A New Approach to Measuring Moral Virtues: The Multi-Component Gratitude Measure

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Abstract: Empirical explorations of moral virtues have increased
dramatically in recent years. This paper introduces a new method of
assessing moral virtue by taking gratitude as an example; a virtue that
continues to be a topic of great interest in psychology, philosophy and
education. We argue, and demonstrate empirically, that to comprehensively
examine a moral virtue, it is necessary to explore its cognitive,
affective, attitudinal (including motivational), and behavioural aspects.
The 'Multi-Component Gratitude Measure' (MCGM) is comprised of four
distinct components, each designed to assess a distinct dimension of the
virtue of gratitude: (a) conceptions (or understandings) of gratitude;
(b) grateful emotions; (c) attitudes towards gratitude; and (d)
gratitude-related behaviours. The MCGM aims to comprehensively examine
all the components that make up this complex moral construct. In two
studies we illustrate the value of assessing these four components of
gratitude and how individuals can differ in the number and 'type' of
components of virtue they exemplify. Importantly, we demonstrate how
well-being increases linearly with the number of components a person
possesses, as measured by three distinct measures of well-being. We
discuss individual differences in gratitude experience and what this
means for personal flourishing as well as future measurement of moral
constructs.

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Highlights for review:

This paper explores individual differences in gratitude experience and what this means for personal flourishing.We argue, and demonstrate empirically, that to comprehensively examine a moral virtue, it is necessary to explore its cognitive, affective, attitudinal (including motivational), and behavioural aspects. We do so by taking gratitude as an example; a virtue that continues to be a topic of many psychological, philosophical and educational papers.

Importantly, in this paper, we demonstrate how individuals can differ in the number and 'type' of aspects (of virtue) they exemplify: Person A might exhibit high levels of grateful emotions and behaviours; Person B might exemplify attitudes towards gratitude; and Person C might exemplify all four components of the virtue of gratitude. A particularly noteworthy finding documented in this manuscript is that well-being increases linearly with the number of components a person possesses. This effect is repeated for three distinct measures of well-being – subjective happiness, positive affect and satisfaction with life.

The cognitive component of our novel assessment method was particularly revealing. We explored whether perceptions of when gratitude was due would impact upon the affective, attitudinal and behavioural aspects of gratitude. Within our empirical studies, we demonstrate how more 'permissive' understandings of when gratitude is warranted is positively related to the experience of grateful emotions, attitudes towards gratitude and gratitude-related behaviours. For example, individuals who believe gratitude is due even when the benefit is deemed non-valuable/unwanted are more likely to experience grateful emotions, attitudes and behaviours than individuals who do not conceptualise this situation as warranting gratitude.

Gratitude has been linked to a vast array of positive psychology benefits including coping, sleeping, prosocial behaviours and building and maintaining relationships. This paper adds further knowledge to the field by indicating how individuals might differ in terms of gratitude experience and what this means for personal flourishing. Future endeavours could use the methods described here to explore how individual differences in gratitude relates to social relationship formation or maintenance, or test the suggested links between gratitude and educational benefits such as academic attainment and satisfaction with school experience.

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Abstract:

Empirical explorations of moral virtues have increased dramatically in recent years. This paper introduces a new method of assessing moral virtue by taking gratitude as an example; a virtue that continues to be a topic of great interest in psychology, philosophy and education. We argue, and demonstrate empirically, that to comprehensively examine a moral virtue, it is necessary to explore its cognitive, affective, attitudinal (including motivational), and behavioural aspects. Taking gratitude as an example, we have created the 'Multi-Component Gratitude Measure' (MCGM) which is comprised of four distinct components, each designed to assess a distinct dimension of the virtue of gratitude: (a) conceptions (or understandings) of gratitude; (b) grateful emotions; (c) attitudes towards gratitude; and (d) gratitude-related behaviours. In contrast to existing gratitude scales, the MCGM aims to *comprehensively* examine all the components that make up this complex moral construct. In two studies we illustrate the value of assessing these four components of gratitude and how individuals can differ in the number and 'type' of components of virtue they exemplify. Importantly, we demonstrate how well-being increases linearly with the number of components a person possesses, as measured by three distinct measures of subjective well-being. We discuss individual differences in gratitude experience and what this means for personal flourishing as well as future measurement of moral constructs.

Keywords: Gratitude, Measurement, Virtue, Personality, Well-being

Introduction:

The measurement of moral virtues is notoriously difficult (Curren & Kotzee, 2014; Kristjánsson, 2015, pp. 60–84). Indeed, there is much ongoing debate around the salient components of moral virtues and, more generally, of moral functioning, that would form the objects of measurement (Curzer, 2012). The present authors' viewpoint on measuring virtue focuses on the need to capture multiple components of moral functioning: cognitive; affective; conative/attitudinal; and behavioural. With particular regard to measuring individual virtues, we suggest that cognitions influencing when and why the virtue is experienced constitute vital information that *can* and *should* be captured to inform the interpretation of the findings. In essence, this approach brings together (philosophical) conceptual inquiry with (psychological) scale development.

The aims of this paper are threefold: (1) to highlight how conceptualisations of a construct constitute vital information that can feed into the measurement of the construct, in this case moral virtue; (2) to demonstrate how measures of moral virtue should encompass multiple components – the *cognitive, affective, conative/attitudinal* and *behavioural* – in order to comprehensively examine virtue; and (3) provide a new measure of one particular moral virtue that remains a topic of great interest in psychology and philosophy: gratitude.

To this end, the following section of this paper will describe the various conceptualisations of gratitude that have been discussed and debated in psychology and philosophy, in the hope of underscoring the diversity in understandings of this moral virtue. It also our hope that readers will recognise how the presence of differing conceptualisations could impact upon the experience of grateful emotions, attitudes towards gratitude and gratitude-related behaviours, and subsequently influence individuals' responses to existing gratitude scales.

After highlighting various ways that gratitude might be conceptualised, and the multiple components that need measuring to comprehensively examine this moral construct, we introduce the 'Multi-Component Gratitude Measure' (MCGM). Through a series of empirical tests of the MCGM we illustrate how conceptualisations of a construct can feed into its assessment, the

relationship between cognitive, affective, attitudinal and behavioural components of gratitude and how these four components influence individuals' well-being. Whilst this paper directly explores the moral virtue of gratitude, this multi-component approach and the application of conceptualisations of the construct could equally be adapted and utilised to examine other moral virtues (and even non-moral constructs). The remainder of this paper, however, will focus on the particular moral virtue of gratitude, as a case in point.

Gratitude:

Gratitude can no longer be deemed 'one of the neglected virtues in psychology' (Watkins, Woodward, Stone & Kolts, 2003, p. 431); over the past decade, gratitude has received copious attention, both in (positive) psychology and in philosophy. Motivating this research focus are all the positive benefits that gratitude can offer, both directly to a particular individual, and indirectly to members of the individual's social group. For instance, early research on gratitude suggested that increased levels of gratitude could lead to increases in subjective well-being (Emmons & McCullough, 2003), and more recent findings indicate that gratitude plays an important role in building and maintaining relationships (Algoe, Haidt & Gable, 2008; Bartlett, Condon, Cruz, Baumann & De Steno, 2012), and in promoting prosocial behaviours (Bartlett & De Steno, 2006). The positive effect of gratitude also extends to sleep patterns (Wood, Joseph, Lloyd & Atkins, 2009), coping mechanisms (Wood, Joseph & Linley, 2007), job satisfaction (AnotherAuthor, ThirdAuthor, SecondAuthor & FirstAuthor, 2015; Waters, 2012) and academic attainment (Froh, Emmons, Card, Bono, & Wilson, 2011; Froh, Miller & Snyder, 2007), as well as protecting against the negative effects of depression, anxiety and materialism (Froh et al., 2007; 2011).

Also apparent from the recent literature, however, is that gratitude is not a simple construct; researchers in this area, for instance, have argued about the conceptual distinction between gratitude and appreciation (Adler & Fagley, 2005), 'triadic' and 'dyadic' gratitude (SecondAuthor, FirstAuthor & ThirdAuthor, 2013), 'benefit-triggered' and 'generalised' gratitude

(Lambert, Graham & Fincham, 2009), and 'thankfulness' and 'gratefulness' (Steindl-Rast, 2004). In essence, all these debates centre on whether gratitude must involve a benefactor, or whether a beneficiary can be grateful in instances where no particular agent is implicated in the benefaction.

In this paper, we argue that there is a need for a more comprehensive measure of gratitude that can adequately assess its multifaceted contours. We begin below with a brief overview of what makes this construct so complex to examine, followed by a description of the current gratitude measures and their limitations. Subsequently, in three empirical studies, we present the 'Multi-Component Gratitude Measure' (or MCGM), demonstrating the reliability and validity of this measure in a comparison with the gratitude scales currently available. We end the paper with recommendations on the future application and examination of the MCGM.

Differing Conceptualisations of Gratitude:

We have already mentioned some of the controversies that surround the structure of gratitude and whether it necessitates a particular benefactor. However, when delving deeper, further disagreements on the concept of gratitude quickly emerge. For instance, other complexities surrounding gratitude involve the question of intention. Must a benefit be intentionally rendered, or is it possible to be grateful for a benefit that came about by accident? Attribution theorist Fritz Heider (1958) took it for granted that people feel grateful when they recognise themselves to be the recipients of an intentional act of kindness on the part of another person. Relatedly, Tesser, Gatewood & Driver (1968) established that the experience of gratitude is determined by appraising benefits to be not only intentional but also altruistic (not driven by ulterior motives). They identified two other 'determinants' of gratitude; namely, that the benefit must be perceived by the recipient as *valuable* and *costly* to the benefactor. More recently, Wood, Joseph & Maltby (2008) supported this position, finding that more than eighty percent of the variance in how much people thought they would experience gratitude in a situation was explained by perceptions of cost, value and altruistic intention.

However, it is not possible to know for certain what people's intentions are in a given situation or indeed whether they purposefully intend to benefit someone. This fact is tacitly acknowledged by McCullough and Tsang (2004), who state that people are most likely to feel grateful when 'the expenditure of effort on their behalf *seems* to have been intentional rather than accidental' (p. 126, author's own italics). We have noted elsewhere that in practice benefactor intention operates not as a necessary condition of gratitude, but rather as an intensity variable which, if categorically present, increases reported gratitude (see SecondAuthor et al., 2013, p. 303 for a full discussion). As such, gratitude might well be felt in circumstances where the benefactor's intentions were not uncomplicatedly benign. In our recent empirical examination probing this question, we found that while malicious and ulterior motives significantly undermined reported gratitude, they did not disqualify it (see AnotherAuthor et al., 2015; SecondAuthor & FirstAuthor, 2015).

It will be recalled that both Tesser et al. (1968) and Wood et al. (2008) identified the *value* of the benefit as a further determinant of gratitude. We are all familiar with the adage 'It's the thought that counts'. However, most of us can readily identify with the experience of being the recipient of an unwanted (i.e. subjectively non-valuable) gift – the Christmas jumper three sizes too big. We can also relate to the experience of being 'grateful for the thought' when an intended benefit fails to materialise. How much does the value of an actual or intended benefit matter in our appraisals of gratitude? It seems reasonable to suggest that for some people the actual value of a tangible benefit is key to their experience of gratitude, while for others the intention might be more salient.

AnotherAuthor et al. (2015) report that in the case of a subjectively non-valuable benefit (either an unwanted nomination for an award, or inheriting a collection of belongings of no financial value that you do not like and do not know what to do with), respondents reported significantly less gratitude than in the 'baseline' (uncomplicated) nomination or will scenario (Baseline ARE M = 4.30, SD= 0.79; Non-Valuable ARE = 3.29, SD = 1.02, p <. 01). Interestingly, they found a significant discrepancy between how grateful respondents reported they *would* and *should* be, with

participants indicating that they 'should' be more grateful than they report they would be. Moreover, in a mixed-design ANOVA, they found that adults were significantly less grateful to receive a benefit that was not of any real value to them than adolescents ($p < 0.1$).

One final conceptual issue surrounding gratitude is whether it is an inherently positively valenced concept or whether it encompasses negative elements. Within the domain of positive psychology, gratitude has tended to be classified as a positively valenced emotion, a view epitomised by Wood et al.'s description of gratitude as 'the quintessential positive psychological trait' (2009, p. 43). Gratitude interventions have been found to have a causal effect on subjective well-being (e.g. Emmons & McCullough, 2003; Froh, Sefick & Emmons, 2008), satisfaction with life (e.g., Fagley, 2012) and increased positive affect (Emmons & McCullough, 2003), making the characterisation of gratitude as positive unsurprising.

Notwithstanding these findings, however, we maintain that the picture is far more complex and that gratitude is better characterised as a *mixed* emotion rather than an unambiguously positive one (see SecondAuthor et al., 2013, p. 307; SecondAuthor & FirstAuthor, 2016; FirstAuthor, SecondAuthor & AnotherAuthor, 2015 for a discussion). In a prototype analysis of gratitude in the UK, we found that alongside positive features such as happiness, smiles and appreciation, gratitude was also associated with features participants rated as negative, such as obligation, indebtedness, guilt and embarrassment (FirstAuthor, SecondAuthor & ThirdAuthor, 2014). We also found that adults were more likely than adolescents to acknowledge that gratitude can co-occur with guilt or indebtedness ($p < 0.01$, see AnotherAuthor et al., 2015), further muddying the waters. Though some authors have attempted to dissociate gratitude and indebtedness (e.g., Watkins, Scheer, Ovnicek & Kolts, 2006), the high correlation Watkins et al. (2006) found between gratitude and indebtedness – in addition to the findings from the prototype study – suggest that this distinction is not clear-cut, at least to the layperson (see also FirstAuthor et al., 2015).

This overview indicates that there are many different ways in which gratitude can be understood and experienced. This undoubtedly creates complications in the measurement of this

construct; how do we validly assess gratitude when it is so notably diverse in its conception? What allowance for the complex and contrasting nature of gratitude is currently made in the existing measures of gratitude and appreciation?

There are three measures of gratitude that are commonly implemented in research to date, each of which emphasises one or two dimensions of gratitude as outlined above. The GQ6, created by McCullough and colleagues (2002), is a 6-item gratitude scale which assesses intensity, frequency, span and density of grateful emotions. The Gratitude, Resentment and Appreciation Test (GRAT, Watkins et al., 2003) consists of three subscales; (1) Sense of Abundance; (2) Simple Appreciation; and (3) Appreciation of Others[1]. Finally, the Appreciation Scale, developed by Adler & Fagley (2005), assesses eight subscales: 'Have Focus'; 'Awe'; 'Ritual'; 'Present moment'; 'Self/Social comparison'; 'Gratitude'; 'Loss/Adversity'; and 'Interpersonal'[2].

The majority of the items in existing gratitude measures aim to assess grateful *emotions* only. Most notable on this count is the GQ6, where all 6 items arguably assess feelings of gratitude (e.g., 'Long amounts of time can go by before I feel grateful to something or someone'; 'I have so much in life to be thankful for'). The emphasis on emotion is also evident in the definition of gratitude McCullough and colleagues offer: 'a tendency to recognise and respond with grateful emotion to the roles of other people's benevolence' (2002, p. 112). Whilst *feelings* of gratitude are clearly a crucial part of gratitude, understood as a complex trait of character (see below), emotion is not the only dimension involved. A second component of gratitude is behaviour: for instance, expressions of thanks or recognition of others – indeed this is the most notable characteristic of gratitude to onlookers. Yet this element of grateful experience is missing from the GQ6 and barely features in the GRAT. Items in the Appreciation Scale do address grateful/appreciative behaviours. However, items that assess behaviours are sometimes answered using the frequency scale (e.g., 'I say "please" and "thank you"') and on other occasions answered using the Likert, attitude scale (e.g., 'I say "please" and "thank you" to indicate my appreciation'), which makes the overall evaluation of behaviours confusing and hard to reconcile.

Further to this, and as previously highlighted by Lambert and colleagues (2009), these measures appear to reveal a mismatch between the authors' proposed definitions of gratitude and their subsequent operationalisations of gratitude. Take, for example, the GRAT; Watkins et al. (2003) appear to define gratitude in 'triadic' (or 'benefit-triggered') terms, referring to Guralnik's (1971, p. 327) definition of as gratitude as 'a feeling of thankful appreciation for favours received' (see Lambert et al., 2009). Whilst the GRAT includes items such as 'I feel deeply appreciative for the things others have done for me in my life' and 'I couldn't have gotten where I am today without the help of many people', which implicate a benefactor, we also observe items such as 'Oftentimes I have been overwhelmed by the beauty of nature' and 'I think it is important to "Stop and smell the roses"', which arguably assess a more 'dyadic' (or 'generalised') conception of gratitude. Similarly, the GQ6 also mixes up dyadic/triadic definitions and operationalisations. McCullough et al. (2002) thus define gratitude in triadic terms (apparent in the definition cited above), yet the GQ6 also contains dyadic items such as, 'I have so much in life to be thankful for'.

On the other hand, Adler and Fagley (2005) are clear in their conceptualisation of gratitude as a subordinate facet of appreciation (evident in their development of a gratitude subscale as part of the Appreciation Scale). Here, gratitude appears to be limited to instances where a third person or benefactor is inferred, for example, 'I notice the sacrifices that my friends make for me', 'I acknowledge when people have gone out of their way for me'; 'I say "thank you" in a restaurant when people bring my food to express my appreciation for their help'. Interestingly, however, whilst Adler and Fagley set out to measure something distinct from gratitude, Wood and colleagues (2008) demonstrate, using exploratory and confirmatory factor analysis, that gratitude and appreciation are a single-factor personality trait rather than distinct constructs. However, their eventual conceptualisation of gratitude as a broad, unitary personality trait, involving 'a life orientation towards noticing and appreciating the positive in the world', begs the question how much this clustered affect profile has to do with what either ordinary people or academics mean when they use the word 'gratitude'.

As argued elsewhere, a general shortcoming with the existing measures is that none of them is grounded in a thorough conceptual analysis of gratitude, drawing either on the views of laypeople or philosophers, let alone in an integration of the two (see SecondAuthor et al., 2013, for a critique). For example, Watkins et al. admit that their choice of subscales is based primarily on what they themselves 'feel' (2003, p. 432) about the contours of the concept. Fundamental questions about what gratitude really 'is' (a set of emotions or cognitions or behaviours or attitudes, or perhaps all of these) are thus elided.

The GQ6, GRAT and Appreciation Scale are well validated and well cited measures which have generated many important insights into the positive effects of gratitude experiences, as highlighted in the introduction. Importantly, however, we (the present authors) believe that the approach to measuring gratitude needs to be extended to better capture gratitude as a multi-component construct. Indeed, we provide evidence for the necessity of this approach in Studies 1 and 2 below. One of the arguable shortcomings of all three existing measures is that they do not incorporate any measure of conceptual understandings or cognitions about gratitude (including assumptions about when it is, or is not, due). As should be evident from the introduction, individuals can have very different views on what gratitude entails, and experiences of gratitude are highly subjective, depending on those conceptualisations. In order to know what we are measuring (and ensure that it is what we are *intending* to measure), individuals' conceptions of the construct should be integrated into measurements of gratitude.

To advance the measurement of gratitude, we have drawn explicitly in the design of our new measure on a conceptual view of gratitude as a moral virtue: an intrinsically valuable trait of character (FirstAuthor & SecondAuthor, 2015). While the instrumental value of gratitude as a moral 'barometer', 'reinforcer' and 'motivator' is well documented in the psychological literature (harking back to McCullough, Kilpatrick, Emmons and Larson, 2001), more recent writings have argued for the need to understand gratitude as an intrinsic moral value, constitutive of (rather than simply conducive to) a flourishing life. This means understanding gratitude as a moral virtue, on the

standard Aristotelian architectonic (Curzer, 2012), as a complex medial trait of character set between a deficiency state (here: ingratitude) and an excess state (here: excessive or indiscriminate gratitude). Although philosophers debate whether Aristotle himself considered gratitude a virtue (see Roberts, 2004, versus ThirdAuthor, 2015), it is clear that the putative designation of gratitude as a virtue entails understanding it as encompassing a number of distinguishable components (Curzer, 2012).

Since Aristotle, each virtue is typically seen to comprise a unique set of cognition, perception/recognition, emotion, desire, motivation, behaviour and comportment or style. The person possessing the virtue of compassion, for example, harbours certain *beliefs* about the nature of misfortune, *notices* easily and *attends to* situations in which the fortune of others has been undeservedly compromised, *feels* for the needs of those who have suffered undeserved misfortune, *desires* that their misfortune be reversed, *acts* (if humanly possible) for the relevant (ethical) reasons in ways conducive to that goal and *exudes* an outward aura of empathy and care (see further in ThirdAuthor, 2013, chap. 1).

Apart from its philosophical pedigree, such a component view also has a long history in social science, having been accommodated into moral psychology. For example, 'neo-Kohlbergians' such as James Rest, Darcia Narvaez, Muiel Bebeau, and Steve Thoma have extended Laurence Kohlberg's famous Cognitive Developmental Theory (Kohlberg, 1969; 1984) to create the 'Four Component Model' (see, for example, Thoma, 2006). This model, whilst retaining cognitions or judgement as an important factor, also includes moral sensitivity, moral motivation and moral character (Bebeau, Rest & Narvaez, 1999).

While debates continue about what the salient components of moral functioning in general, or virtue in particular, are (Curzer, 2014), at least four components figure in most conceptualisations: the *cognitive, affective, conative/attitudinal* and *behavioural*. On this understanding, to profile an individual's gratitude, for example, we need to know what the individual takes gratitude to be, how it moves the individual as an emotion, what attitudes the

individual possesses towards the salience of gratitude, and to what extent gratitude is exhibited in the individual's behaviours (see also Alzola, 2015). Without such a comprehensive exploration of gratitude, we risk winding up in the predicament of the blind men, in the Indian parable, touching the elephant, where none of them got the whole picture of what they were examining.

In the following three studies, we demonstrate how conceptions, emotions, attitudes and behaviours pertaining to gratitude are discrete dimensions that can be effectively and reliably captured by a novel measure of gratitude; the Multi-Component Gratitude Measure (MCGM). In Study 1, we illustrate the findings of an exploratory (principal components) factor analysis where, as hypothesised, our Likert scale items separate into emotion, attitude and behaviour subscales of the MCGM. These scale items are informed by a cognitive evaluation of gratitude experience designed to map individuals' conceptualisations of gratitude.

In Study 2 we demonstrate the clear value of each component of the MCGM with an illustration of how subjective well-being increases linearly with the number of components (of the MCGM) a person possesses. Further to this, we show the incremental validity of the MCGM and how it adds to and enhances the existing gratitude measures. Finally, in this study we demonstrate the value of having four *discrete* components and how the MCGM allows new research findings to come to light.

Study 1:

The aim of this study was to develop a comprehensive measure of gratitude that assesses the four distinct components described above; conceptions/cognitions about gratitude; grateful emotions; attitudes towards gratitude (including motivational aspects and evaluations of its importance); and gratitude-related behaviours.

Method:

Measure development:

A – The Conceptual Component: This component of the MCGM examines individuals'

conceptual understanding of gratitude, for instance whether they believe gratitude must involve a

valuable benefit or a benefit bestowed with benevolent intentions. The questions in this component

derive from the aforementioned 'vignette questionnaire' previously tested on 781 British

participants aged 11 – 65 years (see AnotherAuthor et al., 2015). Respondents are presented with

vignettes, or scenarios, which examine their understandings and experiences of gratitude. The

scenarios concern a nomination for an award; each participant first sees a baseline scenario which is

subsequently manipulated to examine a series of conceptual controversies (such as whether the

benefit must (a) be valuable; (b) be costly to the benefactor; (c) materialise; (d) be bestowed with

benevolent intentions; and so on). For a full list of the manipulations, see Appendix A

(Supplementary Information). For each conceptual controversy, participants are asked two

questions; whether they would be grateful (answered on a 5-point Likert scale ranging from *1 -

Strongly disagree to 5 - Strongly agree,* creating 'Are' scores) and the degree of gratitude they feel

(answered using a slider which can range from *0 – Not at all to 100 –Most grateful you could feel*,

creating 'Degree' scores) (see Figure 1). The aim of this component is to provide a profile of

respondents' understandings of gratitude that can be used to inform the other three components of

the MCGM. Higher 'Are' and 'Degree' scores refer to a more permissive understanding of when

gratitude might be experienced.

B – The Emotion Component: 42 items were developed to assess grateful emotions; these

included items that assessed the strength of grateful feeling; the incidence with which grateful

feelings are experienced; the extent of people and things that gratitude is felt for and feelings

surrounding when gratitude is appropriate. Response options for all items in components B & C are

based on a 7-point Likert scale ranging from *1 = Strongly disagree to 7 = Strongly agree.*

C – The Attitude Component: 36 items were developed to assess attitudes towards gratitude.

Items referred to attitudes towards recognising valuable benefits; attitudes towards expressing

gratitude; evaluations of the importance of gratitude or how much priority gratitude is given; and attitudes towards when gratitude is appropriate.

D – The Behaviour Component: 41 items were created to examine the amount of gratitude-related behaviours that respondents engage in. Importantly, these behaviours extended beyond expressions of gratitude and included noticing benefits received; reflections of what there is to be grateful for; and reminders about being grateful or showing gratitude. Component D utilises a 7-point Likert scale ranging from *1 = Never to 7 = More than once a day*.

[Insert Figure 1 here].

Participants and procedure:

Five hundred and thirty-two participants from the UK responded to the pool of items in an online questionnaire. In return for their participation, participants were entered into a prize draw to win £250 of Amazon vouchers. Complete, usable responses to this questionnaire totalled 477. Respondents were aged 18–88 years with a mean age of 38 years; 68% were female; 85% White-British; 42% Christian; 37% atheist. Of those who identified with a religion, 37% practised their religion. It should be noted that the composition of this sample was broad with a wide age range, varied geographical locations throughout the UK (including both rural and urban) and a variety of educational backgrounds from no qualifications to postgraduate degrees.

Results and Discussion:

Conceptual items – the 'gratitude profile':

Responses to the conceptual component provided a distinct 'gratitude profile', illustrating the impact of the various manipulations on self-reported gratitude scores. As seen in Figure 2, respondents' gratitude experience (evidenced by degree scores) is typically reduced (but not eliminated) in response to non-benevolent intentions (an ulterior motive or malicious intention), and

gratitude experience is amplified as the cost to the benefactor increases. The results across

participants reveal that some individuals place fewer constraints on when gratitude is due: for

example degree scores for ulterior motives and non-valuable benefits both range from 0 to 100

(using the full range of the scale).

Overall, the degree scores across all seven manipulations ranged from 40 to 658; the 'are

scores' ranged from 9 to 33, and the mean 'conceptual score' (for degree and are scores combined)

was 435.3 (SD = 113). The gratitude profile illustrated here supports previous research findings

(AnotherAuthor et al., 2015); for a more detailed exploration of this gratitude profile see

SecondAuthor & First Author, 2015.

[Insert Figure 2 here]

Emotion, Attitude and Behaviour items:

All items in components B, C and D were entered into an exploratory (principal component) factor

analysis (using oblimin rotation and excluding correlations below .50[3]). The scree plot demonstrated

a distinct dip at both 5 and 7 factors; when extracting 7 factors, the 7th factor contained only one

item leaving 6 discrete factors. When extracting 5 factors, the analysis amalgamated two factors that

had previously been separate; 'Rituals/Noticing Benefits' and 'Attitudes to Gratitude'. There were

good theoretical grounds to argue that these factors were indeed distinct from one another as items

in the former category pertain to actions and gratitude-related behaviours (e.g., 'I reflect on all the

good things I have'), whilst items in the latter group were evaluative items that addressed the

perceived importance of gratitude (e.g., 'I believe gratitude is an important value to have'). We,

therefore, retained the 6 factor structure.

The 6 factors (see Table 1 and 2) were (1) Feelings of gratitude; (2) Attitudes of

appropriateness (of gratitude); (3) Behavioural shortcomings; (4) Rituals/Noticing benefits; (5)

Expressions of gratitude; and (6) Attitudes to gratitude. These factors fit nicely with our assumption

of distinct dimensions of emotions, attitude and behaviour; factor 1 refers to emotions; 2 and 6 refer to attitudes; and 3, 4 and 5 pertain to behaviour. The reliability of all sub-scales was tested (using Cronbach's alpha) and all achieved alpha scores over .70 (see Table 2).

The mean scores for each component in this population[4] are as follows: (A) Conceptual component –mean 'are' score = 24.85 (SD = 3.40); mean 'degree' score = 381.80 (SD = 108.47); (B) Emotion component – mean = 35.00 (SD = 5.28); (C) Attitude component – mean = 58.38 (SD = 6.84); (D) Behaviour component – mean = 63.13 (SD = 9.85).

[Insert Tables 1 and 2 here].

The results from the exploratory factor analysis support our conception of gratitude as comprising multiple components and substantiate our claim that these components are affective, attitudinal and behavioural in nature. The distinct conceptual component demonstrates how reported gratitude can be altered based on contextual factors. This component, and Figure 2, illustrates how this particular component can generate a 'profile' of gratitude experience which offers an important insight into how this construct is conceived.

Study 2:

The aim of this study was to validate the refined measure (of 29 items constituting emotion, attitude or behaviour questions plus the fourteen cognitive items (7 'are' and 7 'degree'), and to examine its construct and incremental validity alongside the three existing gratitude/appreciation measures. Moreover, we aimed to explore whether certain combinations of components would result in particular patterns of subjective well-being. That is, would an individual who scores highly on all four components of the MCGM report a different level of well-being to those that score high on only one, two or three components.

We hypothesised that components B – D of the MCGM in particular would correlate well with all three existing gratitude measures, demonstrating good construct validity. We also predicted that the MCGM, given its unique conception and strong theoretical basis, would offer something the existing measures cannot currently offer. We also hoped to demonstrate that the most elevated levels of well-being would relate to higher scores on all four components of the MCGM.

Method:

Participants and procedure:

1599 participants from across the UK took part in this validation study. 52% of this sample was female, aged 18–83 years (mean age, 51 years). 56% of participants identified as Christian; 23% atheist. Of those who identified with a religion, 21% practised their religion. 23% of the sample was single and 67% married; 58% had dependants and 41% did not. In terms of employment, 28% of respondents were in intermediate managerial positions; 22% were in supervisory, clerical or junior managerial positions or identified themselves as administrative or professional; 22% were pensioners. In terms of geographical location, 80% of respondents were from England; 6% from Scotland; 3.3% Wales; and 1.2% Northern Ireland. The composition of this sample was carefully selected to reflect UK population estimates (for a comparison of our sample with UK population estimates please refer to Appendix B (Supplementary information)) .

The measure was completed as part of an online survey and participants were recruited via a crowd-sourcing website and paid £2.00 for their participation. Alongside the MCGM, participants completed the GQ6 scale, GRAT scale and Appreciation scale as well as three measures of (subjective) well-being which have previously demonstrated as correlates of gratitude; Satisfaction with Life scale (or SWL, Diener *et al.*, 1985); Subjective Happiness (SH, Lyubomirsky & Lepper, 1999); and positive affect (as measured by the PANAS, Watson, Clark & Tellegen, 1988), see Table 3.[5] The

presentation order of the MCGM, GQ6, GRAT, Appreciation scale, and three well-being scales was randomised for each participant. The online survey took an average of 31 minutes to complete.

Results:

Construct Validity:

The emotion, attitude and behaviour components of the MCGM correlate positively and significantly with the existing measures of gratitude and the well-being scales (see Table 4). Interestingly, there is a particularly high correlation between the emotion component of the MCGM and the GQ6, which, as will be recalled, we suggest only taps feelings of gratitude ($r = .709$, $p < .001$).

Weaker correlations between existing gratitude scales and other components, or specific subscales, of the MCGM (see behavioural shortcomings in Table 2, for example) begin to indicate how there are aspects of the MCGM that are distinct from the scales that are currently available. We return to this issue in the test of incremental validity.

[Insert Table 3 here]

[Insert Table 4 here]

Exploration of 'Person Types' and their Relation to Subjective Well-Being:

The goal here was to show that well-being is elevated when a particular pattern across the components is evident. Theoretically, we would hypothesise that individuals with a more permissive conception of when gratitude should be experienced, alongside high (above average) levels of grateful emotions, attitudes and behaviour, would show the highest levels of well-being; i.e.,

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respondents that are high on all four components of the MCGM. In turn, those that are high on none of the components of the MCGM should show the lowest levels of well-being.

Person Types:

We tested this hypothesis by creating a series of 'person types' and examining these person types in relation to the three aforementioned measures of well-being (satisfaction with life, subjective happiness and positive affect). Five different 'person types' were created depending on participants' scores across the four components of the MCGM. Participants could either be above average ('high') or below average ('low') on each of the components (based on their mean score for the conceptual component, which included 'are' scores, 'degree' scores and 'triadic/dyadic degree' scores which related to whether participants endorsed a dyadic and/or triadic view of gratitude, see introduction); and a mean score for the emotion component; attitude component and behavior component)[6]. This creates five different person types ranging from those that are high on all four components (these individuals might be thought of as 'abundantly grateful') to those who are high on none of the four components (and perhaps viewed as 'deficiently grateful').

After creating these five person types, we explored the levels of subjective well-being (on all three well-being scales) across the five different person types. To do this we conducted a between-subject MANOVA (multivariate analysis of variance) with person type as the independent variables and satisfaction with life, subjective happiness and positive affect as the dependent variables.

As will be evident in Table 5, our hypothesis was confirmed with all three measures of well-being increasing alongside the number of components that individuals are 'high' on (see also Figure 3 for a clear illustration of this linear relationship). This comparison of person types demonstrates very clearly how all four components of the MCGM relate to individuals' well-being and, consequently, the importance of measuring all four components when attempting to gauge levels of gratitude.

[Insert Table 5 here].

[Insert Figure 3 here]

Combination Type:

When considering person types in more detail, the question arises as to whether the particular combination of components makes a difference to well-being. That is, does being high on conceptual, emotion and behaviour components look any different to being high on emotion, attitude and behaviour components? Therefore, another necessary step involves categorizing people based on the specific combination of components that they are above average on. In explanation, if you are high on three components of the MCGM you can be high on Conceptual, Emotion and Attitude components; or Conceptual, Emotion and Behaviour; Conceptual, Attitude and Behaviour; or Emotion, Attitude, Behaviour. This leads to fifteen different combination types (four combinations for the 3-component person type; six for the 2-component person type; four for the 1-component person type; and one for the 4-component person type).

Through conducting another between-subject MANOVA, we see that the particular component(s) that individuals are high on does have an effect on well-being. When looking at individuals who are high on one component (see Figure 4), we notice that the emotion and behaviour components are associated with higher well-being scores (in this case positive affect) than the attitude and conceptual components. The influence of emotion and behaviour components are similarly evident in the 2-component and 3-component person types; the highest levels of positive affect are found in those that exhibit both emotion and behaviour components together.

[Insert Figure 4 here].

Demographic comparisons:

Previous research measuring gratitude has demonstrated that self-reported gratitude tends to be higher for females than males (e.g., Wood et al., 2008) and for religious rather than non-religious individuals (see Emmons & Kneezel, 2005; McCullough et al., 2002, McCullough, Tsang & Emmons, 2004). Therefore, we also explored whether 'person type' differed across gender, age and practise religion (see demographics at beginning of Study 2). A between-subject ANOVA was conducted with gender (female, male); age group (18-30 years, 31 – 40, 41 – 50, 51 -60, 61 -70 and over 70 years); and practise religion (yes, no) as the independent (fixed) variables and person type as the dependent variable. This ANOVA revealed a significant main effect of gender ($F (1, 958) = 10.44$, $p < .01$, $\eta^2 = .011$), age group ($F (5, 958) = 3.55$, $p < .01$, $\eta^2 = .018$) and practise religion ($F (1, 958) = 25.67$, $p < .001$, $\eta^2 = .026$). There were no interactions between variables.

Females tended, on average, to score high on more components of the MCGM than males (M = 2.50, SE = .072 and M = 2.10, SE = .098 respectively). Over 70 year olds scored high on more MCGM components than all other age groups (M = 2.68, SE = .165), and statistically higher than 31-40 year olds (mean difference = .632, $p < .05$) and 41-50 year olds (mean difference = .628, $p < .05$). When comparing individuals who practised their religion, with those that did not we observe that the former group is high on more components of the MCGM (M = 2.61, SE = .094; M = 1.99, SE = .078 respectively, $p < .001$).

We also conducted a multivariate analysis of variance to examine group differences across all dependent variables tested within Study 2. The independent variables were gender; age-group (as above); religion (Christianity or atheism[7]); the practise of religion (as above); relationship status (single; married[8]); dependants (individuals with dependants and those without); and employment type (as categorised in the demographics section). The dependent variables explored are the four

components of the MCGM; GQ6 scores, GRAT scores, responses to the Appreciation Scale; SWL scores; SH scores and positive affect. The most notable findings here were in terms of gender and religion. Females rated themselves more highly on the emotion component of the MCGM (F (1, 1597) = 4.99; $p < .05$, $\eta^2 = .006$); the attitude component (F (1, 1597) = 17.71; $p < .001$, $\eta^2 = .023$) and the behaviour component (F (1, 1597) = 14.75; $p < .001$, $\eta^2 = .019$); as well as the GQ6 (F (1, 1597) = 10.77; $p < .01$, $\eta^2 = .014$); the GRAT (F (1, 1597) = 9.14; $p < .01$, $\eta^2 = .012$); and the Appreciation scale (F (1, 1597) = 11.26; $p < .01$, $\eta^2 = .014$).

When comparing Christians and atheists, those who identify as Christian report significantly higher ratings of gratitude in the GQ6 (F (1, 1429) = 9.20; $p < .01$, $\eta^2 = .012$); GRAT (F (1, 1429) = 6.47; $p < .05$, $\eta^2 = .008$); and Appreciation scale (F (1, 1429) = 10.66; $p < .01$, $\eta^2 = .014$). In terms of the MCGM, Christians rate themselves significantly higher in grateful emotions than their non-religious counterparts (F (1, 1429) = 14.12; $p < .001$, $\eta^2 = .018$). However, crucially, we notice *no difference* between the two groups in terms of attitudes towards gratitude or gratitude-related behaviours (F (1, 1429) = 1.39, $p = .24$, $\eta^2 = .002$; and F (1, 1429) = 2.37, $p = .12$, $\eta^2 = .003$ respectively). This thereby demonstrates the possibility of differential scoring on the separate gratitude components of the MCGM, which enables a more sophisticated measure of where differences between religious and non-religious participants might lie. Correlational research has tended to show that trait gratitude (measured with the GQ6) is correlated with religiousness (see Emmons & Kneezel, 2005; McCullough et al., 2002). More recently, however, Tsang, Schulwitz and Carlisle's (2011) experimental study showed there to be no difference in gratitude behaviours between religious and non-religious participants, a finding echoed in the comparisons between Christians and atheists on the behaviour and attitude components of the MCGM.

The Value of the Conceptual Component:

In a further illustration of how the conceptual component, in particular, can contribute to assessments of gratitude and inform the scores from components B, C and D, we also split the data

into low, medium and high conceptual Are and Degree totals[9] and conducted a one-way MANOVA

(with Low/Medium/High Are and Degree scores as the independent variable and emotion, attitude

and behaviour scores from the MCGM along with scores from the GQ6, GRAT and Appreciation scale

as the dependent variables). The results demonstrate that more permissive understandings and

experiences of gratitude (as indicated by higher conceptual Are and Degree scores) give higher

scores on the GQ6, GRAT, and Appreciation scale and on components B, C and D of the MCGM (see

Table 6). This speaks to our earlier point about how *some* individuals may esteem a *non*-realised

benefit or *non*-valuable benefit as much as a realised or valuable benefit, making the 'threshold' for

their experience of gratitude lower than it is for individuals who do not rate non-valuable or non-

realised benefits as highly. This finding therefore demonstrates that an individual's more or less

permissive construal of gratitude impacts on their reported grateful feelings, attitudes and

behaviours. The conceptual component of MCGM sheds light on these latent influences.

[Insert Table 6 here].

Incremental Validity of the MCGM:

Having shown that the MCGM has construct validity and that each component influences well-being,

we carried out a more traditional (yet conservative) test of incremental validity to explore whether

gratitude can predict unique variance in the three well-being measures after controlling for the

effects of personality (via the Big Five) and existing gratitude measures. In essence, we were

examining whether the MCGM, in the traditional sense of explained variance, can offer something

above and beyond what is already offered by existing gratitude measures. To test incremental

validity, we conducted a three-step hierarchical multiple regression (following a similar procedure to

that outlined by Wood and colleagues, 2008). In the first step of the regression, we entered various

demographic variables which included age, gender, religion (Christianity or atheism) and whether

participants practised their religion. In the second step of the regression, we entered the Big Five

domains (as measured by the BFI-10, Rammstedt & John, 2007). Previous research suggests that the

Big Five domains can account for a significant amount of variance in well-being measures, for

example, Wood et al. (2008) demonstrate that 25% of the variance in satisfaction with life can be

accounted for by the Big Five (see also McCullough et al., 2002).

In the third step, we entered the existing gratitude scales (the GQ6, GRAT scale and

Appreciation Scale); and in the final step we entered the four components of the MCGM (Conceptual

component ('Are' and 'Degree' scores); Emotion component; Attitude component and Behaviour

component). If entering the MCGM has a significant impact on the regression model, we can be

confident that the MCGM is offering something new (see Figure 5).

This four-step hierarchical regression was conducted on three different outcome variables;

satisfaction with life; subjective happiness and positive affect. This combination allows us to assess

the relationship gratitude has with affective and cognitive well-being as well as global subjective

happiness.

[Insert Figure 5 here].

Predicting Satisfaction with Life, Subjective Happiness and Positive Affect:

When entering the demographic variables, a significant model emerged for each of the three well-

being variables. In the next step of entering the Big Five, a significant model also emerged,

demonstrating that the Big Five can account for 11% of variance in satisfaction with life[10], 31% of

variance in subjective happiness and 37% of variance in positive affect. In the third step, when

entering the three existing gratitude measures, a significant model emerged again; the existing

measures of gratitude can account for an additional 27% of variance in SWL, 15% of SH and 9% of

positive affect. Importantly, in the final step, entering the MCGM components also led to a

significant model for all three well-being measures. The MCGM can account for an additional 2.3% of

variance in SWL above what can be predicted by the Big Five and the three existing gratitude measures model (R^2 = .43; $F_{(17, 820)}$ = 36.02; $p < .001$); an additional 1.6% of variance in SH (R^2 = .55; $F_{(17, 820)}$ = 58.78; $p < .001$) and 1.5% of variance in positive affect (R^2 = .48; $F_{(17, 820)}$ = 44.81; $p < .001$, see Appendix C, Supplementary information).

Discussion:

By identifying five different 'person types', we have demonstrated how the different components of the MCGM coexist within an individual. Moreover, we have illustrated the importance of every component of the MCGM through their relation to well-being; scoring low on all four components is related to the lowest levels of well-being (assessed by *three* distinct well-being scales), this increases in a linear fashion until you reach those individuals who score highly on all four components and similarly report the most elevated levels of well-being. This technique offers a novel multi-component assessment of gratitude which can comprehensively examine all its constituents. As should be evident from the five different person types, possessing only one component of gratitude is considerably less beneficial (both intrinsically and extrinsically) than possessing two components, and those individuals who exemplify all four components will arguably experience the highest levels of well-being.

Furthermore, the three tests of incremental validity demonstrate how the MCGM can offer something new that is not currently measured by existing gratitude scales. In particular, the stage of the MCGM that appears to add most value in the regression model is the behaviour stage; when predicting satisfaction with life and subjective happiness, the largest t- and p-values emerged for the Behaviour component (SWL: $t = 2.142$, $p = .033$; SH: $t = 3.596$, $p = .000$). This further demonstrates the hazards of measuring gratitude only via its emotional manifestations.

The emotion stage does predict some unique variance over the existing gratitude measures in terms of positive affect. However, this is likely weakened due to the strong overlap with the GQ6

(as indicated in the strong correlation between these two scales, r = .709**), we return to this point in the general discussion.

Importantly, the conceptual component can offer a clear *profile* of participants' *experience and understanding of gratitude*, which should be borne in mind when interpreting the results. The significance of having a conceptual component is evident in the analysis of person types; here, the conceptual component significantly impacts upon all three well-being measures. We also separately demonstrated how more permissive understandings of gratitude appear to lead to higher scores on all other components of the MCGM and scores on the existing gratitude scales.

General Discussion:

The MCGM has been designed to comprehensively examine the construct of gratitude as a multi-component virtue, or a complex trait of character, and one of the aims of this paper has been to demonstrate that it is psychometrically robust, reliable and valid. In Study 1, the distinct dimensions of gratitude that this measure was developed to examine were supported by a principal components factor analysis that separated and condensed our pool of items into 6 discrete factors; one assessing grateful emotions (the emotion component); two examining attitudes and evaluations of gratitude (the attitude component); and three examining gratitude-related behaviours (the behaviour component). This analysis supported the theoretical conception of gratitude, as a moral virtue, comprising distinct emotions, attitudes and behaviours.

Importantly, however, this measure also offers a means of examining conceptions of gratitude. The resulting 'gratitude profile' offers the researcher an important insight into participants' understandings of gratitude, which is of crucial importance for assuring validity. Further to this, conceptualisations significantly impact on both well-being and other components of gratitude (see Study 2). As described earlier, the presence of differing conceptualisations of a construct is a particular challenge when exploring moral constructs; the illustrations of differing conceptualisations of gratitude in the introduction is a case in point. By drawing on psychological

and philosophical literature, we illustrated how gratitude is a complex multi-faceted concept with a number of determining factors. Current measures of gratitude make no attempt to map out the contours of individuals' conceptual understandings of gratitude. For instance, some individuals may take a permissive view where gratitude is experienced even when an ulterior or malicious motive is implicated. Conversely, other people may exhibit a more restrictive view, reporting that they would not be grateful if someone were motivated by these non-altruistic ends. Some people may be considerably less grateful 'for the thought' (intended benefits that did not materialise or for subjectively non-valuable gifts) than others. These conceptual differences are interesting in themselves. However, whether gratitude is seen with a 'wide-angle' lens also appears to impact on an individual's grateful feelings, attitudes and behaviours, as demonstrated in Table 6. The MCGM allows an assessment of these latent influences to be made manifest. Given the strong correlation between conceptual 'are' and conceptual 'degree' responses ($r = .67**$), we recommend the use of only degree questions in future applications of the MCGM, for reasons of parsimony and speed of administration.

In Study 2, the value and utility of the MCGM was tested by creating various 'person types' depending on whether individuals were 'high' or 'low' on each of the MCGM components. This analysis offered a clear illustration of how the different components of the MCGM coexist within an individual and how every component contributes toward well-being. These findings should be of great pragmatic interest to researchers seeking to measure gratitude as comprehensively as possible, including its cognitive, affective, conative/attitudinal and behavioural elements.

One possible perceived disadvantage of the MCGM is the numerous scores or values that result from employing all four components. In contrast to the GQ6, GRAT or Appreciation scale, the MCGM does not provide one simple 'gratitude score' (however, as evident in this paper one could categorise respondents as particular 'person types'). Whilst it is possible to amalgamate scores, the convenience of doing so may detract from the uniqueness of this measure and its design. Hopefully, the potential 'richness' in the data set should offset such concerns.

As noted, the diverse conceptual understandings of gratitude have been largely overlooked in the current psychological literature (SecondAuthor et al. 2013; FirstAuthor et al. 2014). Therefore, we hope that the MCGM remedies this shortcoming. This deficiency is not only a theoretical and measurement issue but also an important educational matter. We have suggested elsewhere that gratitude interventions that have the objective of making young people more grateful should be pursued in the broader context of stimulating understanding of the conceptual contours of gratitude and what factors might impact its perceived appropriateness (see FirstAuthor et al., 2015; AnotherAuthor, FirstAuthor & SecondAuthor, 2015). A moral virtue is not cultivated appropriately by just 'boosting' all the relevant components, for there comes a point – that needs to be worked out normatively in the case of each particular virtue – when instantiating the relevant multi-component trait *non-deficiently* turns into instantiating it *excessively* (Grant & Schwartz, 2011). Obviously an instrument such as the MCGM does not make moral theorising on the ideal normative nature of the virtue construct redundant, but it helps identify – and measure either separately or collectively – the relevant variables that make up the virtue.

The concern about education and increased moral understanding ideally going hand in hand has wide theoretical implications. It is part and parcel of our understanding that gratitude – as a *moral virtue* – is constituted by distinguishable components, ordered in an appropriate way (Curzer, 2012). The person possessing the virtue of gratitude entertains certain *beliefs* about when gratitude is deemed appropriate, *notices* circumstances in which gratitude seems warranted, *feels* and *acts* gratefully. Currently, the MCGM is the only measure to offer an insight into the thought processes undergirding participants' conceptual understanding of gratitude. The measure operationalises a range of conceptual controversies rehearsed in the gratitude literature, enabling a picture of an individual's gratitude concept to be sketched. Because extant questionnaires take this representation for granted and presume that participants share the same underlying conception of the concept as the researchers, the MCGM tells us something about gratitude that has not been measured before. We appreciate, however, that depending on the kind of research envisaged, it

may not always be possible or practicable to use component A, and we suggest a flexible use of the measure wherein the subscales could be used independently or in combination depending on the aspect of gratitude (conceptual, affective, attitudinal or behavioural) of interest. Alternatively, components C (attitudinal) and D (behavioural), which are also relatively uncharted dimensions of gratitude in existing measures, could be used alongside the shorter and well-established index of grateful feeling, the GQ6. Indeed, a particular advantage of the MCGM is its flexible application.

Study 2 demonstrates for the virtue of gratitude, in particular, the importance of tapping emotions and behaviours. Not only does this advance the theoretical understanding of this virtue, it also offers a practical suggestion for future researchers: studies aiming to measure gratitude that do not, at the very least, gauge these two aspects of gratitude will be missing out on vital information (especially those studies exploring the link between gratitude and positive psychological outcomes, such as increased well-being).

Future work involving the MCGM will aim to establish its temporal stability, using assessments of test-re-test reliability. It will be also be important to assess whether the MCGM can be used with young people and predict enhanced gratitude states in a systematically administered and measured gratitude intervention. Furthermore, it would be interesting to see the degree to which reported gratitude, on all components of the questionnaire, predicts actual behaviour in experimental studies. Importantly, this methodological approach could also be extended to examine other moral constructs.

Continued exploration of the MCGM should be extended to encompass outcome variables other than well-being. Dimensions of subjective well-being are well suited to the exploration of gratitude given the strong positive correlation between the two constructs; however, this is only one of a host of possible outcome variables that could be examined. As highlighted in the introduction, gratitude has previously been linked to building and maintaining relationships and prosocial behaviours (Algoe et al., 2008; Bartlett et al., 2006; 2012); a fruitful avenue of research would be to explore whether the observed value of the MCGM is specifically tied to well-being or whether these

results are generalizable to other positive benefits such as social functioning. Similarly, given the recent interest in positive and character education (Arthur, Thompson & Wartnaby, 2015), the suggested links between gratitude and educational benefits such as academic attainment and satisfaction with school experience could also be examined using the MCGM, creating another valuable line of inquiry (Froh et al., 2008; 2011).

Conclusions:

Our aims in presenting this paper were three-fold: (1) to highlight how conceptualisations of a construct constitute vital information that contributes to the measurement of the construct, in this case moral virtue; (2) to demonstrate how measures of moral virtue should encompass multiple components – the *cognitive, affective, conative/attitudinal* and *behavioural* – to comprehensively examine virtue; and (3) provide a new measure of one particular moral virtue that is a hot topic in psychology and philosophy: gratitude. By combining conceptual analysis with scale development, we have shown the MCGM to be an internally reliable and valid measure of four components of gratitude: (a) conceptions (or understandings) of gratitude; (b) grateful emotions; (c) attitudes towards gratitude; and (d) gratitude-related behaviours. Crucially, the analysis of person types demonstrates the value of assessing each of the four MCGM components and how all components impact upon an individual's well-being.

Furthermore, we demonstrated that a more permissive understanding of gratitude (indicated by higher conceptual Are and Degree scores) yielded higher scores on the GQ6, GRAT, and Appreciation scale and on components B, C and D of the MCGM. Thus we have been able to show that whether gratitude is construed restrictively or permissively *at a conceptual level* influences an individual's reported grateful feelings, attitudes and behaviours. The MCGM therefore demonstrates a number of features that make significant improvements to existing measures, both from theoretical and practical points of view, and we recommend its use in future explorations of

gratitude. We further advocate methodological approaches that make use of conceptual analysis within measurement design.

This paper has explored a multi-component approach to look at one particular moral virtue, gratitude. We have argued throughout that in order to assess virtue we must measure its cognitive, affective, attitudinal and behavioural aspects; this has been clearly evidenced in the case of gratitude. This multi-component view, however, is not specific to this one virtue. It is our hope that this conception of virtue measurement will be adopted and applied to other moral virtues in the future.

Notes:

1. *The GRAT-short form containing 16 items (Thomas and Watkins, 2003) is utilised in the empirical studies presented in this paper.*
2. *Item analysis (with correlations over .50) produced a short form of the Appreciation scale containing 18 items and displaying strong internal consistency (Cronbach's alpha = .91). We utilised the short form of the Appreciation Scale alongside the 'Gratitude' subscale in the studies presented here.*
3. *Please note that a coefficient of .50 was chosen in order to reduce the number of items piloted to a manageable number. This is particularly important in this case as it is competing with existing measures that are shorter in length.*
4. *The mean scores relate to the six factors as grouped into emotion, attitude and behaviour components. Here, the emotion score could range from 6 to 42; the attitude score could range from 10 to 70; and the behaviour score could range from 13 to 91. The conceptual 'Are' score could range from 7 – 42 and the conceptual 'degree' score could range from 0 – 700.*
5. *It is important to note here that well-being is only one of a set of constructs that could have been used to validate the MCGM. These scales have been chosen due to their well-established links to gratitude but other alternatives are discussed as part of the future directions in the General Discussion.*
6. *The decision was made to separate the data based on the mean rather than the median. When calculating the median the separation of 'high' and 'low' scores shifted by one integer for the emotion and attitude components. However, the mean resulted in greater similarity in sample size across the five person types which is preferable for the analysis of variance.*
7. *56% of our sample was Christian and 23% atheist; accounting for 79% of the total sample; thus these two groups were compared to examine the effect of religion.*
8. *80% of our sample was made up of single (23%) and married (67%) individuals.*
9. *Participants' responses to 'Are' and 'Degree' questions across all manipulations were added together to form an 'Are total' and 'Degree total' per participant; the sample was subsequently split into three equal groups to make low, medium and high groupings for the ANOVA.*
10. *You may note that the amount of variance accounted for by the Big Five here is smaller than that noted by Wood and colleagues (2008). This may be due to the use of different Big Five instruments; Wood and colleagues used the full 240-item Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992) whilst our respondents completed a short Big Five instrument, the BFI-10 (Rammstedt & John, 2007).*

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Table 1. Factor Loadings from the Principal Components Analysis (Oblimin Rotation, coefficients > .50).

Pattern Matrix	Factor Loadings						
Factor Name	**1**	**2**	**3**	**4**	**5**	**6**	**Question**
FEELINGS OF GRATITUDE	-0.813						There are so many people that I feel grateful towards
FEELINGS OF GRATITUDE	-0.880						There are so many people that I feel grateful for
FEELINGS OF GRATITUDE	-0.730						I feel appreciative of the support of many people in my life's journey
FEELINGS OF GRATITUDE	-0.707						I feel grateful for the people in my life
FEELINGS OF GRATITUDE	-0.643						Thinking about all I have to be grateful for makes me feel happy
FEELINGS OF GRATITUDE	-0.708						There are many things that I am grateful for
ATTITUDES TO APPROPRIATENESS		0.722					Gratitude should be reserved for when someone does not want anything in return
ATTITUDES TO APPROPRIATENESS		0.782					Gratitude should be reserved for when someone intends to benefit you
ATTITUDES TO APPROPRIATENESS		0.755					I only show gratitude to people who have benefitted me without wanting anything in return
ATTITUDES TO APPROPRIATENESS		0.735					I only show gratitude for the things that are not already due to me/ are mine by right
ATTITUDES TO APPROPRIATENESS		0.761					I only show gratitude towards people who clearly intended to benefit me
ATTITUDES TO APPROPRIATENESS		0.651					I only feel grateful when the benefit is of genuine value to me
BEHAVIOURAL SHORTCOMINGS			0.745				I forget to let others know how much I appreciate them
BEHAVIOURAL SHORTCOMINGS			0.840				I forget to reflect on the things that I am grateful for
BEHAVIOURAL SHORTCOMINGS			0.818				I overlook how much I have to be grateful for
BEHAVIOURAL SHORTCOMINGS			0.797				I forget to remind myself that there is so much in life to be thankful for
RITUALS/NOTICING BENEFITS				0.860			I stop to recognize all the good things I have in my life
RITUALS/NOTICING BENEFITS				0.866			I recognise how many things I have to be grateful for
RITUALS/NOTICING BENEFITS				0.878			I stop and think about all the things I am grateful for
RITUALS/NOTICING BENEFITS				0.851			I reflect on all the good things I have
RITUALS/NOTICING BENEFITS				0.835			I remind myself of the benefits I have received
EXPRESSIONS (OF GRATITUDE)					0.756		I make it a priority to thank others
EXPRESSIONS (OF GRATITUDE)					0.690		I express thanks to those who help me
EXPRESSIONS (OF GRATITUDE)					0.622		I notice the people who are kind to me
EXPRESSIONS (OF GRATITUDE)					0.802		I go out of my way to thank others for their help
ATTITUDE OF GRATITUDE						0.709	I don't think it is necessary to show your gratitude to others
ATTITUDE OF GRATITUDE						0.690	I believe it is important to thank people sincerely for the help they give me
ATTITUDE OF GRATITUDE						0.673	I believe gratitude is an important value to have
ATTITUDE OF GRATITUDE						0.788	It is important to acknowledge the kindness of other people

Table 2. The reliability of the MCGM subscales (from Study 1); correlations with existing gratitude/appreciation scales (from Study 2); and example items. (E) refers to an emotion item; (A) attitude item; and (B) behaviour item; ** = p < .01.

	Study 1		Study 2			
Subscale	Reliability of Subscale (Cronbachs α)	No. of Items	Correlation with GQ6	Correlation with GRAT	Correlation with Appreciation Scale	Example Item
FEELINGS OF GRATITUDE	0.87	6	.709**	.612**	.514**	There are so many people that I feel grateful towards (E)
ATTITUDES OF APPROPRIATE-NESS	0.85	6	.382**	.369**	.223**	Gratitude should be reserved for when someone intends to benefit you (A)
BEHAVIOURAL SHORTCOMINGS	0.82	4	.182**	.170**	.109**	I overlook how much I have to be grateful for (B)
RITUALS/NOTICING BENEFITS	0.92	5	.529**	.510**	.769**	I stop to recognize all the good things I have in my life (B)
EXPRESSIONS OF GRATITUDE	0.79	4	.416**	.353**	.497**	I make it a priority to thank others (B)
ATTITUDE OF GRATITUDE	0.74	4	.415**	.404**	.289**	I don't think it is necessary to show your gratitude to others (A)

Table 3: Summary of the SWL, SH, and PANAS scales

Scale	Number of items	Response option	Reliability (alpha)	Evidence of correlation with gratitude	Example item(s)
Satisfaction with life (Diener *et al.,* 1985)	5	7-point Likert scale (*1 = Strongly disagree to 7 = Strongly agree*)	.87	Adler & Fagley, 2005; McCullough, et al., 2002; Watkins et al., 2003; Wood et al., 2008	In most ways my life is close to my ideal
Subjective Happiness (Lyubomirsky & Lepper, 1999)	4	2 items are answered on a 7-point scale ranging from *1 = less happy to 7 = more happy* (in comparison to others) The other 2 items are answered on a 7-point scale ranging from (describes me) *1 = not at all to 7 = a great deal*	0.79 - 0.94	McCullough et al., 2002	Compared to most of my peers, I consider myself; Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?
Positive affect subscale of PANAS (Watson, Clark & Tellegen, 1988)	10	5-point Likert scale (*1 = very slightly or not at all to 5 = extremely*) used to rate how well a list of 10 adjectives describes the respondent	> .80	Adler & Fagley, 2005; McCullough, et al., 2002; Watkins et al., 2003	Indicate to what extent you generally feel... Interested; Excited; Proud

Table 4: Correlation matrix demonstrating the relationship between all stages of the Multi-Component Gratitude Measure (MCGM); the existing gratitude/appreciation scales (the GQ6, GRAT and Appreciation Scale) and the well-being scales SWL; SH and Positive Affect).

	Conceptual ARE	Conceptual DEGREE	Emotion Stage	Attitude Stage	Behaviour Stage	GQ6	GRAT	Appreciation Scale	SH	SWL	(Pos) PANAS
Conceptual ARE	1	.672**	.234**	.224**	.162**	.188**	.166**	.188**	.123**	.094**	.162**
Conceptual DEGREE	.672**	1	.246**	.201**	.216**	.195**	.181**	.233**	.163**	.135**	.176**
Emotion Stage	.234**	.246**	1	.428**	.482**	.709**	.612**	.514**	.472**	.435**	.408**
Attitude Stage	.224**	.201**	.428**	1	.366**	.452**	.437**	.280**	.262**	.178**	.195**
Behaviour Stage	.162**	.216**	.482**	.366**	1	.552**	.512**	.681**	.475**	.370**	.395**
GQ6	.188**	.195**	.709**	.452**	.552**	1	.766**	.578**	.567**	.546**	.487**
GRAT	.166**	.181**	.612**	.437**	.512**	.766**	1	.582**	.573**	.592**	.450**
Appreciation Scale	.188**	.233**	.514**	.280**	.681**	.578**	.582**	1	.389**	.356**	.347**
SH	.123**	.163**	.472**	.262**	.475**	.567**	.573**	.389**	1	.616**	.589**
SWL	.094**	.135**	.435**	.178**	.370**	.546**	.592**	.356**	.616**	1	.479**
(Pos) PANAS	.162**	.176**	.408**	.195**	.395**	.487**	.450**	.347**	.589**	.479**	1

*Pearson Correlation, N = 1599, ** = p < .01. The blue highlighted cells indicate correlations within the MCGM; the orange cells indicate correlations between the MCGM and the existing gratitude scales; the green cells indicate correlations between the MCGM and the well-being scales.*

Table 5. Mean scores for each well-being scale across the five person types. A comparison of the mean difference in well-being between each person type is shown alongside the associated significance value.

Person Type	Satisfaction with Life score (Scores can range from 5 – 35)				Subjective Happiness score (1-7)				Positive Affect score (10-50)				N
	Mean	SD	Comparison	Sig.	Mean	SD		Sig.	Mean	SD		Sig.	
High on 0 components	21.08	6.15			4.27	1.09			31.22	5.64	0 –1	NS	256
High on 1 component	21.55	6.38	High 0 – High 1	NS	4.46	1.13	0 –1	NS	32.34	6.26	1 –2	p <.001	352
High on 2 components	24. 14	5.91	High 1 – High 2	p <.001	5.04	1.21	1 –2	p <.001	34.45	6.26	2 –3	p <.001	389
High on 3 components	25.68	5.39	High 2 – High 3	p < .01	5.40	1.06	2 –3	p <.001	36.28	5.60	3 – 4	p <.001	341
High on 4 components	27.05	5.45	High 3 – High 4	p <.05	5.75	1.00	3 – 4	p <.01	38.07	5.58		p <.01	261

Table 6. Summary of results from MANOVA examining the effect of the conceptual stage on gratitude scores

Gratitude Scale		Low 'Are total'	Medium 'Are total'	High 'Are total'	Low 'Degree total'	Medium 'Degree total'	High 'Degree total'
GQ6	*Mean*	5.36	5.47	5.77	5.33	5.47	5.72
	SD	.97	.94	.88	.98	.91	.91
Group Comparison	*F*		24.72			23.68	
	Significance		p < .001			p < .001	
GRAT	*Mean*	106.1	108.7	112.9	105.6	108.2	112.7
	SD	17.82	17.22	17.30	18.22	16.76	17.29
Group Comparison	*F*		19.16			22.49	
	Significance		p <.001			p < .001	
Appreciation Scale	*Mean*	75.64	78.30	83.08	74.83	76.75	84.11
	SD	17.41	17.74	18.06	17.86	16.76	17.83
Group Comparison	*F*		22.01			41.72	
	Significance		p <.001			p < .001	
Emotion Component	*Mean*	32.70	33.88	35.89	32.53	33.86	35.51
	SD	6.19	5.48	5.26	6.08	5.41	5.62
Group Comparison	*F*		38.72			36.43	
	Significance		p <.001			p < .001	
Attitude Component	*Mean*	54.24	55.95	58.99	54.23	55.88	58.21
	SD	8.34	7.75	7.55	8.38	7.72	7.81
Group Comparison	*F*		44.66			33.51	
	Significance		p <.001			p < .001	
Behaviour Component	*Mean*	60.65	62.55	65.11	60.18	61.63	65.73
	SD	11.77	11.87	11.86	11.65	11.45	11.78
Group Comparison	*F*		17.91			32.63	
	Significance		p <.001			p < .001	

Figure 1. Example of a scenario from the conceptual component of the MCGM; the conceptual controversy being tested here is the presence of an ulterior (non-benevolent) motive:

A colleague nominates you for an award at work. If you win, you will receive recognition of your hard work and a voucher. The colleague has nominated you because she wants to repay the favour by helping her with her workload.

You *are* grateful to this person for their help.

1=Strongly disagree   2=Disagree   3=Neither agree nor disagree   4=Agree   5=Strongly agree

Please indicate the degree of gratitude you feel on the scale below:

|————————————————————————————————————|

Not at all   *Most grateful*
grateful   *you could feel*
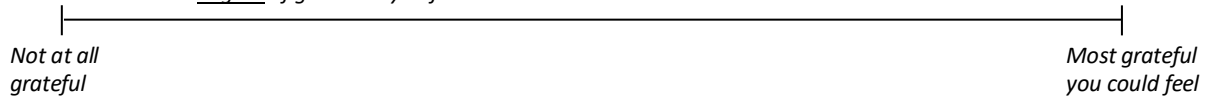
Figure 2: The mean degree responses across the seven conceptual manipulations that make up Component A. The resulting figures provide a 'gratitude profile' that describes respondents' conceptions of when gratitude is due and, thus, their self-projected gratitude experience. Error bars denote standard error values.
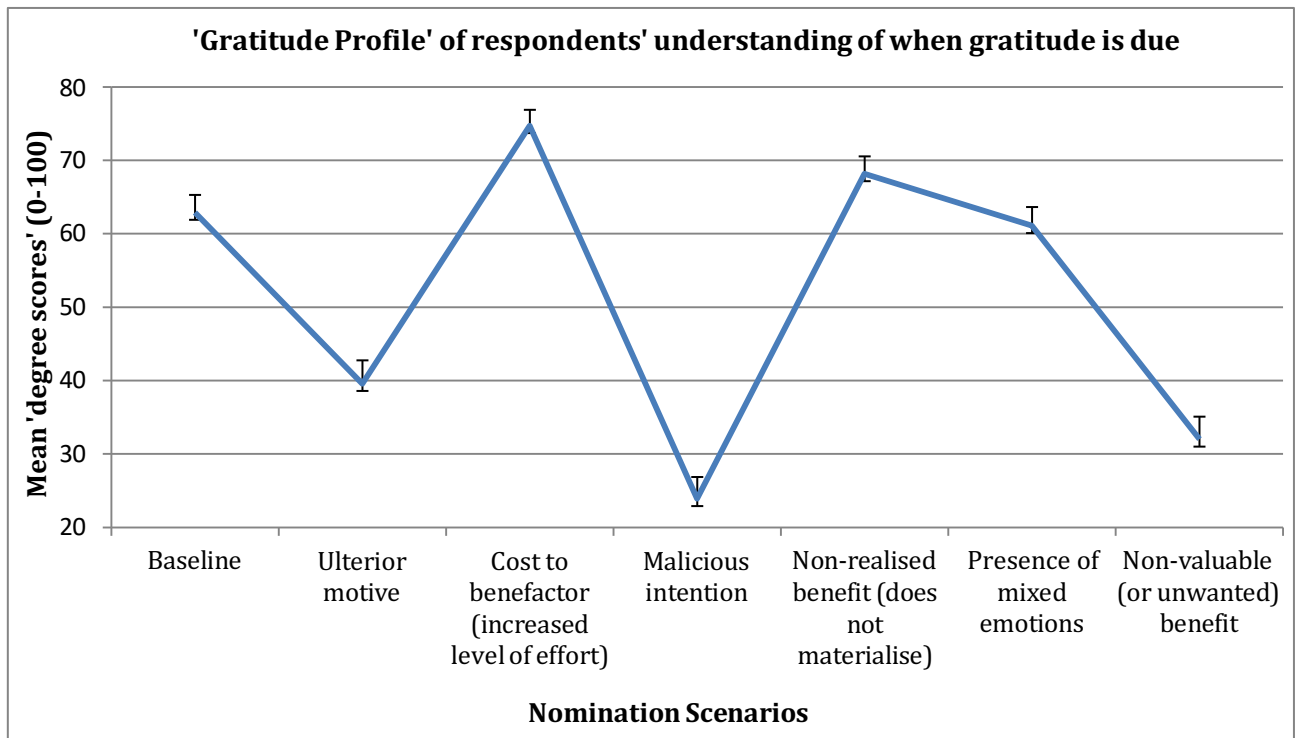
Figure 3. Graphical illustration of the linear relationship between number of components of the MCGM that individuals endorse and their subjective well-being (as measured by the positive affect section of PANAS).
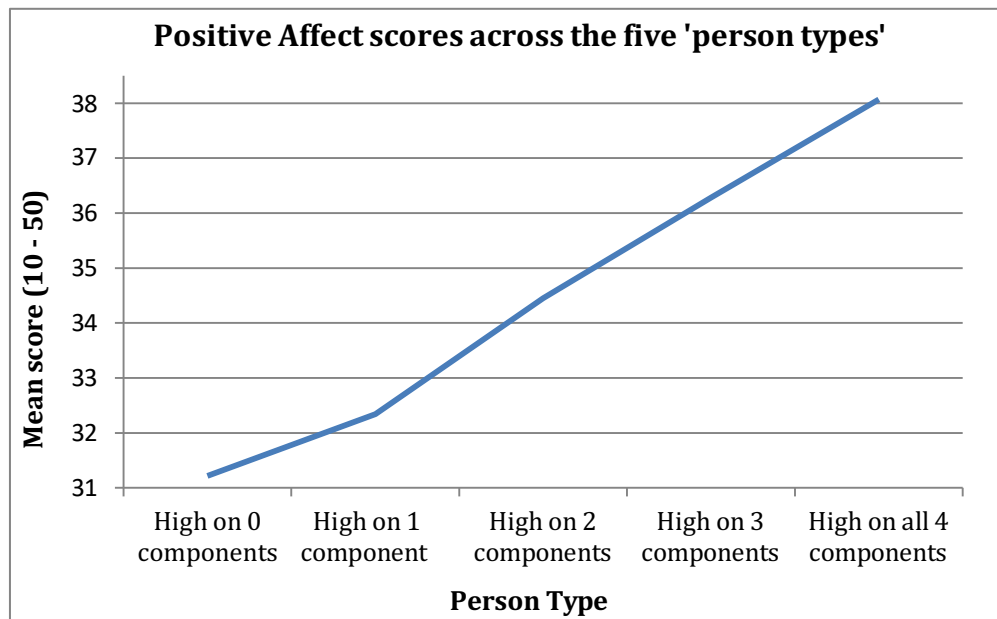
Figure 4. Graphical illustration of the relationship between positive affect and the fifteen different combination types. The red marker points signpost the points where the emotion and behaviour components make a visible impact on well-being scores.

Positive Affect scores across the 'Combination Types'

Key:

C= 'High' on conceptual component
E= 'High' on emotion component
A= 'High' on Attitude
B = 'High' on Behaviour
CE = 'High' on conceptual and emotion components
CA = Conceptual and attitude
CB = Conceptual and behaviour
EA = Emotion and attitude
EB = Emotion and behaviour
AB = Attitude and behaviour
CEA = 'High' on conceptual, emotions and attitude components
CEB = Conceptual, emotion and behaviour
CAB = Conceptual, attitude and behaviour
EAB = Emotion, attitude and behaviour
CEAB = 'High' on all four components of the MCGM

Figure 5. Illustration of the four steps of the hierarchical multiple regression

Step 1: Enter **Demographic information** (age, gender, religion, practise religion)	**Step 2:** Enter **Big Five domains of Personality** (measured by BFI-10, Rammstedt & John, 2007)	**Step 2:** Enter **Existing Gratitude/ Appreciation Scales** (GQ6, GRAT, Appreciation Scale)	**Step 4:** Enter **4 components of MCGM** (Conceptual (Are & Degree); Emotion; Attitude; Behaviour)
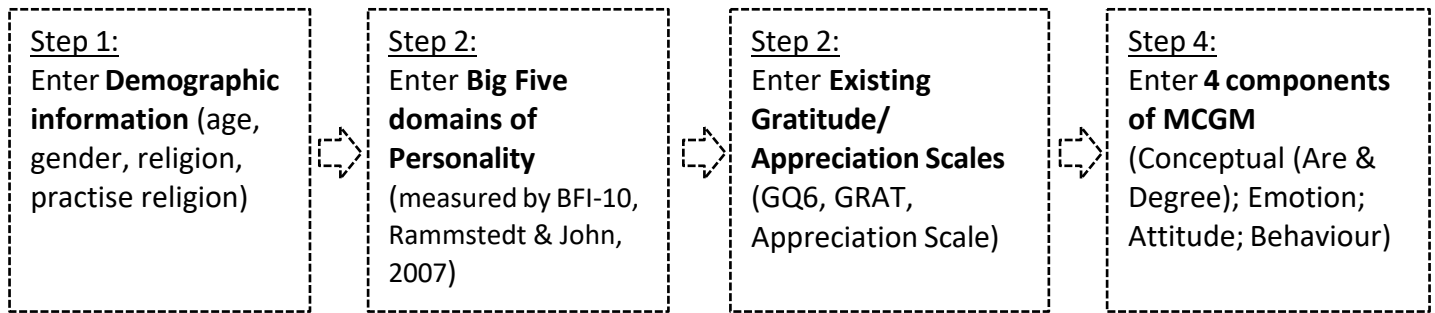
Appendix 1: Table demonstrating the various scenarios, and questions, in the Conceptual Component of the MCGM.

Gratitude scenarios
(Nomination for award)
Baseline
A colleague nominates you for an award at work. If you win, you will receive recognition of your hard work and a voucher.
• You **are** grateful to this person for their help
(1=Strongly agree – 5=Strongly disagree)
• Please indicate the **degree** of gratitude you feel:
(Not at all grateful – Most grateful you could feel)
Ulterior Motive
A colleague nominates you for an award at work. If you win, you will receive recognition of your hard work and a voucher. The colleague has nominated you because she wants you to repay the favour by helping her with her own workload.
Cost to benefactor
A colleague nominates you for an award… The colleague had to spend a long time filling in the nomination form outside of work.
Non-realised benefit
A colleague nominates you for an award at work... In the end you do not win the award.
Malicious intent
A colleague nominates you for an award at work…. You do not get on with this colleague and you know that she only nominated you because she knew it would embarrass you.
Value of benefit
A colleague nominates you for an award…You do not want to win this award and would rather that you had not been nominated.
Mixed emotions
A colleague nominates you for an award at work… You feel thankful that your colleague nominated you but you also feel uncomfortable now that you are indebted to her.

Appendix 2: The number and demographics of participants who took part in Studies 2 and 3 (the validation of the MCGM):

Demographics	Study 2 and 3		Estimates of UK population (%)
	Numbers	%	
No. participants	1599		
% Female		52%	50.81
Age range	18-83 yrs		
Mean Age	51		39.9
18-30yrs	67	4.20%	~15%
31-40yrs	331	20.70%	13.00%
41-50yrs	370	23.10%	14.30%
51-60yrs	371	23.20%	12.50%
61-70yrs	365	22.80%	11.00%
>70yrs	95	5.90%	11.90%
Employment			
Higher	104	6.50%	No comparable estimates
Intermediate	459	28.70%	
Supervisory	347	21.70%	
Skilled Manual	61	3.80%	
Semi-skilled manual	32	2.00%	
Unskilled manual	31	1.90%	
Casual	18	1.10%	
Pensioner	353	22.10%	
State benefit	36	2.30%	
Other	144	9.00%	
Ethnicity			
White-British	1490	93.20%	White: 87.1%
White-Irish	26	1.60%	
White Other	32	2.00%	
Black British Caribbean	1	0.10%	Black British (African/Caribbean): 3%
Black British African	1	0.10%	
Black Other			
Asian-British Indian	15	0.90%	2.30%
Asian-British Pakistani	4	0.30%	1.90%
Asian-British Bangladeshi	1	0.10%	0.70%
Chinese	9	0.60%	0.70%
Asian Other	2	0.10%	1.40%
Mixed White and Black Caribbean	1	0.10%	Mixed/Multiple ethnicity: 2%
Mixed White and Black African			
Mixed White and Asian	3	0.20%	
Mixed Other	2	0.10%	
Other Ethnicity	1	0.10%	0.90%

Demographics	Study 2 and 3		Estimates of UK population from 2011 UK Census (%)
	Numbers	%	
Religion			
Agnostic	160	10.00%	
Atheist	374	23.40%	25.10%
Buddhism	5	0.30%	0.40%
Christianity	897	56.10%	59.30%
Hinduism	8	0.50%	1.50%
Islam	9	0.60%	4.80%
Judaism	6	0.40%	0.50%
Sikhism	2	0.10%	0.80%
Spirituality	25	1.60%	
Other	328	20.50%	0.40%
Practise Religion			
Yes	336	21.00%	No comparable estimates
No	646	40.40%	
Relationship Status			
Single	122	7.60%	68.50%
Partner	27	1.70%	
Long term partner	108	6.80%	
Co-habiting	109	6.80%	
Married	1064	66.50%	29.80%
Civil Partnership	11	0.70%	No comparable estimates
Separated	22	1.40%	
Divorced	83	5.20%	1.50%
Widowed	50	3.10%	
Other			
Dependants YES	930	58.20%	No comparable estimates
Dependants NO	662	41.40%	
Average no. dependants	2.1		1.7
Geographical location			
England	1274	79.70%	84%
Scotland	96	6.00%	8%
Wales	53	3.30%	5%
N. Ireland	19	1.20%	3%

Appendix C: Summary of the three-step hierarchical regression when predicting Satisfaction with Life, Subjective Happiness and Positive Affect.

SWL Model	Variables entered	Method	β	t	p value	R	R^2	R^2 change	F change	Significance of F change
1	Demographics:	Enter				.144	.021	.021	4.242	.002**
	Gender		-.007	-.194	.846					
	Age		.112	3.217	.001					
	Religion		.003	.80	.936					
	Practise religion		.076	2.169	.030					
2	Big Five:	Enter				.367	.135	.114	21.817	.000**
	Agreeableness		.153	4.382	.000					
	Conscientiousness		.074	2.156	.031					
	Neuroticism		-.161	-4.343	.000					
	Openness		.041	1.219	.223					
	Extraversion		.097	2.657	.008					
3	GQ6	Enter	.154	3.434	.001	.636	.400	.270	124.47	.000**
	GRAT		.494	10.787	.000					
	Appreciation Scale		-.006	-.178	.859					
4	MCGM:	Enter				.654	.428	.023	6.626	.000**
	ConceptualARE		-.044	-1.215	.225					
	ConceptualDEGREE		.062	1.715	.087					
	Emotion		.048	1.210	.227					
	Attitude		-.159	-5.160	.000					
	Behaviour		.084	2.142	.033					
SH Model										
1	Gender	Enter	-.087	-2.559	0.11	.279	.078	.078	17.556	.000**
	Age		.213	6.281	.000					
	Religion		.001	.019	.985					
	Practise religion		.133	3.890	.000					
2	Agreeableness	Enter	.236	8.045	.000	.622	.387	.309	83.42	.000**
	Conscientiousness		.067	2.297	.022					
	Neuroticism		-.311	-9.960	.000					
	Openness		.057	2.032	.042					
	Extraversion		.165	5.386	.000					
3	GQ6	Enter	.183	4.615	.000	.731	.534	.147	86.685	.000**
	GRAT		.294	7.263	.000					
	Appreciation Scale		.011	.339	.734					
4	ConceptualARE	Enter	-.054	-1.673	.095	.741	.549	.016	5.661	.000**
	ConceptualDEGREE		.053	1.622	.101					
	Emotion		.054	1.524	.128					
	Attitude		-.095	-3.452	.001					
	Behaviour		.125	3.596	.000					
Positive Affect Model										
1	Gender	Enter	.022	.612	.541	.087	.007	.007	1.572	.180
	Age		.033	.931	.352					
	Religion		.012	.341	.733					
	Practise religion		.075	2.103	.036					
2	Agreeableness	Enter	.052	1.768	.077	.612	.374	.367	96.977	.000**
	Conscientiousness		.287	9.802	.000					
	Neuroticism		-.223	-7.044	.000					
	Openness		.208	7.354	.000					
	Extraversion		.213	6.883	.000					
3	GQ6	Enter	.229	5.404	.000	.683	.466	.092	47.416	.000**
	GRAT		.077	1.770	.077					
	Appreciation Scale		.099	2.974	.003					
4	ConceptualARE	Enter	-.007	-.217	.828	.694	.482	.015	4.898	.000**
	ConceptualDEGREE		.064	1.870	.062					
	Emotion		.109	2.890	.004					
	Attitude		-.104	-3.524	.000					
	Behaviour		.042	1.119	.263					