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Measuring Virtuous Gratitude

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Measuring Virtuous Gratitude

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1 Introduction

Within the framework of an Aristotelian approach to virtue ethics, virtues are *virtuous* insofar as they are directed towards the right person, to the right degree, at the right time and for the right purpose. Importantly, emotions are implicated in Aristotelian virtue at all levels of engagement, and some virtues seem to constitute emotion responses (as traits rather than episodes) exclusively or at least predominantly. Perhaps the most celebrated example is Aristotle's take on *justified anger* (also known as 'mildness of temper'), both in the *Nicomachean Ethics* and the *Rhetoric*. An Aristotelian approach can, by extension, be applied to virtues Aristotle did not himself take into account, or even to virtues about which he was ambivalent (Kristjánsson, 2013, cf. Carr, 2015). Clearly, there are now more virtues in the lexicon than were brought under Aristotle's consideration in the *Nicomachean Ethics*, and there is no reason to think that even Aristotle himself considered the list of virtues there to be exhaustive.

The current paper applies the Aristotelian approach to virtue ethics to *gratitude* which, as is well known, was *not* regarded as a virtue by Aristotle himself in the *Nicomachean Ethics* (although he praised it as a positive personal quality in his *Rhetoric*).¹ Nonetheless, there is much to be gained from this line of thinking. Gratitude has often been cast in an unambiguously good light and there is a tendency, particularly apparent within the growing field of positive psychology, to classify gratitude as an unfailingly positive emotion or positive trait, irrespective of any contextual conditions. The same division of emotions and traits into the categories of positive and negative sees anger, guilt and shame classified as *negative*, and gratitude, hope and forgiveness as *positive*. There can be no doubt that were Aristotle alive today, he would take issue with the current propensity to classify emotions, or relatively settled traits of character (*hexeis*), into crude categories of positive or negative - to say nothing of the human experience of mixed emotions which seriously problematizes any simple taxonomy! Carving up the affective life in such a simplistic way takes little or no account of whether the emotion or disposition (the virtue) in question is appropriate in a given situation; for example, to be grateful to the right person, for the right reasons and to a satisfactory degree.

¹ Aristotelian scholars do not agree whether Aristotle's rejection of gratitude as an attribute of his fully virtuous public benefactors, the *megalopsychoi*, in the *Nicomachean Ethics*, only applies to them (in view of their specific public role) or to all fully virtuous agents.

In this paper we will suggest that current psychological thinking about gratitude would be enriched by taking an Aristotelian perspective on board. Furthermore, we believe it is imperative that interventions to promote gratitude, especially those involving young people, should incorporate the crucial consideration of whether gratitude is fitting. To this end, we suggest that interventions to promote gratitude should go beyond (unreflectively) counting blessings and begin to teach young people something about the ‘grammar of gratitude’, and of the factors which might render the indiscriminately grateful approach that goes hand-in-hand with ‘gratitude as positive’, problematic (Morgan, Gulliford & Carr, in press).

We posit that a variety of factors function to ‘filter’ our understanding of the appropriateness of gratitude. Moreover, we have conducted a number of empirical studies which show that laypeople across a wide range of ages appear to use such filters when appraising whether they *would* and *should* feel grateful as well as the *degree* of gratitude they would feel, in a range of imagined scenarios (see Section 2). Thus we have empirical data that supports Aristotelian intuitions about a given virtue’s *appropriateness* in a given situation; in this case the conceptual and moral condition that we need to be grateful to the *right* person, for the *right* reason and to the *right* degree, for our reaction to represent the virtue of gratitude rather than simply misplaced (excessive or deficient) gratitude.

It may seem like a category mistake, to some philosophers, to present empirical data on lay people’s understandings in order to illuminate conceptual points, for example about the proper application of virtue concepts. We do believe, however, that Aristotelian *naturalism*, according to which all moral theorising is in the end answerable to empirical evidence on what makes people flourish or flounder, does justify the use of empirical data on lay conceptual understandings, of the sort that we present below. By this we are not claiming that if, say, 80% of the general public believe that x is a condition of the proper applicability of (virtue) concept C, then philosophers need to take this as the *last* word on the nature of C. We believe, however, that it should be the *first* word. In other words, if philosophers want to insist that x is *not* a conceptual condition of C, it becomes incumbent on them to explain why the majority of the general public are wrong.

Conversely, if the philosophers agree with the majority of language speakers, they will render helpful service to the language community by explaining why and how the 20% go wrong. It, then, also becomes a crucial task for educators (say, in moral education classes at school) to teach children why the minority view is unhelpful and may hinder the proper (moral and conceptual) understanding and application of the notion in question. As noted above, we have argued (Morgan, Gulliford and Carr, in press) that efforts at gratitude education have so far neglected this task, by failing to pay

attention to, and help children understand, the moral and conceptual grammar of gratitude as a virtue.

2 Empirical Research at the Jubilee Centre for Character and Virtues

The *Attitude for Gratitude* project at the Jubilee Centre for Character and Virtues has been engaged in research which aims to illuminate empirically, and within a broadly Aristotelian virtue ethical framework, factors that influence gratitude. To this end, and to throw light on what British people *understand* by the concept of gratitude, we have carried out a series of empirical studies that aimed to complement the definitions of philosophers and psychologists with more everyday conceptions of laypeople. Two specially designed methods have been implemented to examine the extent to which laypeople deem gratitude appropriate in different circumstances; (1) a vignette questionnaire for use with both adults and adolescents (aged 11 – 18 years), and (2) gratitude stories written for children (aged 8 – 11 years). Both of these methods explore a range of different conceptual controversies that surround gratitude (and have been highlighted in a recent critical review, see Gulliford, Morgan & Kristjánsson, 2013). For example, how do benefactor's *intentions* (be they benevolent or malevolent) impact on gratitude experience? Must a benefit be *valuable* to the beneficiary and must it actually *materialise* in order for gratitude to arise? Is (and *should*) gratitude be reserved for someone who goes above and beyond what is expected out of duty (i.e., is *supererogatory*)? Below we explain these two specifically designed methods and report on some salient findings.

(1) Vignette Questionnaire:

The vignette questionnaire comprises two 'high gratitude scenarios' – in this case being rescued from a dangerous situation – and two 'low gratitude scenarios' where gratitude should still be present but at less intense levels (i.e., receiving a nomination for an award or being a beneficiary in a will).

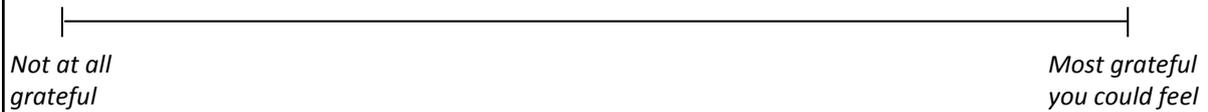
Each scenario begins with a baseline question, before systematically manipulating the scenario to examine different conceptual controversies (see Figure 1 and Appendix 1). For each conceptual controversy we examined we asked three types of question; whether the participants *would be* grateful if that scenario were to arise, *how* grateful they would be; and whether they *should be* grateful. Order of the 'should' and 'would' questions was also counterbalanced. The adults' version of this questionnaire was presented online via SurveyGizmo and the adolescents' version was presented in hard copy.

“You get into difficulties swimming in a lake. You cannot make it back to the shore and you are in real danger. A person on the shore sees you struggling and dives in and rescues you.”

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

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

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



You *should* be grateful to this person for their help.

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

Figure 1: Baseline questions from a high gratitude scenario

Participants:

Adults: 810 adults accessed the questionnaire, of these 510 responses yielded usable data. 73.9% of respondents were female; ages ranged from 18 – 65 years (mean age 28 years); 80% of respondents were White British.

Adolescents: 273 students from a Secondary School in Cheshire completed a hard copy of the Vignette Questionnaire; aged 11 – 17 years (mean age 14 years); 53.5% female; 94% White British.

(2) Gratitude Stories:

For children (aged 8 – 11) we utilised gratitude stories rather than a questionnaire. As far as possible, we tried to replicate the same conceptual controversies in the children’s stories as tested in the vignette questionnaire. For instance, the lake rescue scenario in the vignette questionnaire maps closely onto ‘The Blue Oasis’ story (see Appendix 2). ‘The Class Councillor’ and ‘St Oscar’s Oscars’ follow similar themes to the two low gratitude scenarios in the questionnaire, manipulating, for example, the presence of ulterior and malicious motives in benefit bestowal and the occurrence of mixed emotions (i.e., experiencing negative emotions such as guilt or indebtedness alongside gratitude). ‘Shooting Hoops’ offers several scenarios that manipulate issues of duty (or supererogation).

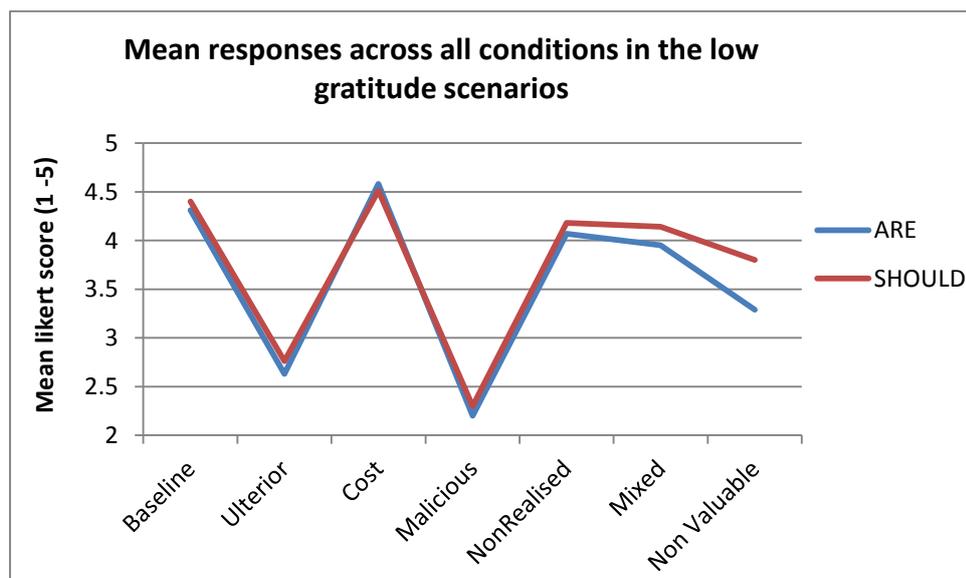
At several junctures in the stories, participants answered questions in story workbooks about how they thought the characters in the story would feel. The questions included both open-ended and closed forms; some questions necessitated a Yes/No response, others followed a five-point Likert

scale gauging degree of gratitude. Within a one hour lesson, teachers read through the stories with students, pausing at set junctures to answer the questions.

Participants: 270 primary school students, aged 8 – 11 years, completed one of the workbooks. The 6 schools involved were recruited from across the UK: West Midlands (N=90); Derbyshire (N=33); and Scotland (N= 147).

3 Findings (Vignettes and Stories):

Results from our questionnaire and stories have shed light on the matter of being grateful to the *right* person, for the *right* reasons and to the *right* degree. For instance, increased benefactor effort increases reported gratitude and a benefactor’s ulterior motive *decreases* it, though to a lesser extent than a malicious motive (Baseline DEGREE = 73.31%, SD =18.31; Ulterior DEGREE = 37.44%, SD = 24.03; Malicious DEGREE = 27.10%, SD =23.95, see Graph 1). We have also shown that people deem gratitude appropriate even when people are benefitted as a result of duty-fulfilling obligations. In combined data from our high gratitude scenarios (a rescue from a lake or burning building) just 1.5% of the amalgamated sample disagreed that they would be grateful to the firefighter or lifeguard because it is their job. Similarly, 99% (N=86) of children who completed ‘The Blue Oasis’ story workbook said they thought one of the characters would be grateful to a lifeguard for rescuing her even though that is her job. Only one respondent indicated that the character would *not* be grateful to the lifeguard because she was doing her duty.



Graph 1: Mean ARE and SHOULD Likert scores in each condition of the low gratitude scenarios in the vignette questionnaire

The vignettes examined whether gratitude *necessarily* involves benefactors' benign intentions. The data showed that while malicious and ulterior motives undermine reported gratitude significantly, they do not disqualify it. Only 18.18% of the sample indicated they would be grateful for a nomination for an award at work or being named beneficiary in a will if the benefactor had the ulterior motive of wanting help with their workload or stipulating conditions in the will. Moreover, only 12.37% agreed they would be grateful for a benefit which was motivated by the malicious end of harming their relationship with their relatives or deliberately embarrassing them.

We examined ulterior and malicious motives in the gratitude stories for children. Malicious intentions were probed in a story where a shy boy's name was put forward as class councillor to ridicule him. 86% participants (N=81) believed the boy would *not* have been grateful to receive the nomination. However, 8% believed he would have been either 'really grateful' or 'quite grateful' to have been proposed. 29% children believed that a character who had been nominated for an award with an ulterior motive of copying his answers in a spelling test would still be grateful for it. However, 88% of the total sample (N=62) indicated that this boy would have been *least* grateful of three people receiving a nomination in the story, suggesting that children reflected on the appropriateness of gratitude towards the agent in different cases.

We explicitly assessed the presence of mixed emotions in 'St Oscar's Oscars'. Here, a child (Ethan) feels *obliged* to nominate a classmate for an award because the classmate (Jordan) has nominated him. However, Ethan would like to nominate someone else (Dominic). In response to the question 'Do you think Ethan is grateful for the nomination he received from Jordan?' 60% said 'Yes'; 37% answered 'No'; and 3% amended the workbook themselves to give a 'Yes *and* No' response. In an open response question, 40% of children referenced that Ethan would feel confused and 13% believed he would experience awkwardness. Interestingly, 63% believed the boy should nominate Dominic, whom he originally had in mind, while 21% suggested he now nominate Jordan instead. This indicates that a fifth of the children had difficulty separating obligation from gratitude.

Relatedly, a mixed-design ANOVA conducted on the ARE data in the low gratitude scenarios of the vignettes revealed that adults were significantly *more* likely to agree that gratitude is not an entirely pleasant emotion compared with adolescents ($p < .01$). Our findings demonstrate that people across the lifespan appreciate that gratitude is not entirely positive and can be mixed with other emotions. Adults endorsed the view that gratitude is not an entirely pleasant emotion to a greater extent than did adolescents ($M=4.07$ and $M=3.73$ respectively), suggesting that people may become more aware of gratitude's 'shadow side' with increasing age.

Furthermore, adults were significantly *less* grateful than adolescents to receive a benefit that was not of real value to them (a nomination for an award at work they did not want, or inheriting a collection of unwanted belongings in a will). Meanwhile 79% children indicated that they thought a boy in one of the stories would be grateful for an ordinary birthday cake instead of the rocket cake he was promised. Are young people more likely than adults to endorse the adage ‘it’s the thought that counts’?

Our research has shown that people across the lifespan nuance perceptions of gratitude along broadly Aristotelian lines, weighing up whether gratitude is due to the right person, to the right degree, at the right time and for the right purpose. However, children may need to learn about these factors (e.g. ulterior motives, mixed feelings around indebtedness). Not all children aged 8-11 appear to understand how ulterior motives or mixed feelings impact on whether gratitude is warranted.

We believe that our gratitude stories have not only shed light on the way in which children aged 8 – 11 *understand* gratitude, but they can also be used as tools for teaching children about what we have called elsewhere ‘the grammar of gratitude’ (Morgan et al., in press), enabling children to find their way through the complexities that surround this concept, such as how feelings of indebtedness and ulterior motives impact on gratitude experience. Indeed, we do not advocate the teaching of gratitude without careful consideration of whether gratitude is due: it would be unhelpful and potentially dangerous to ask students to feel indiscriminately grateful as emotional virtues can turn into vices not only through under-reactions but also over-reactions. The vignette questionnaire could be used to spark similar discussion in secondary schools and possibly even with adults. It is our view that Aristotle’s ‘discriminating’ approach to virtue is a powerful corrective to current positive psychological interventions.

The purpose of the vignette questionnaire and stories is to gain insight into respondents’ understanding of gratitude. The purpose is *not* to compare this with a ‘standard model’ from the literature (i.e., assessing a ‘degree of match’), so much as to see (empirically) whether factors which philosophers and psychologists hypothesize influence gratitude (such as greater benefactor effort) do *in fact* influence the amount of gratitude people would report they would experience across a range of circumstances.

The nomination for the award vignette in the low gratitude scenario has been particularly effective. For example, it clearly demonstrates that non-benevolent intentions (malicious intent or ulterior motives) do not *disqualify* gratitude (as some might think). Thus the view that gratitude must involve benevolent intention on the part of the benefactor is not a *necessary* condition of gratitude. We

believe that this conceptual analysis offers a comprehensive (and much needed) profile of laypeople's understanding of gratitude which should be borne in mind when examining or measuring gratitude.

4 The Multi-Component Gratitude Measure

Picking up the Aristotelian framework again, we view virtues in general, and gratitude in particular, as encompassing various components. In addition to a cognitive element (offered by the aforementioned vignettes), virtues also consist of an emotional component, an attitudinal component and a behavioural component. Unless all of these dimensions are addressed, only a partial view of the virtue in question can be obtained.

In this connection, our own research has highlighted how *all* of these different components do need to be addressed as they may not always be in line with one another. For example, our 'Valuable Values Questionnaire' which examined each of these distinct gratitude elements revealed how attitudes to gratitude (such as evaluations of its importance) do not necessarily map on to gratitude behaviours (see Arthur, Kristjánsson, Gulliford & Morgan, forthcoming). The discrepancy between these different elements, or components, of gratitude has significant implications for measuring the construct and establishing correlates of gratitude such as subjective well-being and prosocial behaviours (Bartlett & de Steno, 2006; Emmons & McCullough, 2003).

There are currently two measures of gratitude and one measure of appreciation established in the literature; the GQ6 (McCullough, Emmons & Tsang, 2002); the GRAT (Watkins, Woodward, Stone & Kolts, 2003) and the Appreciation Scale (Adler & Fagley, 2005). However, we see a major problem with these current measures which we now briefly highlight. The most well-established measure of gratitude is the GQ6 which consists of 6 short Likert-scale items. The problem with this measure, however, is that all 6 items tap only one component of gratitude, namely, *grateful feeling*. Similarly, the GRAT has a limited scope; whilst tapping into more dimensions than the GQ6 (with items also evaluating a sense of abundance - or lack thereof - and supportive dispositions) there are components of gratitude that remain unexamined. Neither of these measures, nor the Appreciation Scale, offer a measure of conceptual understanding of gratitude or simultaneously tap into cognitions, emotions, attitudes *and* behaviours pertaining to gratitude. Thus, in our view, none of these scales offer a comprehensive measure of gratitude, at least if we see it as a complex trait of character (*hexis*) on a quasi-Aristotelian understanding.

In contrast, our aim has been to develop a *Multi-Component* measure of gratitude that explores the various facets that make up this interesting and complex construct. To this end, we have created a

measure that consists of four distinct components designed to measure four different dimensions of gratitude; the Multi-Component Gratitude Measure (MCGM)²:

(A) *The Conceptual Component*: This component of the measure examines an individual's conceptual understanding of gratitude and gauges whether the person has a 'broad' or 'narrow' view of the meaning and scope of gratitude. To examine conceptual understanding, we employed a scenario from the vignette questionnaire (a nomination for an award). The person's view on the scope of gratitude may, for example, be limited to when benefactors act benevolently, or may be broader, encompassing situations where there is even an ulterior motive. The ARE (5-point Likert scale) and DEGREE (0-100 slider) questions were taken from the vignette questionnaire.

(B) *The Emotion Component*: Items in this component assess individuals' degree of grateful feeling, for example, 'I feel appreciative of the support of many people in my life's journey'; 'There are so many people that I feel grateful for'. 6 items assess grateful feeling. All items from components B – D are answered using a 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree).

(C) *The Attitude Component*: This component examines attitudes of gratitude and evaluations of its importance. For example, 'I don't think it is necessary to show your gratitude to others'; 'I make it a priority to thank others'. This stage comprises 10 items.

(D) *The Behaviour Component*: Items here measure the amount of gratitude-related behaviours that respondents engage in. Examples include, 'I notice the people who are kind to me'; 'I remind myself of the benefits I have received'. This stage contains 13 items.

Note that while we do not make any judgements about whether respondents have the 'right' understanding of gratitude in section A, the measure allows us to offer a 'profile' of their understanding of gratitude. However, this is separate from the score they obtain across components B, C and D. A person would not need to *understand* the concept of gratitude to be a grateful person. Someone could, for instance, believe that gratitude is not warranted when a benefit fails to materialise yet have a high score across B, C and D. Given that most people are almost as grateful for benefits that fail to materialise as they are for a realised benefit, we *could* say that this person had an 'atypical' conceptual grasp of gratitude. However, this does not rule them out of experiencing grateful feelings, or engaging in an array of gratitude-related rituals. Notably, the score in B, C and D can be aggregated, for relevant purposes, but the measure also allows us to explore correlations between each component separately and any other relevant variables.

² The description of the MCGM has been taken from the Attitude for Gratitude Research Report (Arthur et al., forthcoming).

We have tested the MCGM as an alternative to the GQ6, GRAT and Appreciation scales; the aim being to demonstrate its validity and reliability and to examine what kinds of people tend to be grateful.

Pilot of the MCGM:

Participants: 532 participants accessed the online survey; complete usable responses totalled 477. 68% of respondents were female; ages ranged from 18 – 88 (mean age 38 years); 85% of respondents were White British; 42% Christian; 37% Atheist. Of those who identified with a religion 37% practised their religion.

After piloting a pool of emotion, attitude and behaviour items with 477 participants, we performed a principles components analysis (or PCA) to explore what aspects of gratitude our measure taps³. The 6 factors that emerged from this analysis were: (1) Feelings of gratitude; (2) Attitudes to Appropriateness (of gratitude); (3) Behavioural shortcomings; (4) Rituals/Noticing benefits; (5) Expressions of gratitude; (6) Attitudes to Gratitude (see Table 1 for example items).

We were left with 29 items (6 emotion items; 10 attitude items; and 13 behaviour items), and an additional 14 items from the vignette questionnaire to assess conceptual understanding. The reliability of each subscale of the MCGM (i.e, each of the 6 factors) was assessed using Cronbach’s α (see Table 1). The overall reliability of the MCGM (i.e., all 6 factors combined, excluding the conceptual stage) is .89 which is an acceptable value of scale reliability.

Subscale/Factor Name	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 APPROPRIATENESS	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)
Overall for components B-D of the MCGM	.89	29	.702**	.645**	.653**	

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

³ Oblimin rotation ran with eigenvalues over 1 and suppression of coefficients smaller than .50.

Validity test of the MCGM:

Participants: 1817 participants accessed the second online survey, of which 1599 responses could be analysed. 52% of respondents were female; ages ranged from 18 – 83 years (mean age 51 years). 93% of respondents were White-British; 56% Christian; 23% Atheist. Of those who identified with a religion 21% practised their religion. 23% of the sample was Single; 67% Married; 58% had dependants, 41% did not.

Following the pilot of the MCGM, we aimed to (1) examine the incremental validity of our measure (that is, whether it could demonstrate any effects above and beyond the ability of the GQ6, GRAT and Appreciation Scale combined); and (2) examine what kinds of people tend to be grateful.

(1) Examining the incremental validity of the MCGM

To test the incremental validity of our measure, we conducted a hierarchical multiple regression on three outcome variables that measure well-being; Satisfaction with Life (SWL, Diener, Suh, Lucas & Smith, 1999), Subjective Happiness (SH, Lyubomirsky & Lepper, 1997), and the positive affect component of the PANAS scale (Watson, Clark & Tellegen, 1988). When examining each of the outcome variables, the regression consisted of three steps.

Step 1: We first entered the Big Five domains of personality (Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness) which previous research has demonstrated accounts for a large amount of variance in such measures of well-being (McCullough et al., 2002; Wood, Joseph & Maltby, 2008).

Step 2: The second step involved entering the three existing measures of gratitude/appreciation into the regression (i.e., the GQ6, the GRAT, and the Appreciation Scale).

Step 3: The final step involved entering the four components of our MCGM. This process allowed us to examine whether the MCGM can account for (variance in) the three outcome measures above and beyond what the GQ6, GRAT and Appreciation scale (combined) are capable of measuring; *that is, can our own measure of gratitude add anything new that is not already covered by existing scales?*

Findings:

(1) Predicting Satisfaction with Life (SWL); Subjective Happiness (SH); and Positive Affect in the PANAS:

When entering a composite score for Conceptual ARE items from the MCGM, Conceptual DEGREE items, the Emotion component, the Attitude component, and the Behaviour component, the MCGM accounted for an additional 2.2% of the variance in SWL above the Big Five and existing gratitude/appreciation measures ($p < .001$); an additional 1.6% of variance in SH above the Big Five and existing measures ($p < .001$); and an additional 1.3% of variance in the PANAS above the Big Five and existing measures ($p < .001$).

In explanation, the MCGM predicts variance in all three outcome measures examined here that *cannot* be explained by the three existing measures of gratitude/appreciation combined. **Simply put, our measure is offering something new, rather than merely replicating the effects of the GQ6, GRAT or Appreciation Scale.**

(2) What kinds of people tend to be grateful?

A multivariate analysis of variance (or MANOVA) was used to examine whether there are any differences between participant groups across the various dependent variables measured in the study. The participant groups examined were gender (Male; Female), age-group (18-30 years; 31-40; 41-50; 51-60; 61-70; and > 70 years), Religion (Christians; Atheists⁴), the practice of religion (individuals who do practise their religion regularly and those that do not), relationship status (Single; Married), and participants who have dependants and those that do not. The dependent variables included all four components of the MCGM (conceptual, emotional, attitudinal, and behavioural); the three existing gratitude/appreciation scales (GQ6, GRAT and Appreciation Scale); and the three well-being variables (SH, SWL, PANAS)⁵.

Gender: Females scored significantly higher in self-reported ratings of gratitude. In explanation, females rated themselves more highly on the emotion ($p < .05$), attitude ($p < .001$) and behaviour components ($p < .001$) of the MCGM, and on the GQ6 ($p < .01$), GRAT ($p < .01$) and Appreciation scales ($p < .01$).

Age: When examining differences across age groups, we see that over 70 year olds scored significantly higher on the Appreciation Scale compared to all other age groups (18 -30 years, $p < .05$; 31-40 years, $p < .001$; 41-50 years, $p < .001$; 51-60 years, $p < .001$, and 61-70 years, $p < .05$). However, there were no age-related differences in any other dependent variable tested.

⁴ 51.6% of our sample are Christians; 23.4% Atheists; combined they account for 75% of our sample. Thus these two groups were compared to examine the effect of religion.

⁵ The three well-being variables were included as outcome variables in the incremental validity test and as dependent variables in the MANOVA; this is because we view gratitude as enhancing well-being and well-being as enhancing gratitude, see Watkins (2004), p. 185.

Christianity/Atheism: Compared to self-professed atheists, individuals who identify themselves as Christian report significantly higher ratings of gratitude/appreciation on the emotion stage of the MCGM ($p < .001$); the GQ6 ($p < .01$); the GRAT scale ($p < .05$) and the Appreciation Scale ($p < .01$). Interestingly, there was no significant difference between these two groups in terms of attitudes and behaviours relating to gratitude (as measured by the attitude and behaviour stages of the MCGM). However, Christians also reported higher levels of satisfaction with life and subjective happiness than their atheist counterparts.

Single/married and dependants Yes/No: There were no differences between these participant groups across any of the dependent variables.

Practice of religion: We were also interested to see if there would be any differences between those who practise their religion and those that do not. Our findings indicated that those who practise their religion report higher levels of gratitude in the emotion and behaviour components of the MCGM ($p < .01$ and $p < .05$ respectively); and all three existing gratitude/appreciation measures (GQ6: $p < .01$; GRAT: $p < .05$; Appreciation Scale: $p < .05$). This group of individuals also score higher than their non-practising counterparts in terms of satisfaction with life and positive affect ($p < .05$ and $p < .01$ respectively).

5 Conclusion

Our research has shown that people across the lifespan nuance perceptions of gratitude along broadly Aristotelian lines – gratitude is due to the right person, to the right degree, at the right time and for the right purpose (though there may be some age differences in conceptions and experiences of gratitude). Aristotle’s ‘discriminating’ approach is a powerful corrective to current positive psychological interventions. We need to be asking whether the emotions or dispositions (virtues) are appropriate in given situations.

Furthermore, the conception of virtue as being made up of multiple components is a valuable and helpful notion when describing and measuring gratitude. Our own research has indicated that there are discrepancies between understandings, emotions, attitudes and behaviours of gratitude. For example, when comparing Christians and atheists, we observe differences in grateful feelings between these two groups but no differences in attitudes to gratitude or grateful behaviours. This finding would not be observable without an instrument that separately taps into each of these gratitude components; fortunately, this opportunity is now available through the application of our Multi-Component Gratitude Measure (MCGM).

Furthermore, the MCGM has been shown to be psychometrically robust (Cronbach $\alpha = .89$) and offers a more nuanced way of tapping different aspects of gratitude, in line with the Aristotelian view of virtue consisting of cognitions, emotions, attitudes and behaviours. We therefore recommend the use of the MCGM in future explorations of gratitude. This is the first measure to incorporate a conceptual component alongside three other dimensions of gratitude (emotional, attitudinal and behavioural).

To conclude, this paper sheds light on the question of what it means to manifest *virtuous gratitude* and demonstrates the value of bringing philosophy into dialogue with psychology in order to create better measures based on a rigorous conceptual analysis, with input from the 'many' as well as from the 'wise'.

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Appendix 1: List of manipulations across the high and low gratitude scenarios. Examples are shown for a rescue from a lake (high gratitude condition) and a nomination for an award (low gratitude scenario)

High gratitude scenarios (Rescue from lake/fire)	Low gratitude scenarios (Nomination for award/beneficiary of will)
<p>Baseline</p> <p><i>You get into difficulties swimming in a lake. You cannot make it back to the shore and you are in real danger. A person on the shore sees you struggling and dives in and rescues you.</i></p> <ul style="list-style-type: none"> • 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) • You should be grateful to this person for their help (1=Strongly agree – 5=Strongly disagree) 	<p>Baseline</p> <p><i>A colleague nominates you for an award at work. If you win, you will receive recognition of your hard work and a voucher.</i></p>
<p>Cost (or Risk) to benefactor</p> <p><i>You get into difficulties swimming in a lake... A person on the shore sees you struggling and dives and rescues you. You know that she is risking her own life by doing so as she is not a very good swimmer.</i></p> <p>You <i>are/should</i> be more grateful to this person than the lifeguard as there is a bigger risk involved.</p> <p>You <i>are/should</i> be more grateful to this person than the lifeguard as it was not her job to help you.</p>	<p>Ulterior Motive</p> <p><i>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.</i></p> <p>Cost to benefactor</p> <p><i>A colleague nominates you for an award... The colleague had to spend a long time filling in the nomination form outside of work.</i></p>
<p>Duty</p> <p><i>You get into difficulties swimming in a lake.... A lifeguard is on duty and jumps in and saves you.</i></p>	<p>Non-realised benefit</p> <p><i>A colleague nominates you for an award at work... In the end you do not win the award.</i></p>
<p>Non-realised benefit</p> <p><i>You get into difficulties swimming in a lake. A person on the shore sees you struggling and dives in to rescue you. However, she struggles herself and has to give up. In the end a lifeguard rescues both of you.</i></p>	<p>Malicious intent</p> <p><i>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.</i></p> <p>Value of benefit</p> <p><i>A colleague nominates you for an award...You do not want to win this award and would rather that you had not been nominated.</i></p> <p>Mixed emotions</p> <p><i>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.</i></p>

Appendix 2: Excerpt from 'Blue Oasis', one of the four gratitude stories designed to explore children's understandings of gratitude.

It was too late. No one seemed to have noticed Laura's plunge into the deep end. They didn't know whether Laura could swim but Mrs Enright said they should find a lifeguard and raise the alarm in any case.

Laura had not done as she was told. She knew that they had been instructed to stay with the adults in the pool for safety reasons but it had been her birthday the weekend before and no one had thrown a pool party for her. Probably, she thought, no one would even care if she went off on her own. She took her chance to slip away when Ben's mum and her own mother were momentarily distracted by Laura's two year old sister.

The jump itself had been thrilling but now Laura was in trouble; she just couldn't get her breath and the waves kept coming. No one seemed to notice her struggling.

'Help!' she cried before the next wave rolled in.

Just at that moment a young man on the poolside caught sight of Laura's flailing arm. He wasted no time in jumping in to rescue her. Mrs Enright saw him going after Laura and noticed that he wasn't a particularly strong swimmer. Just as she alerted the lifeguard to what had happened she saw Laura frantically grabbing the would-be rescuer and pulling him down into the water. He was in trouble now too.

The lifeguard dived in and swam towards the pair. She separated the man from Laura's desperate clasp and towed Laura towards the edge of the pool. The young man, probably just a teenager, retrieved a float that had been tossed to him from the poolside and began to kick towards the poolside. Just as they all reached the rail, the wave machine stopped. Someone had thrown the switch. It had all happened so quickly!

Let's pause for some more questions...

Do you think Laura should be grateful to the lifeguard for getting her out of difficulties even though it is her job to do that?

Why do you say that?

Why do you think the lifeguard said she was 'just doing her job'?

Do you think you would be more grateful to the man who tried to save you or to the lifeguard who saved you? Why?
