretical position of the hypothesis by showing that with increasing abstractness from the beneficiary, gratitude would be reduced. Creating another level in the benefactor condition using the available sample was not advisable

since doing so would have reduced the statistical power of the research given limited access to the number of participants.

In this research, the characteristics of group benefactors were not defined. Future research involving group benefactors can consider examining how changing group characteristics and features will influence gratitude perception. This is an important area of research with practical applications for public policy and communications since gratitude could be a means to enhance intergroup relations and how characteristics of groups are defined and circulated in the public domain may matter. To illustrate, certain groups in society such as foreign professionals may not be seen favourably by some segments of society. Study 2 in this research can be repeated but this time with 3 levels in the benefactor condition (individual, foreign professionals, foreign professionals with positive attributes). Different ways of including positive attributes such as contribution to nation building, sharing of work experiences with locals, bringing in of new ideas, skills and technologies may help identify the best way to improve the gratitude perception of these foreign professionals compared to the case of not defining such attributes.

Another type of group benefactors can be occupational in nature. They differ from public service officers in that these groups are responsible for producing essential goods and services for one's sustenance and enjoyment. They include farmers, food producers, cotton producers, weavers, etc. Surprisingly, just as in the case of public service officers, there are also no studies examining gratitude for this group. Future research can consider repeating the studies in this research with the addition of this group. Given that their benefits are more tangible and closer to the self than compared to those provided by public service

officers, the prediction is that gratitude would be stronger for this group. Occupational group benefactors may turn out to be an important source for invoking gratitude in reflection exercises since their benefits permeate deeply in one's life and therefore there are much more things to feel grateful for (see downward counterfactual section below for a related discussion).

Thoughts on entitlement. One of the unexpected findings in this research was the finding in Study 1 that in contrast to neutral thoughts, those in self-entitlement thoughts condition experienced higher gratitude. A possible explanation for this finding is that this thought was made in relation to the question of benefits from benefactors. The manipulation required participants to think about why they deserved the benefits and why they should not be reduced or taken away. Such a framing would have directed participants to find reasons to conclude that the benefactors were important in one's life and would naturally lead to gratitude. Compare this manipulation with one that did not require participants to make reference to benefactors: "Please write down why you deserve the good things in your lives, deserve more good things, and deserve more good things than others, and the good things that you received should not be reduced or taken away from you" or the manipulation used by Zitek and Vincent (2014) "please give reasons why you should demand the best in life, why you deserve more than others, and why you should get your way in life". A manipulation that did not require participants to make reference to benefactors clearly would have a different tone from the one in this study since they would be thinking of reasons why one is special and why resources are owed to them.

In this study, when told to think about why they deserved the benefits and why they should not be reduced or taken away, the responses indicated that the

importance of the benefactors was made salient through the acknowledgement from participants about the sacrifices they have made for the benefits such as either through an exchange made in the past or that an appropriate behaviour had been reciprocated. Such a process would have led to the emotion of gratitude towards these benefactors. In many cases, requiring participants to give reasons might have also made it difficult for participants to justify why they should receive these privileges other than it being a natural right (as a citizen or as a dependent) and this too might have made participants realised the importance of having these benefactors around since this natural right also implies they could have otherwise not received them if not for circumstance, fate or fortune.

Overall, findings suggest making people reason about the importance of one's benefactors and why their benefits should not be reduced or removed may be an effective means to enhance gratitude. This was an unexpected but important outcome and future research in gratitude intervention could consider pursing into this line of inquiry.

The findings from study 1 however should not been viewed as implying that the effects of self-entitlement thoughts on gratitude is positive. Since the manipulation was on deservingness in relation to benefactors, it was possible that the manipulations triggered aspects of social identity which thereby affected the responses. For instance, the responses from those in the group condition suggested that social identities of a Singaporeans (e.g. contributions to nation through taxes, serving national service, playing a role as a hardworking student) were triggered rather than a more self-serving identity that is arguably a feature of self-entitlement thoughts. In the individual condition, identities of being a filial and dutiful child expected of in Asian societies were likely triggered and stronger

than any self-serving ones coming from feeling entitled and deserving. The deservingness and entitlement thoughts invoked might therefore have been seen positively from a group membership perspective which therefore positively influenced gratitude compared to a self-serving individualistic perspective. Additionally, the mean of trait self-entitlement in the sample was low. Whilst the experience of state self-entitlement can occur independent of trait self-entitlement, it was plausible that the aforementioned nature of the manipulation, which did not invoke strong self-entitlement thoughts, coupled with low trait self-entitlement thoughts from the sample, limited the intended experience of deservingness and entitlement. A possible way to improve on the current manipulation in future studies is to ask participants about why they deserved the benefits more than their peers or people around them and why they should therefore not be reduced or taken away. Such an approach might focus thoughts explicitly on deservingness and entitlement from a self-serving perspective that was not apparent in the manipulations of study 1.

Downward counterfactual thoughts. Findings in this research showed that the use of downward counterfactual thoughts in benefit assessment was not significantly different to that of the neutral thoughts condition that focused on recalling one's experience about the benefits received. This however did not mean that using downward counterfactual thoughts was ineffective as a gratitude intervention practice. Rather, the absence of differences between the thought conditions in Study 2 suggests recognising the potential loss of benefits (and benefactors) in one's life can be an equally effective approach in eliciting gratitude than that of recalling thoughts about benefit encounters.

One possible explanation why the manipulation did not produce the intended effect of enhancing gratitude was that in the laboratory condition, participants were told to engage in a cognitive task which in fact might not realistically happen to them. Participants could come up with good examples required of the task but because these examples were not practically possible, that such examples can easily happen to them, participants therefore did not feel as much gratitude or a sense of relief from such thoughts. For instance, some participants might have grown up in a stable and secure family and therefore might find it difficult to imagine the possibility of how the instrumental and emotional benefits enjoyed could be reduced if not fully removed. In another example, those in the group condition might find it hard to imagine how the benefits provided by the public service officers could be reduced having never experienced an alternative scenario where this happened.

The other possible explanation for the finding in study 2 is that the experiment involved only a one-off thought exercise, and this was therefore less effective compared to approaches where participants develop a mental habit of engaging in gratitude reflection exercises over time. Future studies may consider using a longitudinal approach to investigate the effect of gratitude reflection practice accompanied by the use downward counterfactual thoughts on a regular basis rather than in a single session. Similar to diary method in gratitude intervention (see Wood et al. 2010), participants would write things about their gratitude encounters accompanied by downward counterfactual "If not for …" thoughts and to further contemplate about them each night before heading to bed. In such an approach, participants when having a meal in the morning could think about the authorities that ensured that food produced and sold in Singapore was

safe for consumption. They could also think of those agencies that ensured there was a constant supply of food essentials such as rice and cooking oil. Likewise, when they wash up on a daily basis, they could think of the authorities that ensured there was a supply a water and that water was clean for use. An extended approach could also ask participants to think of occupational benefactors that produced goods and services they consume in the lives. In these scenarios, when having a meal in restaurants, participants could think of service staff in general without which the dining experience would not be possible. They could also think of the farmers who produced the food. Even as they put on clothes, they could think of the cotton producers, thread producers, the designers, etc. The possibilities are therefore myriad. Such extended approaches might be more effective than brief induction exercises because participants are recognising and acknowledging the benefactor and consequences as they consume the benefit. Counterfactual thoughts associated with these experiences would also be much more vivid and poignant than in laboratory settings. Such forms of gratitude exercises might also be more powerful than neutral practice of merely being mindful of one's experiences after receiving benefits since the former directs attention in a particular way to find reasons to feel grateful whereas the latter merely examines how one think and feel without necessarily searching for what a benefactor has done.

Potential Contributions

In Study 2, it was shown that benefactor type influenced gratitude and people who reflected upon the benefits brought about by group benefactor experienced lower gratitude than compared to people who reflected upon benefits brought about by individual benefactor. This finding is novel because it

challenges the adequacy of attempts by those scholars in the past to account for the varieties of gratitude merely by designating gratitude referents as either personalised or generalised. This research showed that despite being agentive in nature, and thereby it would have been classified as personalised in the traditional sense, gratitude towards group benefactor was lower than that towards individual benefactor. To treat group and individual benefactors as similar and proceed to examine and discuss the outcomes of gratitude would therefore have been misleading. One of the implication from this finding is that researchers should not generalise about findings on gratitude without making reference to the specific type of agentive referents in their sample. Practitioners should also be mindful not to treat findings on gratitude intervention as unitary and applicable to all individuals.

Clearly defining the benefactor type is also critical since the outcome of gratitude can differ as this research has shown. In the auxiliary analysis of Study 2, it was shown that helping responses were different for benefactor types with overall intent to help lower for those who reflected on group benefactors than those who reflected on individual benefactors. Importantly, this effect of benefactor type on overall helping behaviour was partially mediated by gratitude towards the benefactor. Past research has shown that appreciating a benefit provided by a benefactor increases helping responses through gratitude (e.g., Bartlett & DeSteno, 2006; Grant & Gino, 2010; Watkins et al., 2006) and therefore the relationship between the constructs measured in this study were in order. This should allay any concern that the effect of benefactor type on helping behaviours in this study might in fact have little to do with gratitude.

Study 2 has also contributed to the understanding of the effects on trait gratitude by showing the absence of cross-situational consistency in the case of benefactor type. For participants with high trait gratitude, they experienced lower gratitude if they had reflected upon benefits brought about by group benefactor than if they had reflected upon benefits brought about by individual benefactor. For those with low trait gratitude, the effect of benefactor type on gratitude did not differ whether it was individual or group benefactor. This finding means one cannot always assume grateful people will experience gratitude similarly in all contexts. For two equally grateful people, one could experience higher gratitude than the other in one sort of situation (i.e. thinking about individual benefactor) and less grateful in a different sort of situation (i.e. thinking about group benefactor). Gratitude reflection exercises might therefore need to be tailored according to the disposition tendency of the participants.

Across both studies, there were evidences showing that gratitude and indebtedness were distinct constructs. These constructs were found to be positively related and gratitude was associated with helping responses, but this was not the case for indebtedness. Such results corroborated with past research findings (Tsang, 2006a, Tsang, 2007). Findings in both studies did not support some notions forwarded in literature about the negative bi-variate relationship between gratitude and indebtedness. In both studies, benefactor type and the influence of accompanying thoughts related to benefit assessment had no relationship with indebtedness and so the possibility of indebtedness as a more appropriate outcome measure over gratitude was not supported.

The finding on the main effect of benefactor type on gratitude has ramifications on the definition of the gratitude construct in the agentive domain.

Most current definitions focused on the relationship between a single benefactor and a beneficiary and many of the extended definitions may not be applicable for group benefactors. For instance, the moral sentiment perspective proposed that gratitude comes for the recognition and appreciation of an altruistic gift (Emmons, 2004) but as this research has shown, people do experience gratitude for group benefactors and this was the case even as respondents acknowledged the benefits provided by public service officers were not altruistic in nature since they have been funded by taxes or have been paid for (e.g. healthcare). In a similar vein, the motivational perspective emphasising about the importance of benefits coming from benefactors as voluntary and intentional may also not be fully applicable in the group context since many of the benefits can be the consequence of fulfilling obligatory roles rather than out of any kindness or goodwill on the part of the group benefactor. Continued research is therefore needed to expand on the findings found herein and to clarify on the necessary antecedents of gratitude with respect to different types of agentive referents.

Research on the main effect of downward counterfactual thought on gratitude came about from the gap in literature indicating the lack of understanding about the beneficiary. Much research on the beneficiary has only been on trait gratitude and there is a need to go beyond this. Thoughts about benefits from the beneficiaries' perspective have been largely an unexplored area of research. This research answered relatively recent calls by researchers to examine relevant constructs such as sense of entitlement (Watkins, 2014) and downward counterfactual thoughts (Ahrens & Forbes, 2014; Koo et al, 2008). This line of inquiry is also important since the traditional assumption does not take into consideration that in the naturalistic setting, other evaluative thoughts

about benefits can occur beyond those about benefactors. Although hypotheses on thought type were not supported in this research, findings do have implications applicable to future research as highlighted in the discussions on limitations and future directions. The findings from study 1 suggests that making people reason about the importance of one's benefactors and why their benefits should not be reduced or removed may be an effective means to enhance gratitude whereas findings in study 2 suggests that making people think about how the benefits they have received might not have happened or could have turned out less positive may be a complementary practice for use in gratitude reflection exercises.

There is some merit to the experimental methodology of this research and future research in the gratitude field can consider adopting relevant aspects of it. The experimental manipulations of this research can be said to be insightful since the manipulations (both the benefactor type and thought type) allowed the researcher to understand the benefit appreciation processes involved. This would have been difficult to understand if participants were primed to experienced self-entitlement thoughts or downward counterfactual thoughts through watching a video or reading a story. Importantly, the responses provided will allow researchers to understand why gratitude experiences were different between the various conditions under examination. The experimental tasks were also not complicated to complete and a large proportion of the participants were able to give thoughtful comments within the time allocated (up to 5 minutes per task).

This research included measures of trait variables and this practice is highly encouraged for similar experimental studies in gratitude. In the typical gratitude encounter in life, trait gratitude is likely to interact with benefit evaluation processes to cause the experience of gratitude as a state. This study

accounted for possible trait influences and indeed it was shown that trait gratitude was a moderator in study 2. This practice would help researchers address possible concerns on the ecological validity of their experiments when disposition of the participants was not considered.

As already discussed in the previous paragraphs, this research did not simply adopt helping measures used in the literature and instead carefully considered realistic helping behaviours that participants were competent to fulfil at an appropriate cost. Future gratitude research should follow suit by ensuring that the helping responses were calibrated for use and also consider helping responses in a broad and holistic manner. Finally, the practice of including indebtedness measure in this research is strongly encouraged for future research that involves examining the responses of beneficiaries since indebtedness is a possible response and this research was able to rule out the possibility of this emotion interacting with the constructs being examined in the studies. Indebtedness was also ruled out as the emotion that explained intent to help.

Conclusion

The results presented in this experimental research has helped to increase understanding about the effects of benefactor type, self-entitlement thoughts and downward counterfactual thoughts on gratitude. From the results of Study 2, it can be concluded that gratitude differs across benefactor type and the associated outcome, intent to help, varies depending on the benefactor type in question. It was shown that those who reflected upon the benefits brought about by group benefactors experienced lower gratitude than those who reflected upon the benefits brought about by individual benefactors. Intent to help was found to be higher for those in the individual benefactor condition and this effect was partially

mediated by gratitude. Participants were also more willing to engage in interpersonal helping compared to impersonal helping. Finally, Study 2 showed that the effect of benefactor type on gratitude was found to be affected by trait gratitude. Gratitude for grateful people was weaker for those in the group condition than compared to those in the individual condition and the effect of benefactor type on gratitude did not differ for less grateful people. More broadly, findings from this research stand alongside others showing that brief contemplative exercises produce effects on gratitude. Findings on self-entitlement thoughts suggest thoughts on maintaining entitlement coming from benefactors can have positive effects on gratitude whereas findings on downward counterfactual thoughts suggest it can be a potentially complementary approach in contemplative practices. Corroborating previous research, evidences suggest gratitude and indebtedness are distinct constructs.

As gratitude is linked to more positive individual and social outcomes, it becomes increasingly important to explore factors that influence gratitude and grateful behaviour. The inclusion of benefactor type and potential effects of accompanying thoughts related to the benefit assessment is a positive step in this direction.

LIST OF TABLES

Table 1. Sample generalised responses for group benefactor (Study 1)

Condition	Case	Responses	Category
1	275	Well-rounded education implemented by the MOE to ensure children's cognitive development is balanced.	Educational
1	64	Good education from teachers.	Educational
3	52	Able to gain knowledge and make sense of the world through education from teachers.	Educational
3	19	Professors from school for teaching new knowledge.	Educational
1	3	Good healthcare system and adequate care.	Healthcare
1	190	Healthcare - Preventing and providing for us.	Healthcare
3	51	High quality of healthcare from medical practitioners.	Healthcare
3	71	Medicine from doctors when sick.	Healthcare
1	4	Security and peace on the home front, provided by the police force.	Protection from crime
1	16	With the police force, I could live in a safe environment.	Protection from crime
3	19	Security from police patrol at night.	Protection from crime
3	53	Police keep the neighbourhood safe.	Protection from crime
1	4	Regional security provided by the military.	Security
1	15	Safety from terrorism.	Security
3	62	Military: benefitted from their contributions in maintaining this security of Singapore.	Security
3	68	Interpersonal security from military.	Security
3	59	Maintain peace within the society.	Peace
3	69	Racial harmony.	Peace
1	193	No chaos, order maintained.	Peace

Table 2. Sample individualised responses for group benefactor (Study 1)

Condition	Case	Responses	Category
1	106	Going on OCSP (service learning overseas) last year, a doctor gave our team vaccinations at a heavily discounted rate because it was her way of giving back.	Healthcare
1	204	I have received many benefits from my doctor at a public hospital that has treated my condition and treats me with respect and allows me to make my own decision e.g. regarding choosing my own medication and how much of it to take to suit my lifestyle.	Healthcare
1	9	Civil defence - They are very prompt in responding to emergencies, and I am grateful for that as they saved my grandmother's life.	Civil Defence
3	72	Civil defence - helped fight a fire next to my house	Civil Defence
1	17	2) ICA staff for reissue of student pass. Benefit = crucial identification and so I had It on time	Others
3	70	Police Force: A police officer helped me when I got lost once.	Others
1	17	2) ICA staff for reissue of student pass. Benefit = crucial identification and so I had It on time	Others

Table 3. Sample responses for individual benefactor (Study 1)

Condition	Case	Responses	Category
2	33	I have benefited from the hard work my father, who is the sole breadwinner of my family until 4 years ago. Because of him, I have been able to go through a formal education until university.	Family Instrumental Support
2	42	The first benefit I've received would be basic needs and amenities such as a roof above my head. Secondly, my parents support me financially.	Family Instrumental Support
4	95	My parents provided me basic necessities such as food, water, a house and emotional support.	Family Instrumental Support
4	85	Monetary support from parents - benefit such as being able to enjoy good food and enjoy entertainment.	Family Instrumental Support
2	31	I have received lots of love and care from family and friends around me. They provided (and are still providing) me with support and encouragement.	Family Emotional Support
2	48	Love and understanding from my loved ones - emotional needs/support.	Family Emotional Support
4	75	I receive love and kindness from my family and friends.	Family Emotional Support
4	92	My friends and family give me the emotionally support that I need.	Family Emotional Support
2	39	Friends: Companionship and sense of belonging in the community.	Friends Instrumental Support
2	42	My friends provide me with the sense of belonging and artistic integrity.	Friends Instrumental Support
4	73	Academic help from peers.	Friends Instrumental Support
4	79	School: received help and advice from peers and seniors for planning of modules and advice for classes.	Friends Instrumental Support
2	45	Friends being there for me emotionally and physically -always have someone to rant to/ hear a second opinion from - make more informed decisions in life.	Friends Emotional Support
2	29	Emotional support from friends and family.	Friends Emotional Support
4	80	Emotionally support through social interaction with my group of friends.	Friends Emotional Support
4	93	Emotional support from friends and family during time of need.	Friends Emotional Support

Table 4. Sample responses for group benefactor × self-entitlement thoughts condition (Study 1)

Condition	Case	Responses	Category
1	7	Paying money to fund my education. Taxpayers money to provide such protection.	Equitable Exchange
1	19	MRT assistance should not be reduced since we paid for the commute (ez-link card). Prevention from terrorism is also a privilege for citizens of the country. Healthcare is a privilege and we also paid for it although it can be subsidised. Education is paid for through our tuition fees.	Equitable Exchange
1	193	I've worked hard to pursue my education and hence I deserve the best. I do not pick fights and I'm generally a good person hence I deserve peace in the country.	Equitable Exchange
1	194	1) As a citizen, I deserve to feel safe and secure in my own home country. 2) If should not be taken away as it is their job and duty to be the first on scene. 3) It should not be reduced as it is within their job requirements to serve others. 4) I deserve this protection as it is their job and I am a citizen of the country. 5) It should not be taken away as it is what is expected of them.	Citizenship Rights
1	190	I can't give each a specific reason. I would say it's because we're Singaporean that we receive such benefit. It's because we're Singaporean that we deserve such benefit.	Citizenship Rights
1	21	National defence should not be taken away - all citizens should be entitled to it.	Citizenship Rights
1	13	The right to good standard of living unmarked by the fear of constant threats (e.g. rape, robbery, war) is universal to all citizens, a state should be preserved. Access to healthcare and responsible doctors/nurses/medical professionals in time of need should also be universal as a basic right.	Universal Rights
1	118	Healthcare is the right of any human. More so for an advanced economy like SG.	Universal Rights
1	5	I as a citizen of Singapore, have the universal right to have unrestricted and unfettered access to education.	Universal Rights
1	23	I spent my time in NS, thus I should be given the opportunities to learn. I deserve this because I myself abide by the law.	Reciprocity
1	9	Education: Although my tutors were wonderful, I believe I also put in the necessary hard work and did my best, so they will also be willing to put in extra effort.	Reciprocity

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| 1 | 4 | Security/peace; government duty to all citizens. | Duty of Government |
| 1 | 193 | The government is responsible for ensuring citizens welfare is top-notch. He should care for his people and place them as priority to make him a good government. | Duty of Government |

Table 5. Sample responses for individual benefactor × self-entitlement thoughts condition (Study 1)

Condition	Case	Responses	Category
2	28	I deserve the benefit because I believe I earned what I can earn and give back what I can give. There are situations in which I have helped them before.	Reciprocity
2	32	I have been reciprocal to the support given, giving back to these individuals with all of the effort I can muster.	Reciprocity
2	36	I am a good daughter and will take care of my parents next time.	Reciprocity
2	30	Education - This should not be reduce/taken away as it helps me better myself for the working world. This should never be taken away from me as it shapes my moral values and help me be the person I am today.	Positive Growth
2	201	Having mentors (who have the value of experience) is something that should not be taken away from the young - this guide us in making important individual decisions and also shapes us to be leaders that will affect others' lives in the future.	Positive Growth
2	206	Education is an important enabler in our society, and this should not be taken away from my peers and I, because such a removal would result in many doors being closed.	Positive Growth
2	42	I deserve basic amenities and financial security because it is my right as a human being and as their child.	Rights of Dependent
2	38	Only my family is obligated to support me.	Rights of Dependent

Table 6. Sample responses for group benefactor × neutral thoughts condition (Study 1)

Condition	Case	Responses	Category
3	50	I do not have to worry much about my safety when I am in Singapore.	Peace of Mind
3	54	Sleeping soundly at night - A. Similar to point 1. Compared to other countries, like the middle eastern ones, we are able to have a peace of mind that there are people watching over the safety of this country.	Peace of Mind
3	57	A sense of security is a good thing because it makes me feel safe and protected in my everyday life.	Peace of Mind
3	49	Education allows me to be more useful and earn money.	Positive Personal Development
3	51	Able to get a job and hence have a higher quality of life compared to those who are unable to support themselves.	Positive Personal Development
3	64	The good thing I listed previously all contribute to a better life for me by ensuring I'm in safe and secure place and well-equipped to face the working world in the 21st century.	Positive Personal Development
3	52	Health is important and key. Without good health, you can't function.	Personal Health
3	63	Allows everyone to have a good access to maintaining their health.	Personal Health
3	72	Healthcare - ensures I can live day to day without having to worry about injuring myself again.	Personal Health
3	275	Getting a better job means getting a better salary and being able to better provide for one's family. Also, one may feel more intellectually	Positive Future self
3	94	Allows me to spend my money better with a view for the future.	Positive Future self
3	269	Learning about myself will lead to better judgement of other people and easier completion of tasks in the future.	Positive Future self

Table 7. Sample responses for individual benefactor × neutral thoughts condition (Study 1)

Condition	Case	Responses	Category
4	77	2nd benefit makes me happy as who doesn't like or not want to be loved. 3rd benefit, feeling less lovely drives my depression and sadness away at most times. I am able to do fun things with them which keeps me happy.	Positive Emotions
4	90	Unconditional love - they will be there whenever I need help/advise. Emotional support - almost the same as unconditional love, but towards more helpful advice in times of trouble/need.	Positive Emotions
4	216	Emotional support - Gets you out of negative feelings, help you get back on your feet.	Positive Emotions
4	217	Greater self-awareness helps me make better life decisions. It helps me to love myself better and be more confident as a person. It makes me a better person and gives me a sense of achievement. It helps me build positive relationship with others.	Positive Personal Development
4	95	I am encouraged constantly to be a better student and person and it helps me grow as an individual. Praise acts as a positive reinforcement for me to continue being a good/hardworking person.	Positive Personal Development
4	75	Able to upgrade myself and learn more.	Positive Personal Development
4	73	I have the ability to purchase things I need.	Goal Attainment
4	76	Invitations to these events enhance my working experience and allows me to connect to like-minded individuals for future endeavours.	Goal Attainment
4	84	It is beneficial because it helps me to save a lot of time. I will be able to rest early. It is convenient (for example, dad drove me to school). I can save money as I do not have to buy dinner myself. I will get a better grade when friends help me in my academics.	Goal Attainment

Table 8. Internal consistency, reliabilities, means, standard deviations, and inter-correlations of study variables (Study 1, n = 140)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gratitude	3.58	1.06	{.97}															
2. PA	2.81	.80	.50** (.57)	{.91}														
3. NA	1.3	.43	0 (0)	-.01 (-.01)	{.86}													
4. Indebtedness	1.86	.92	.38** (.41)	.28** (.31)	.21* (.23)	{.85}												
5. Interpersonal Help	4.22	.51	.20** (.34)	.14 (.25)	-.15 (-.27)	.02 (.05)	{.45}											
6. Impersonal Help	2.80	.87	.22** (.27)	.19* (.24)	-.15 (-.19)	.16 (.21)	.38** (.78)	{.64}										
7. Intent to Help_all	3.51	.58	.26** (.33)	.21* (.27)	-.18* (-.24)	.13 (.18)	.72**^	.91**^	{.65}									
8. Trait SET	2.29	.67	-.13 (-.15)	.23** (.27)	.14 (.16)	.05 (.06)	-.18* (-.34)	-.13 (-.17)	-.17* (-.24)	{.87}								
9. Reciprocity Norm	4.00	.55	-.03 (-.03)	.10 (.12)	.05 (.06)	-.01 (-.01)	.17* (.33)	.15 (.21)	.19* (.27)	.20* (.25)	{.82}							
10. Trait Gratitude	4.26	.59	.32** (.36)	.19* (.22)	-.18* (-.21)	-.14 (-.17)	.30** (.57)	.24** (.32)	.31** (.44)	-.28 (-.35)	.14 (.17)	{.81}						
11. Trait Indebtedness	3.31	.65	-.04 (-.05)	.08 (.09)	.13 (.16)	.07 (.08)	-.01 (-.02)	.04 (.05)	.02 (.03)	.29** (.37)	.69** (.88)	.02 (.02)	{.69}					
12. Trait DCT_Positive	3.22	.78	.20* (.22)	-.07 (-.08)	.08 (.10)	.09 (.11)	.12 (.23)	.11 (.14)	.14 (.19)	-.06 (-.08)	.11 (.13)	.20* (.35)	.08 (.11)	{.81}				
13. Trait DCT_Negative	3.31	.85	.10 (.11)	.05 (.05)	.05 (.05)	.07 (.08)	.20* (.37)	-.07 (-.10)	.03 (.04)	-.12 (-.15)	-.02 (-.03)	.21* (.25)	-.05 (-.07)	.34** (.41)	{.88}			
14. SET Condition			.18*	-.03	.21*	.04	.02	-.01	0	-.07	-.14	.04	-.12	-.08	-.06			
15. Individual Benefactor			.04	0	.11	.10	.06	0	.03	-.08	-.06	.07	-.14	.03	.19*	0		
16. Female			-.02	-.21*	-.13	-.25**	-.01	.11	.08	-.18*	.04	.19*	-.05	.01	-.04	-.02	.02	

Note. Values in { } represent internal consistency reliabilities (Cronbach's alphas) obtained in the study. Values in ( ) represent corrected correlations.

** p < .01, * p <.05, ^ indicates that corrected correlations not included because it correlates highly with its composite measure.

Table 9. Sample generalised responses for group benefactor (Study 2)

Condition	Case	Responses	Category
5	218	Good learning facility - Students are able to be taught well be qualified teachers.	Education
5	103	Higher education has allowed us to move into industries which require high skills.	Education
7	148	Knowledge from school teacher/ lecturers.	Education
7	262	Those in the education sector (front line and behind the scenes) have provided opportunities to myself and many others to thrive and growth.	Education
5	112	Healthcare (doctors and nurses) to prescribe medicine to us when we fall ill.	Healthcare
5	220	Good means to doctors and nurses with safe prognosis.	Healthcare
7	237	Healthcare allows us to remain healthy and receive treatment.	Healthcare
7	239	Healthcare- readily available facilities and experts to alleviate physical discomfort. Can easily request for medication or measures taken to improve well-being and lifestyle that affects my health.	Healthcare
5	99	I can walk the streets at night safely.	Protection from crime
5	102	Safe neighbourhoods so that we know we are safe when we return late at night.	Protection from crime
7	153	Safety has been enforced by our police force and I feel safe to walk the street even into the wee hours at night.	Protection from crime
7	161	From the police force, we have benefitted in terms of safety and helping to keep the neighbour's noise down.	Protection from crime
5	110	Military: Prepare to protect our country and serve our country.	Security
5	104	Military: constant and vigilant protection for our country against numerous threat.	Security
7	147	As for the military, I am thankful for their sacrifices to serve the nation to keep us all safe.	Security
7	238	Safe environment due to safety provided but security forces.	Security

Table 10. Sample individualised responses for group benefactor (Study 2)

Condition	Case	Responses	Category
5	108	Doctor that accurately diagnosed my sickness instead of diminishing it as something mild.	Healthcare
5	116	My life was saved thanks to the staff at the hospital when I was rushed to the emergency ward.	Healthcare
7	151	Saved my life multiple times from otherwise fatal asthma attacks.	Healthcare
7		Assistance from firemen when there was damage to school property.	Civil Defence
7	157	I was extremely lucky to have been assigned to the Air Force, where my OC in charge was a very fair and just person wo took care for all his staff, extended to NSFs as well.	Other

Table 11. Sample responses for individual benefactor (Study 2)

Condition	Case	Responses	Category
6	131	My mother has provided me with a house to stay in. My mother has provided me with an education.	Family Instrumental Support
6	133	Because of my parents and extended family, I have the luxury of a tertiary education and ability to go on exchange/travel.	Family Instrumental Support
8	172	Parents: my parents serve to excel in their careers so that we may be able to live comfortably along with the benefits such as family/friends as networking/future business partners and the luxury of focusing solely on my attendance.	Family Instrumental Support
8	174	My parents give me a stable home along with all its comforts (e.g. food, hyenine etc). They are also nuanced enough in their child raising to ensure that I grow up well-adjusted.	Family Instrumental Support
6	130	Comfort, knowing that I have support (whether perceived or real) from my friends and family members.	Family Emotional Support
6	231	Support - Friends and family provide me with a lot of emotional support.	Family Emotional Support
8	244	Emotional wellness from parents and friends. Kind words and encouragement that built my confidence from friends and family.	Family Emotional Support
8	247	1) Emotional stability. Parents have provided a loving environment, very supportive when I fail.	Family Emotional Support
6	134	2) My friends shaped me to who I am today.	Friends Instrumental Support
6	225	Friend took the time to tutor me on a subject I was weak in during A levels - helping me improve in grades.	Friends Instrumental Support
8	246	Become more outspoken because of my outgoing friends.	Friends Instrumental Support
8	248	4) Studies and motivation. Friends encourage and support my journey in university.	Friends Instrumental Support
6	227	My friends give me affirmation and confidence by validating me.	Friends Emotional Support
6	229	My friends and family show me care and concern when I'm upset or feeling down, making me feel loved.	Friends Emotional Support
8	264	Care and concern from my friends and family.	Friends Emotional Support
8	241	Friends who kept me company.	Friends Emotional Support

Table 12. Sample responses for group benefactor x downward counterfactual thoughts condition (Study 2)

Condition	Case	Responses	Category
5	102	If the police officers were not trained to detect suspicious activity, our neighbour would not be safe. If the government did not invest in the healthcare sector to provide subsidies for elders or low-income families, there might not be equal opportunities to this resource. If teachers were not portrayed as having impact on the lives of the students, there may have been a shortage of teachers to guide our youths.	Negative Societal Effects
5	104	1) Military: If our country was ruled by the military, things might not be as democratic as they are today. 2) Police Officers: If our police officers started arresting people due to skin colour, our society may not be as peaceful 3) Healthcare: If the healthcare market was left to the free market, we may not have affordable and good quality healthcare. 4) Education: If our government did not have subsidized education we might not be able to sustain our economy. 5) Home Affairs: If we did not have these checks and balances in our society, racial riots may be a common occurrence in Singapore.	Negative Societal Effects
5	112	If not for police officers, Singapore would be a less secure place. If not for education, many of us would end up not educated, which might affect how we can survive in this world. If not for hospitals, many of us would've died/ been unable to get a cure when we are sick.	Negative Societal Effects
5	117	If not for the police forces, there would be possibilities of crime whenever I go. If not for education, our country would not prosper. If not for the military, terrorist would attack our country. If not for healthcare, the sick would not recover quickly. If not for sufficient jobs, many unemployed people would not have a roof over their heads.	Negative Societal Effects
5	100	Don't know who to go to for help when I am molested or robbed.	Physical Security
5	113	With regards to sense of security, if it weren't for our police force, we Singaporeans probably will not feel as safe roaming around the streets late at night.	Physical Security
5	106	If not for the military, our country would be less secure from internal and external threats. If not for the police, it would be much more unsettling returning home every night.	Physical Security

5	101	I would not receive knowledge if not for my caring teachers.	Lower One's Competence
5	105	I must say that if not for the Singaporean education system, I may not have taken studying seriously. I have studied in international schools which while they have their own advantage, operate in a very carefree manner, and do not impose the same standards of hard work and achievement. I	Lower One's Competence
5	98	I would have had typhoid that went undetected and would have ended up worse.	Personal Health
5	106	If not for the help rendered by doctors in poly clinics, I would be down with illness much longer. If not for help rendered by doctors and nurses in hospitals, my leg would have been worse shape than it is now.	Personal Health

Table 13. Sample responses for individual benefactor × downward counterfactual thoughts condition (Study 2)

Condition	Case	Responses	Category
6	123	If not for I have friends and family who truly care for me, I would not have received useful advices.	Lower Competence
6	126	If not for the advice I get to receive, I would be more lost/less clear in making decisions. If not for practical help made available to me. I would be making slower progress.	Lower Competence
6	133	If not for my teammates, I might not have learnt the value of time management and hard work, which is necessary to succeed in other aspects of life.	Lower Competence
6	142	If not for my friends, my life would not have been filled with so much joy and fun.	Reduced Emotional Well-being
6	230	If not for emotional support and care, I would feel lost and alone. If not for companionship, I would feel alone and probably sad. If not for love and a sense of security, I would end up in a state much worse off.	Reduced Emotional Well-being
6	270	If they cared less about me, or if I wasn't willing to share my emotional state with them, I would not be able to receive the same amount of social support.	Reduced Emotional Well-being
6	131	If not for my mother, I would not have a comfortable house to live in nor would I have the necessary resources to be…like this or sit in this classroom.	Financial Woes
6	122	1) I might have to work part time in order to find my own lodging. 2) I might have to scrimp and save on meals while not consuming nutritious meals. 3) I might have to stay in school to enjoy those facilities, and spend more time on laundry instead of studying. 4) I might have been indebted, limiting my ability to save up when I work.	Financial Woes
6	231	If not for my parents, I would not be so fortunate as to be alive to afford a university education along with my other extra curriculums.	Financial Woes

Table 14. Sample responses for group benefactor × neutral thoughts condition (Study 2)

Condition	Case	Responses	Category
7	147	Feeling grateful that people who are close to me are okay and wanting to spend more time with them.	Gratitude
7	162	In all for all the benefits listed down previously, the main thought would be that I felt really thankful for it. If not for those individuals I met, things would have been very different now.	Gratitude
7	255	Thankful for their help and makes me want to help others too.	Gratitude
7	153	I feel free and not constrained. I can pursue whatever I want as long as I am interested and willing to work hard for it. I feel proud as a Singaporean.	Positive emotions
7	164	Proud of my country especially in the eyes of tourists who experience it for the first time and compare it to their home country. I will receive justice and people around me too.	Positive emotions
7	271	Pride/respect for our civil service.	Positive emotions
7	150	Its fortunate to be able to meet caring and interesting teachers instead of strict and boring ones.	Lucky/blessed/fortunate
7	154	I feel thankful and fortunate. I also feel grateful to be living in this society and not others.	Lucky/blessed/fortunate
7	163	I feel blessed.	Lucky/blessed/fortunate

Table 15. Sample responses for individual benefactor × neutral thoughts condition (Study 2)

Condition	Case	Responses	Category
8	167	1. Very thankful for being able to do other things other than earning money to feed the family. 2. Thankful for not having boundaries that restrict what I want to do. 3. Waking up to food on the table is great.	Gratitude
8	169	I feel thankful that my family and friends think about me and my welfare despite facing their own struggles and problems in their lives. I feel grateful for the treats friends have offered in the form of meals and movies, I am thankful my parents give me an allowance and credit card to spend money on necessities and general things that I want. I am thankful for the many meals my family cook or dine out. I feel thankful for the wise words my family and friend have given to me.	Gratitude
8	181	My parents work really hard to support the family; earning money is not easy. I should strive to work hard and repay them. I am thankful for the friends I have and I would be sure to be there of them when they need me as well.	Gratitude
8	173	I feel loved and it makes me want to become a better person. I feel that I need to do the same for them - to be a better friend.	Positive Emotions
8	180	Feeling of warmth, love and sincerity.	Positive Emotions
8	187	I feel happy that there are people in this world who care about me and what I think.	Positive Emotions
8	178	Listening Ear: Appreciative of my friend for always lending me a listening ear.	Care/Concern by Others
8	247	I owe my parents for their never-ending support. My sister has my best interest at heart.	Care/Concern by Others
8	264	Care and concern - I need my friends at my lowest point and they are there to listen.	Care/Concern by Others

Table 16. Internal consistency, reliabilities, means, standard deviations, and inter-correlations of study variables (Study 2, n = 140)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gratitude	3.75	1.01	{.98}															
2. PA	2.78	.84	.57** (.61)	{.93}														
3. NA	1.37	.53	-.02 (-.02)	.16 (.18)	{.91}													
4. Indebtedness	2.07	1.00	.33** (.37)	.24** (.27)	.24** (.29)	{.88}												
5. Interpersonal Help	4.11	.52	.15 (.23)	.04 (.06)	-.13 (-.20)	.01 (.02)	{.34}											
6. Impersonal Help	2.77	.84	.32** (.40)	.20* (.27)	.03 (.04)	.05 (.07)	.28** (.52)	{.68}										
7. Intent to Help_all	3.44	.55	.31** (.39)	.17* (.22)	-.04 (-.05)	.04 (.06)	.68**^	0.89**^	{.62}									
8. Trait SET	2.36	.60	-.05 (-.05)	.23** (.26)	.07 (.08)	.08 (.09)	-.07 (-.12)	.01 (.01)	-.03 (-.04)	{.82}								
9. Reciprocity Norm	3.92	.54	.16 (.18)	.15 (.18)	0.005 (0.01)	.21* (.26)	.10 (.17)	.13 (.19)	.15 (.21)	-.04 (-.05)	{.80}							
10. Trait Gratitude	4.25	.57	.44** (.50)	.33** (.38)	-.09 (-.10)	-.02 (-.02)	.25** (.42)	.23** (.33)	.30** (.41)	-.07 (-.08)	.09 (.11)	{.80}						
11. Trait Indebtedness	3.33	.68	.12 (.14)	.10 (.12)	-.04 (-.06)	.15 (.19)	.10 (.18)	.04 (.06)	.08 (.12)	-.01 (-.01)	.73** (.97)	.05 (.07)	{.75}					
12. Trait DCT_Positive	3.28	.77	.27** (.30)	.10 (.12)	.13 (.16)	.21* (.26)	.13 (.21)	.18* (.25)	.20* (.27)	-.11 (-.13)	.29** (.36)	.14 (.17)	.38** (.51)	{.83}				
13. Trait DCT_Negative	3.26	.83	.18* (.20)	.15 (.17)	.15 (.17)	.12 (.14)	.14 (.22)	.22** (.29)	.23** (.31)	-.12 (-.14)	.12 (.14)	.22* (.26)	.04 (.05)	.23** (.27)	{.87}			
14. DCT Condition			-.02	-.03	.06	.03	.13	-.15	-.05	-.08	-.01	-.05	.07	-.09	-.02			
15. Individual Benefactor			.20*	.12	-.02	.05	.18*	.19*	.23**	-.19*	-.05	.09	-.12	.03	-.01	0		
16. Female			.13	-.18	0	-.07	.01	.09	.07	.08	.02	.10	.04	.10	.03	.16	0	

Note. Values in { } represent internal consistency reliabilities (Cronbach's alphas) obtained in the study. Values in ( ) represent corrected correlations.

** p < .01, * p <.05, ^ indicates that corrected correlations not included because it correlates highly with its composite measure.
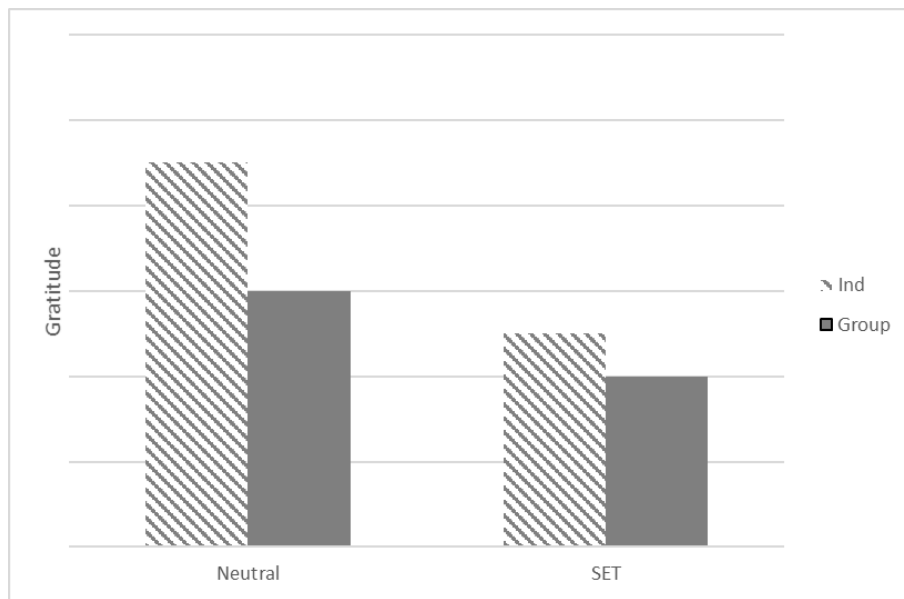
LIST OF FIGURES

Figure 1. Hypothesised main effect of benefactor type on gratitude (H$_1$). People who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor.
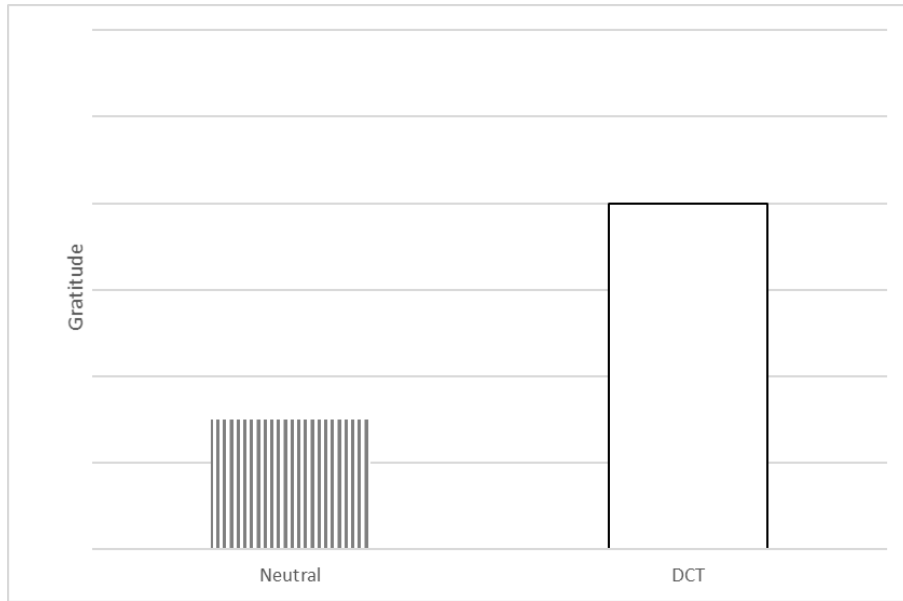
Figure 2. Hypothesised main effect of self-entitlement thoughts on gratitude (H$_2$).

People who engaged in self-entitlement thoughts will experience lower gratitude
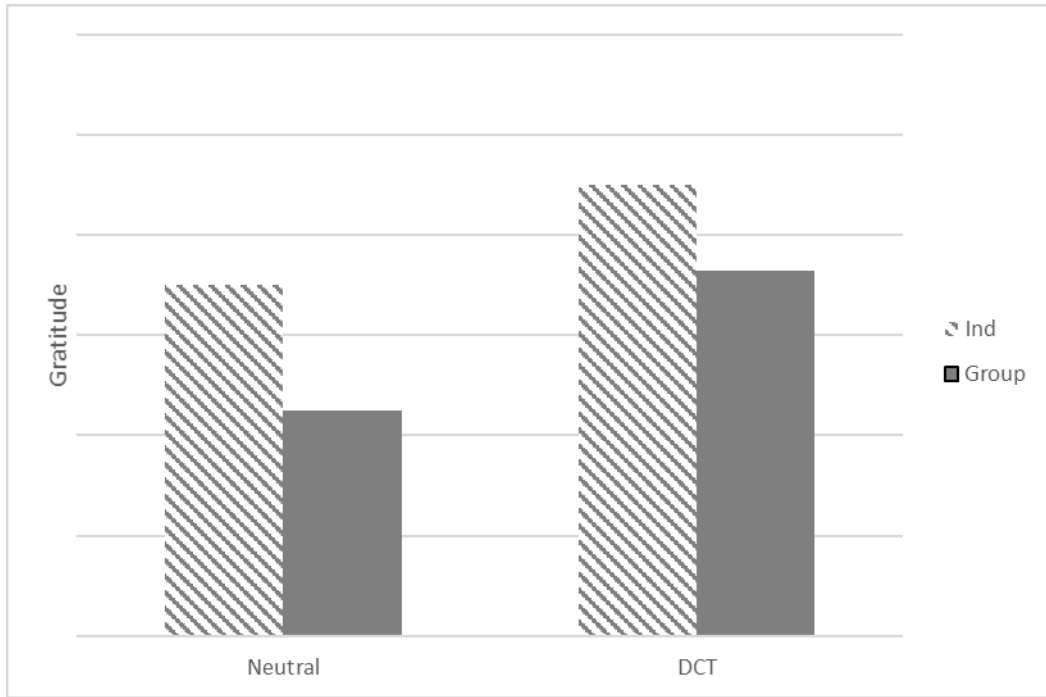
than those who engaged in neutral thoughts.

Figure 3. Hypothesised interaction effect of benefactor type and self-entitlement thoughts on gratitude (H$_3$). There will be a two-way interaction between benefactor type (individual vs. group) and self-entitlement thought (neutral vs. self-entitlement) on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker in the presence of self-entitlement thoughts.

Figure 4. Hypothesised main effect of downward counterfactual thoughts on gratitude (H4). People who engaged in downward counterfactual thoughts will experience higher gratitude than those who engaged in neutral thoughts.

Figure 5. Hypothesised interaction effect of benefactor type and downward counterfactual thoughts on gratitude (H₅). There will be a two-way interaction between benefactor type (individual vs. group) and downward counterfactual thought (neutral vs. downward counterfactual thoughts) on gratitude. Specifically, people who reflected upon the benefits brought about by group benefactor will experience lower gratitude than those who reflected upon the benefits brought about by individual benefactor but the magnitude of difference is weaker in the presence of downward counterfactual thoughts.
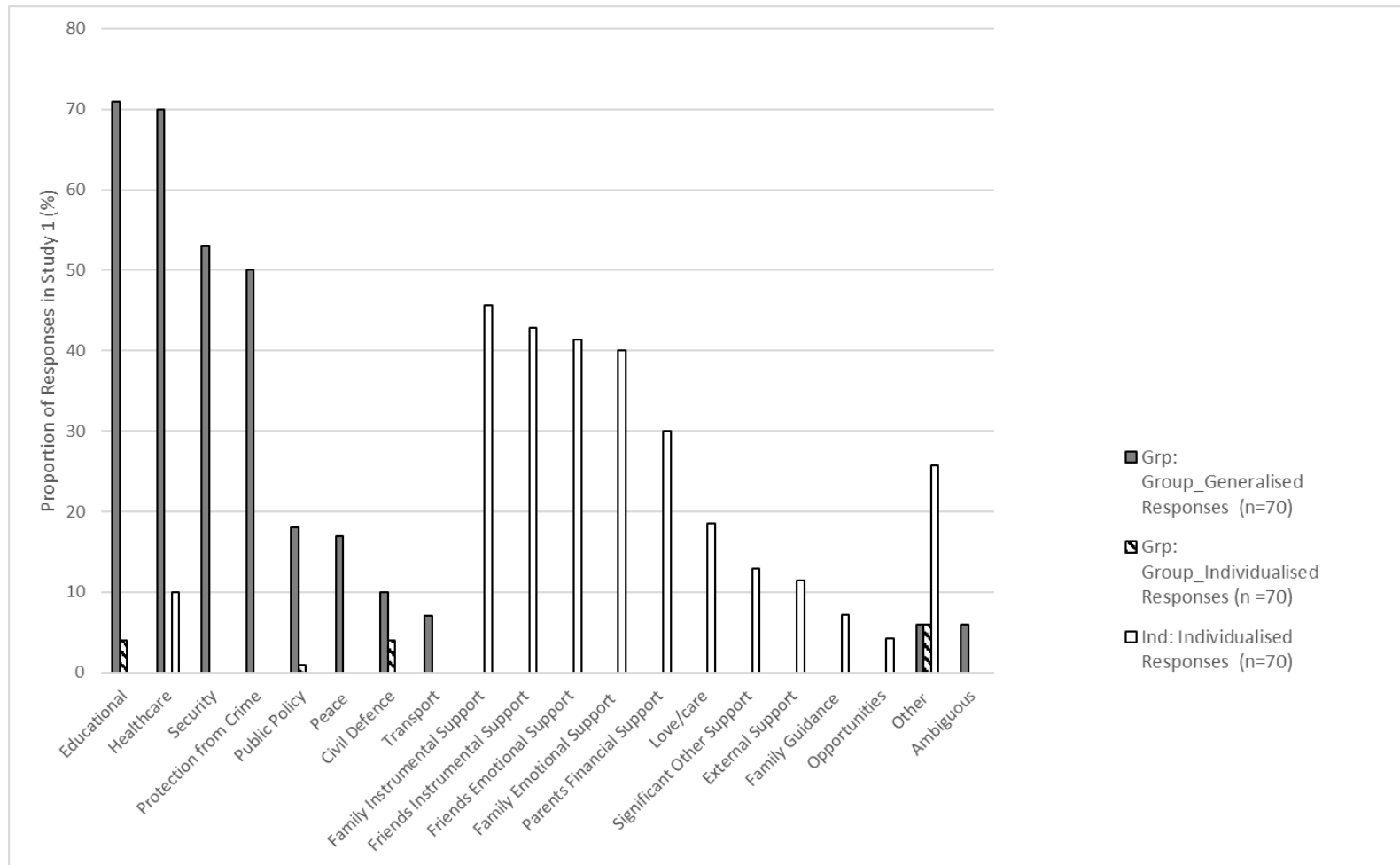
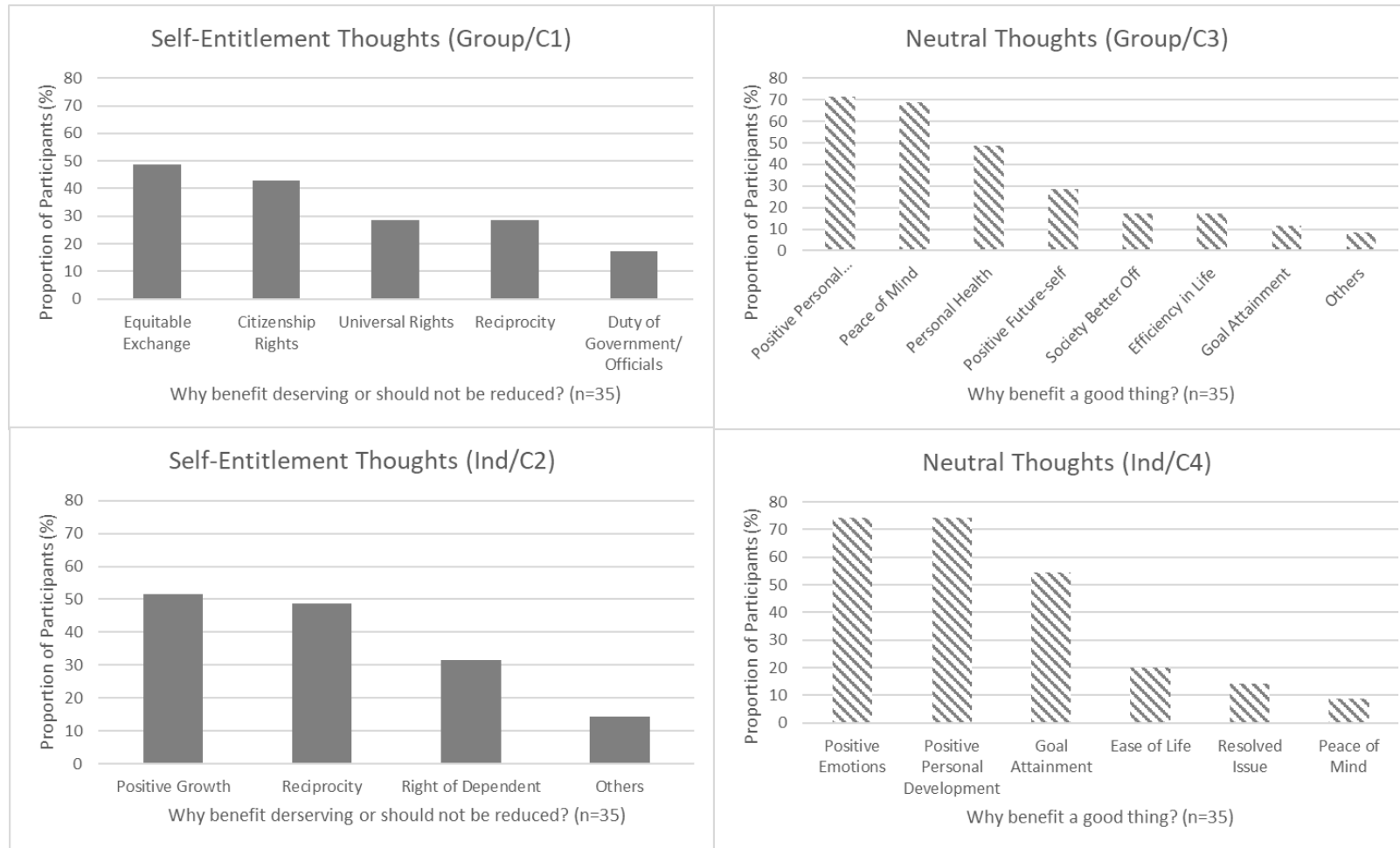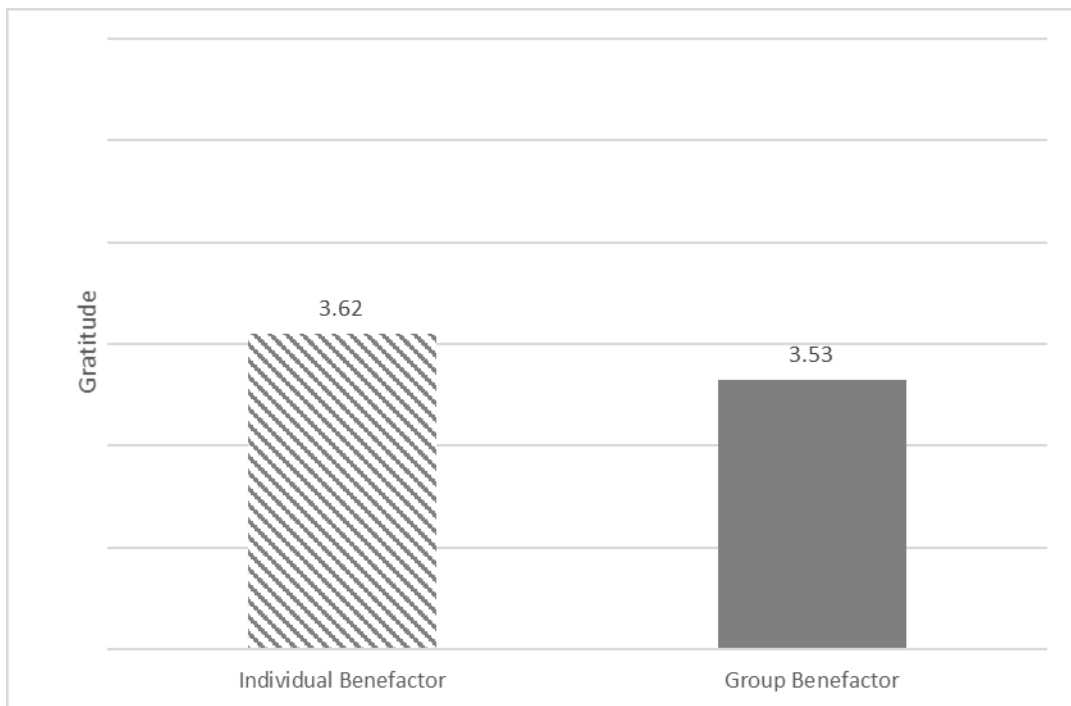*Figure 6.* Types of benefits reported in benefactor type conditions (Study 1).
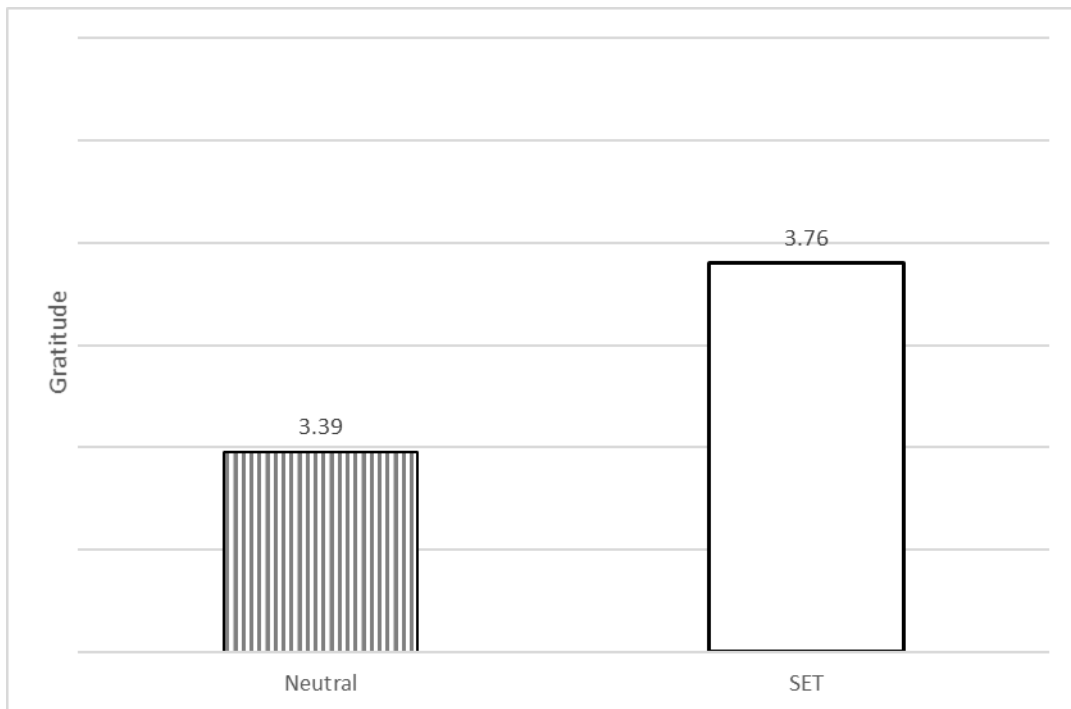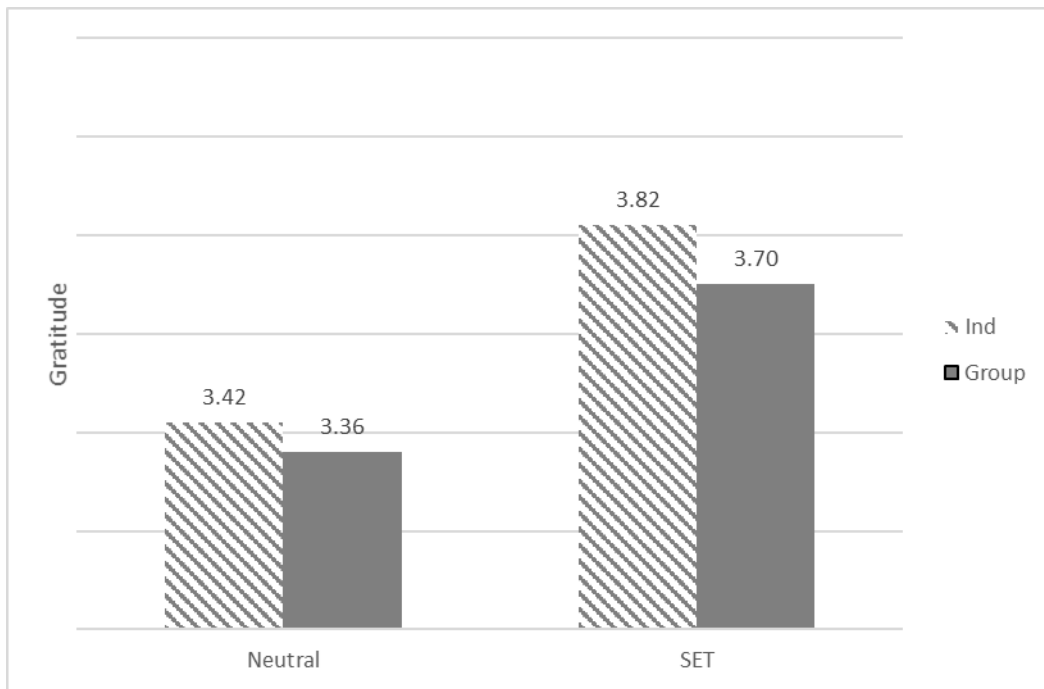
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Figure 9. Main effect of self-entitlement thoughts on gratitude (Study 1). People who engaged in self-entitlement thoughts did not experience lower gratitude than those who engaged in neutral thoughts. H_2 was not supported.

Figure 10. Interaction effect of benefactor type and self-entitlement thoughts on gratitude (Study 1). Self-entitlement thoughts did not moderate the relationship between benefactor type and gratitude. H_3 was not supported.
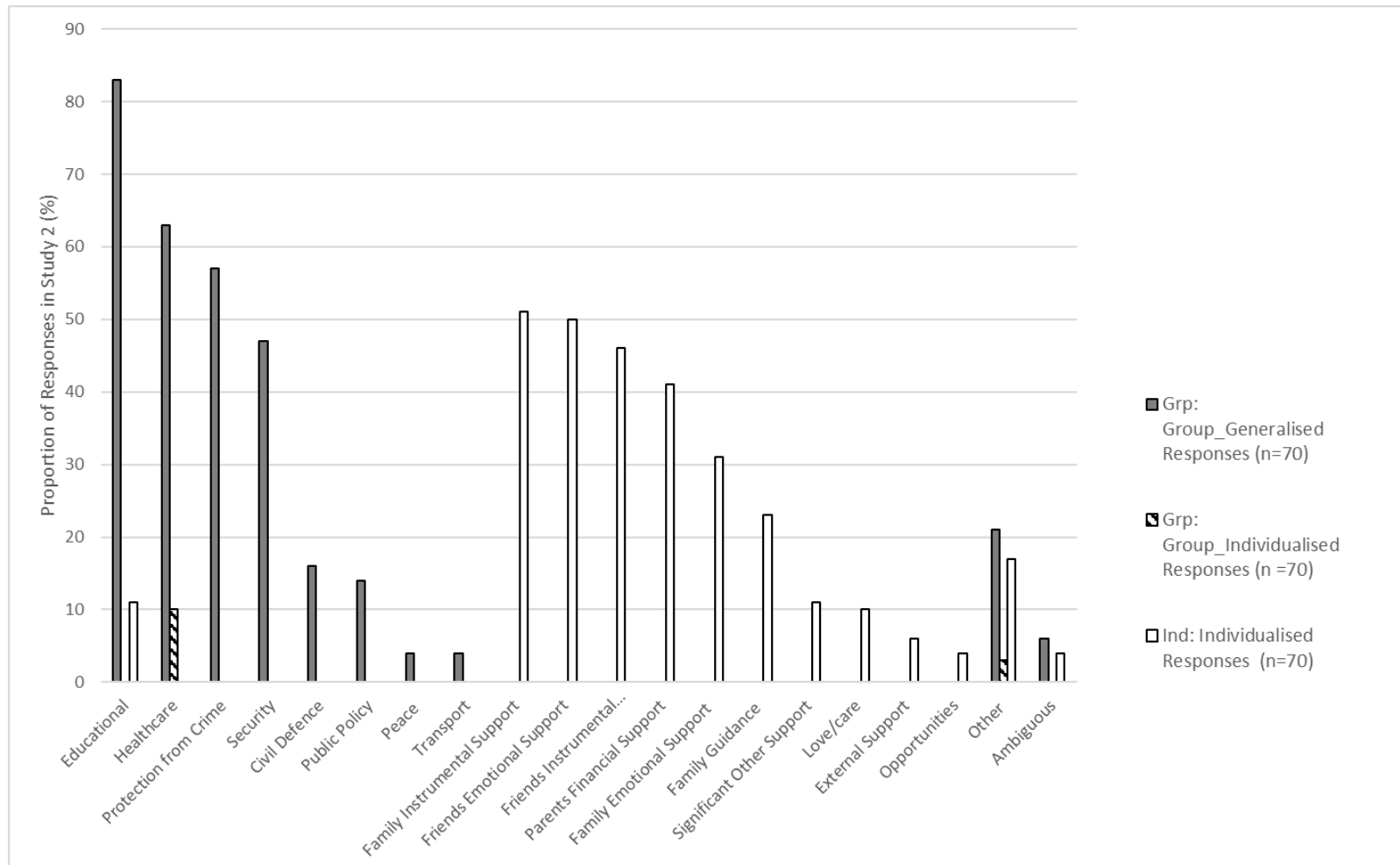
Figure 11. Types of benefits reported in benefactor type conditions (Study 2).
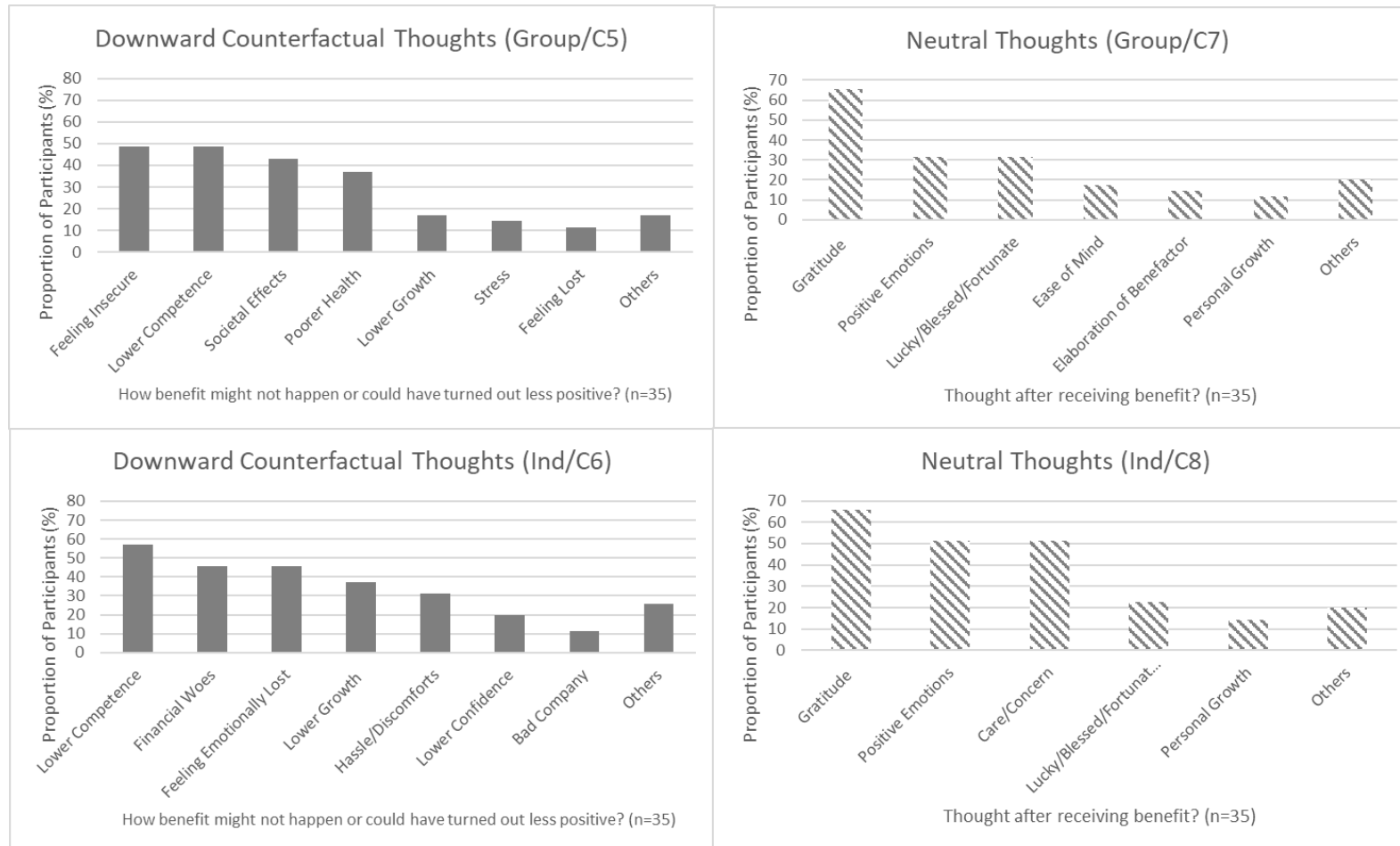
Figure 12. Responses in downward counterfactual thoughts condition vs. neutral thoughts condition (Study 2)
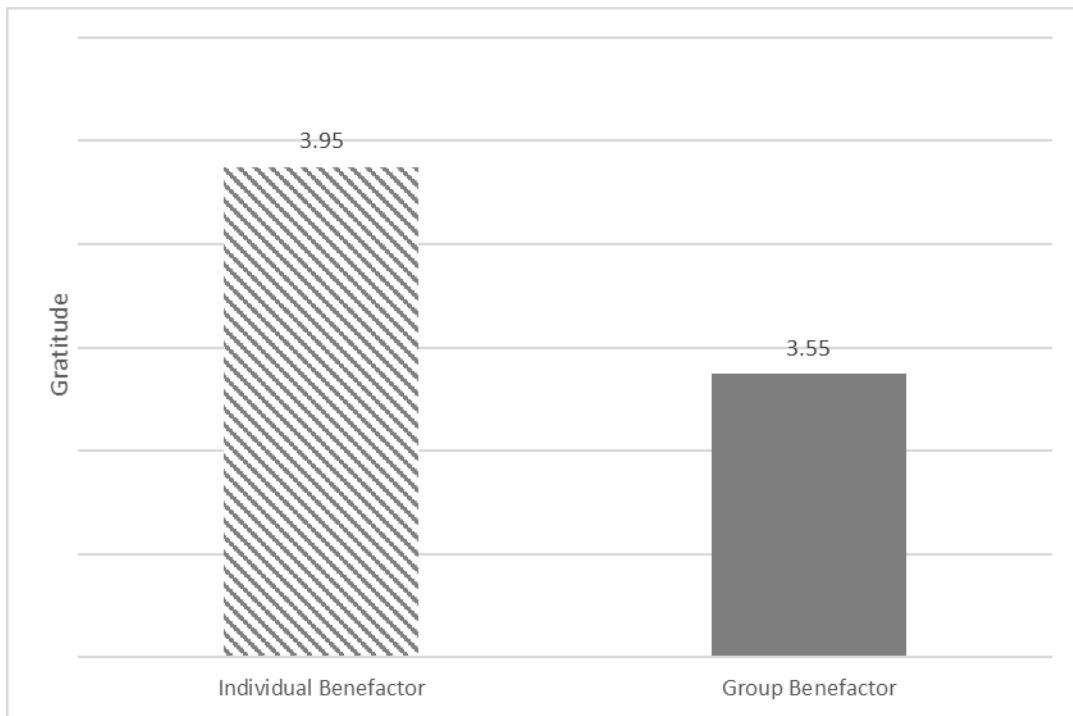
Figure 13. Main effect of benefactor type on gratitude (Study 2). There was a main effect of benefactor type on gratitude. People who reflected upon the benefits brought about by group benefactor experienced lower gratitude than those who reflected upon the benefits brought about by individual benefactor. H_1 was supported.
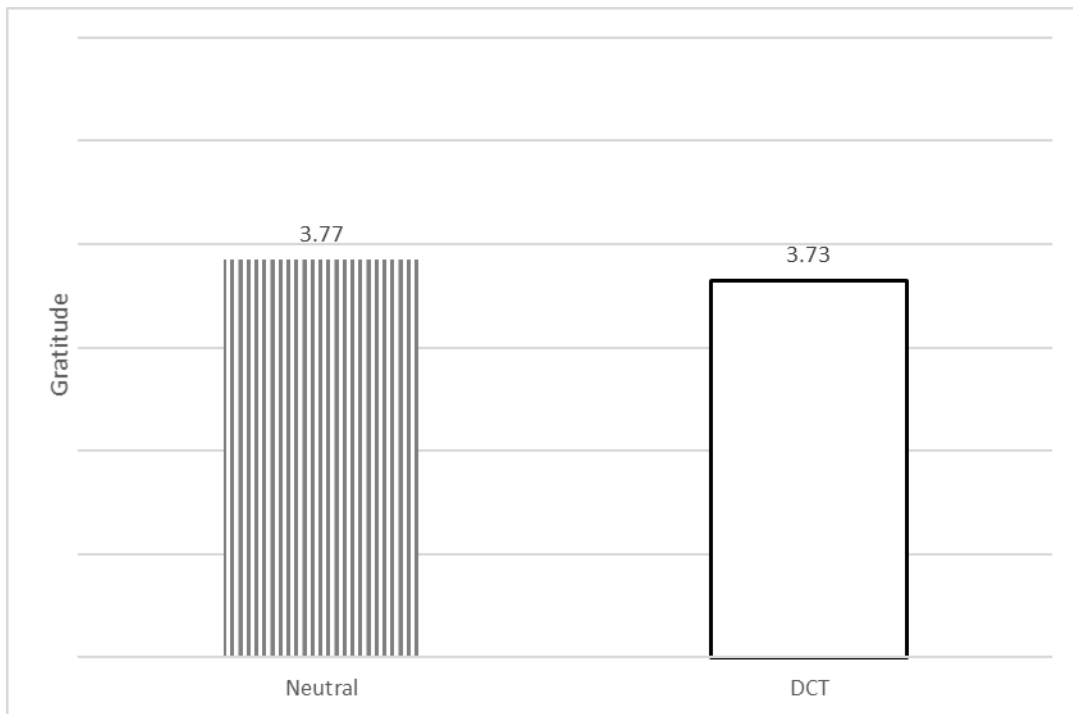
Figure 14. Main effect of downward counterfactual thoughts on gratitude (Study 2). People who engaged in downward counterfactual thoughts did not experience higher gratitude than those who engaged in neutral thoughts. H_4 was not supported.
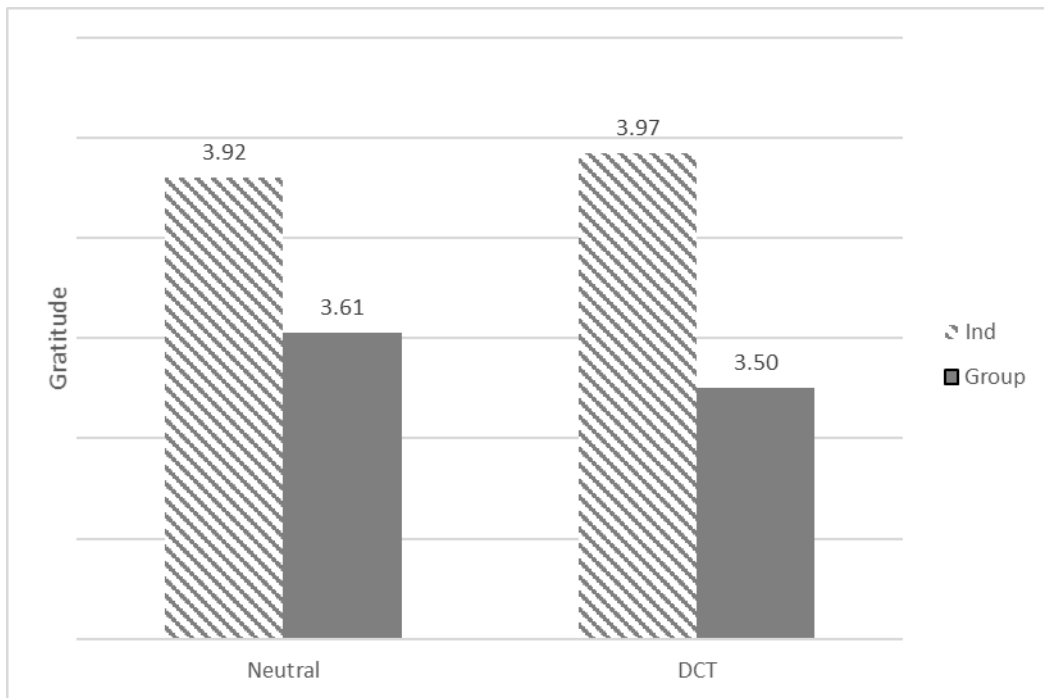
Figure 15. Interaction effect of benefactor type and downward counterfactual thoughts on gratitude (Study 2). Downward counterfactual thoughts did not moderate the relationship between benefactor type and gratitude. H_5 was not supported.
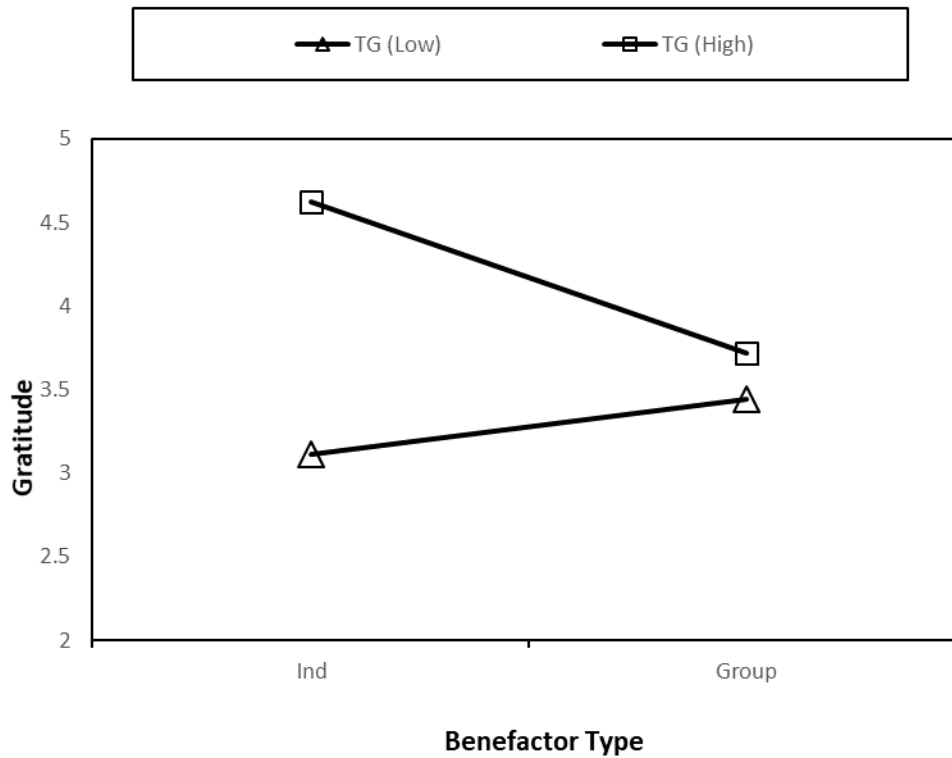
Figure 16. Interaction effect of trait gratitude on the relationship between benefactor type and gratitude (Study 2). When trait gratitude is high, those who reflected upon the benefits brought about by group benefactor experienced lower gratitude than those who reflected upon the benefits brought about by individual benefactor. However, when trait gratitude was low, there were no difference in the level of gratitude experienced between those who reflected upon the benefits brought about by group benefactor and those who reflected upon the benefits brought about by individual benefactor.
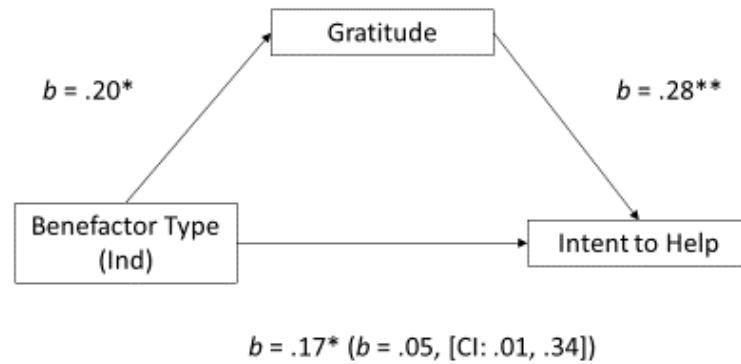
Figure 17. The mediation role of gratitude on the relationship between benefactor type (individual vs. group) on intent to help (Study 2).

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<div align="center">**Appendix A**</div>

Instructions for Benefactor Type Condition (Study 1 and Study 2)

Group benefactor condition:

Think about the benefits that you have received from the actions or contributions of public service officers (e.g., police force, civil defence, military, education, healthcare). Write down on the lines below up to five benefits that you have received as a result of the actions or contributions from these individuals. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

Individual benefactor condition:

Think about the benefits that you have received from the actions or contributions of your family members, friends and individuals you know personally. Write down on the lines below up to five benefits that you have received as a result of the actions or contributions from these individuals. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

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*Instructions created for study.

Instructions for self-entitlement thoughts condition (Study 1)

Self-entitlement thoughts condition:

There are many situations where people deserve the good things they receive in their lives, deserve more good things, and deserve more good things than others, and the good things that they received should not be reduced or taken away from them. For each of the benefits that you listed in the previous section, write down on the lines below why you deserve the benefit that you received or why they should not be reduced or taken away from you. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

Neutral thoughts condition:

There are many situations where people receive good things in their lives. For each of the benefits that you listed in the previous section, write down on the lines below why the benefit that you received is considered a good thing. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

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*Instructions created for study.

Appendix C

Instructions for section with items measuring "gratitude and indebtedness" (Study 1 and Study 2)

INSTRUCTION: [Part 2 of 2] The following words describe feelings or emotions that an individual may experience. For each word, indicate the extent to which you have experienced the feeling or emotion <u>at the present moment</u> using the following 5-point scale: (1) very slightly or not at all, (2) a little, (3) moderately, (4) quite a bit, (5) extremely

1. Grateful	1. Indebted
2. Appreciative	2. Obligated
3. Thankful	3. Obliged

Gratitude items (Grateful, Thankful, and Appreciative) form a common measure of state gratitude as used in: Tsang, J. (2006). The effects of helper intention on gratitude and indebtedness. *Motivation and Emotion*, *30*, 198–204.

Indebtedness items (obligated and indebted) for a common measure of state indebtedness as used in: Tsang, J. (2006). The effects of helper intention on gratitude and indebtedness. *Motivation and Emotion*, *30*, 198–204. "Obliged" created for study

Instructions for section with items measuring "positive and negative emotions" (Study 1 and Study 2)

INSTRUCTION: [Part 1 of 2] The following words describe feelings or emotions that an individual may experience. For each word, indicate the extent to which you have experienced the feeling or emotion <u>at the present moment</u> using the following 5-point scale: (1) very slightly or not at all, (2) a little, (3) moderately, (4) quite a bit, (5) extremely

1. Interested
2. Excited
3. Strong
4. Enthusiastic
5. Proud
6. Inspired
7. Attentive
8. Active
9. Alert
10. Determined

1. Distressed
2. Upset
3. Guilty
4. Scared
5. Hostile
6. Irritable
7. Ashamed
8. Nervous
9. Afraid
10. Jittery

*PANAS items from: Watson, D., Clark, L., & 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.

Instructions for section with items measuring "intent to help" (Study 1 and Study 2)

INSTRUCTION: This section examines the various situations in which people may or may not choose to help. There are no right or wrong answers. **<u>For each situation, imagine that it happens today or tomorrow</u>**. Please indicate the extent to which you will help in each situation using the following 5-point scale: (1) very unlikely, (2) unlikely, (3) neither likely nor unlikely, (4) likely, (5) very likely

Interpersonal Helping

1. The elevator is not working. A stranger, who has difficulty carrying several boxes of printed materials up the staircase, asked you to help. How likely will you help him/her?

2. A classmate, who just attended the same lecture as you, told you he/she has difficulty understanding several parts of the lecture and asked to borrow the notes that you made during the lecture. You know this classmate personally, although not as a close friend. How likely will you lend your notes to him/her?

3. In a group project, one of your fellow group members had difficulty completing his/her assigned task on time and asked you for assistance. How likely will you help him/her?

Impersonal Helping

1. You came across a university staff approaching students to request for some urgent help from volunteers for a university event. You are available to help but it will require you to reschedule some of your routine activities. How likely will you help in this university event?

2. You came across a voluntary welfare organisation preparing free household items to give to the needy elderly and disadvantaged communities in Singapore. They are looking for ad-hoc volunteers to help for a few hours to pack the household items in individual bags so that they can do the delivery. How likely will you help in this packing effort?

3. You came across a university staff looking for students to participate in a survey designed to find ways to or improve the quality of life of people living in Singapore. The survey will take one hour to complete and there is no compensation involved. How likely will you help by participating in this survey?

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*Items created for study.

Appendix F

Instructions for section with items measuring "what you deserve" (Study 1 and Study 2)

INSTRUCTION: For each of the following statements, please indicate the extent to which you agree or disagree that it describes how you think and feel using the following 5-point scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree.

1. I honestly feel I'm just more deserving than others.

2. Great things should come to me.

3. If I were on the Titanic, I would deserve to be on the first lifeboat!

4. I demand the best because I'm worth it.

5. I do <u>not</u> necessarily deserve special treatment.

6. I deserve more things in my life.

7. People like me deserve an extra break now and then.

8. Things should go my way.

9. I feel entitled to more of everything.

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*Items from: Campbell, W., Bonacci, A., Shelton, J., Exline, J., & Bushman, B. (2004). Psychological Entitlement: Interpersonal Consequences and Validation of a Self-Report Measure. *Journal of Personality Assessment*, *83*, 29-45.

Appendix G

Instructions for section with items measuring "doing things in return" (Study 1 and Study 2)

INSTRUCTION: For each of the following statements, please indicate the extent to which you agree or disagree that it describes how you think and feel using the following 5-point scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree.

1. If someone does me a favour, I feel obligated to repay them in some way.
2. If someone does something for me, I feel required to do something for them.
3. If someone gives me a gift, I feel obligated to get them a gift.
4. I always repay someone who has done me a favour.
5. I feel uncomfortable when someone does me a favour that I know I won't be able to return.
6. If someone sends me a card on my birthday, I feel required to do the same.
7. If someone says something pleasant to you, you should say something pleasant back.
8. I usually do not forget if I owe someone a favour, or if someone owes me a favour.
9. If someone treats you well, you should treat that person well in return.

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*Items from: Eisenberger, R., Lynch, P., Aselage, J., & Rohdieck, S. (2004). Who takes the most revenge? Individual differences in negative reciprocity norm endorsement. *Personality & Social Psychology Bulletin*, *30*, 787-99.

Appendix H

Instructions for section with items measuring "being grateful" (Study 1 and Study 2)

INSTRUCTION: For each of the following statements, please indicate the extent to which you agree or disagree that it describes how you think and feel using the following 5-point scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) 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. I am grateful to a wide variety of people.
4. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
5. When I look at the world, I <u>don't</u> see much to be grateful for.
6. <u>Long</u> amounts of time can go by before I feel grateful to something or someone.

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*Items from: 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.

Appendix I

Instructions for section with items measuring "being indebted" (Study 1 and Study 2)

INSTRUCTION: For each of the following statements, please indicate the extent to which you agree or disagree that it describes how you think and feel using the following 5-point scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree.

1. If someone saves your life, you are forever in their debt.
2. One should return favours from a friend as quickly as possible in order to preserve the friendship.
3. Owing someone a favour makes me uncomfortable.
4. As a rule, I don't accept a favour if I can't return the favour.
5. If someone pays for my dinner or invites me to eat at their place, I feel obligated to buy them dinner the next time or to invite them to eat at my place.
6. I get very upset when I discover I have forgotten to return something I borrowed.

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*Items from: Naito, T., & Sakata, Y. (2010). Gratitude, indebtedness, and regret on receiving a friend's favor in Japan. *Psychologia*, *53*, 179-194.

Appendix J

Instructions for section with items measuring "what you think after some positive or negative events" (Study 1 and Study 2)

INSTRUCTION: The following statements describe thoughts you may or may have following some positive or negative events. For each statement, please rate how frequent you experienced the thought using the following 5-point scale: (1) never, (2) rarely, (3) sometimes, (4) often, (5) very often.

In general, for <u>positive</u> events, how often do you…

1. think about how much less positive things could have been.
2. feel relieved when you think about how much less positive things could have been.
3. count your blessings when you think about how much less positive things could have been.
4. think that for things that happened that were positive, they clearly could have been a lot less positive.

In general, for <u>negative</u> events, how often do you…

1. think about how much worse things could have been.
2. feel relieved when you think about how much worse things could have been.
3. count your blessings when you think about how much worse things could have been.
4. think that for things that happened that were negative, they clearly could have been a lot worse.

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*Items adapted from: Rye, M., Cahoon, M., Ali, R., & Daftary, T. (2008). Development and Validation of the Counterfactual Thinking for Negative Events Scale. *Journal of Personality Assessment, 90*, 261–269.

Appendix K

Instructions for downward counterfactual condition (Study 2)

Downward counterfactual thoughts condition:

People often have thoughts like "If not for …" after positive events such as receiving a benefit, in that they could see how the benefit or positive event might not have happened or could have turned out less positive. For each of the benefits that you listed in the previous section, write down on the lines below how the benefit that you received might not have happened or could have turned out less positive. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

Neutral thoughts condition:

People often have some thoughts after positive events such as receiving a benefit. For each of the benefits that you listed in the previous section, write down on the lines below a thought that you had after receiving the benefit. Please spend no more than 5 minutes to list these benefits in the space below using short sentences.

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*Instructions created for study.