Examining the Role of the Intensity of Religious Conviction on Levels of Gratitude

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Abstract

Gratitude is an emotional state that is related to several positive outcomes including general well-being, happiness and vitality. Some research shows that a relationship exists between religiosity and gratitude; however, there is also evidence to the contrary. The goal of this study was to examine the relationship between religiosity and gratitude, and provide further information about this contested topic. This study involved 79 undergraduate participants from Northeastern University who were assessed through a construct-validated behavioral paradigm, experience sampling, peer ratings, and “real world” virtue probes. Each participant completed the Centrality of Religiosity Scale (CRS) to measure his or her level of religiosity. The hypothesis predicted that there would be a positive relationship between religiosity and gratitude. Despite measuring gratitude in multiple modalities, we did not find a positive relationship between the variables. We did however find that religiosity does predict peer-reports of participants saying thank you.

Keywords: religion, religiosity, gratitude
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Gratitude is defined as “a positive emotional reaction to the receipt of a benefit that is perceived to have resulted from the good intentions of another” (Tsang, 2006, p.138). According to previous research, gratitude appears to have a relationship with several positive outcomes, including: a reduction in symptoms of mental illness (Wood, et al., 2008), increases in prosocial behavior (Bartlett & DeSteno, 2006), general well-being, vitality and happiness (McCullough, Emmons, & Tsang, 2002). While many studies demonstrate the positive functions that gratitude serves, a smaller set of research explores the relationship between gratitude and religion. Since gratitude is one of the central virtues focused on by religious leaders and institutions (Emmons & Crumpler, 2000), it is worth investigating if and how religiosity affects this emotion. This thesis examines whether or not adherence to religion makes a difference in believers’ levels of gratitude when compared to that of non-religious believers. This thesis also examines whether or not one’s intensity of religious conviction modifies one’s level of gratitude.

Before discussing the ways in which religious adherence may relate to gratitude, it is useful to provide some background on the construct of religiosity. Religiosity is a measure of the intensity of religious conviction and combines several defined factors of religious belief and adherence into one representation of the total religious life (Huber & Huber, 2012). The difference between religious adherence and religiosity is that religious adherence is more defined by general religious affiliation, whereas religiosity focuses more on the degree of one’s personal religious commitment (McAndrew, 2011). Much of the early research pertaining to the development of the religiosity construct was conducted by Glock and Stark (1962). They have identified the following five dimensions of religiosity: Experiential, ritualistic, ideological, intellectual and consequential. Experiential religiosity involves one's personal religious
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experiences, ritualistic religiosity refers to one’s religious practice (church going etc.), ideological religiosity refers to one’s beliefs about existence and transcendence, intellectual religiosity refers to one’s knowledge and thoughts on religious issues, and consequential religiosity refers to the effect of religion on other facets of one’s life (Malloy, 2014). In 1968, Glock and Stark eliminated the consequential dimension from the model and split the ritualistic dimension into public and private practice, thus maintaining five dimensions (Huber & Huber, 2012).

In addition to Glock and Stark’s five dimensions of religious orientation, another widely studied concept is the idea of intrinsic and extrinsic religiosity, which came about in 1959 and was developed by Allport and Ross. Intrinsically motivated religious believers deeply internalize their religion, and their faith goes beyond simple rituals and church attendance. Alternatively, extrinsically motivated religious believers may interpret religion as something more external, and their religious orientation is more influenced by outside factors such as one’s community or family (Holdcroft, 2006). Allport and Ross (1967) summarized this distinction by saying, “The extrinsically motivated person uses his religion, whereas the intrinsically motivated person lives his religion” (p. 434).

Experimental research is difficult to carry out when studying the psychology of religion because one cannot randomly assign people to religious beliefs (Batson, 1977). Hence, the bulk of current research relating to religiosity and gratitude relies on correlational design. Several of these correlational studies suggest a relationship exists between trait level gratitude and religiosity. Empirically speaking, gratitude is positively correlated with religious service attendance (Adler & Fagley, 2005) and a recent study found that individuals who were instructed to pray daily, when compared to participants in a non-praying condition, reported higher levels
of grateful personality after four weeks (Lambert et al., 2009). The aforementioned studies measured *aspects* of religious practice such as prayer and church attendance, but did not use a measure that demonstrates a holistic representation of religious conviction. However, such studies provide researchers with evidence to hypothesize that religiosity and gratitude are related.

A study by Emmons (2005) shows that measures of public and private religiousness are significantly associated with both grateful feelings experienced on a daily basis and dispositional gratitude. This study utilized an experience sampling measure of 21 experience rating forms to determine participants’ daily levels of gratitude and a self-report scale as a measure of dispositional gratitude. This study used measures of religiousness and spirituality including the Spiritual Transcendence Scale (Piedmont, 1999) and the Religious Problem Solving Scale (Pargament, 1997) which together, provide an integrated measure of religious adherence. Emmon's study found that spiritual transcendence was positively correlated with dispositional gratitude as measured by the GQ-6 (McCullough, et al., 2002), and that daily experiences of gratitude were also positively correlated with spiritual transcendence. Additionally, importance of religion, the frequency of religious practice, and relationship with God were all positively correlated with dispositional gratitude.

Few studies have specifically compared gratitude and religiosity through the five dimensions of religiosity as developed by Glock and Stark (1962). However, Rosmarin et al. (2011) conducted a study which measured religiosity using the five dimensions and compared this measure to the GQ-6 (McCullough, et al., 2002). The study found that among a diverse sample of 405 adults, gratitude was positively correlated with religious adherence. While the findings of this study fully support my hypothesis, it is important to note that the correlation found between religiosity and gratitude was fully mediated by gratitude towards God. Rosmarin
(2006) explains this mediation by saying that religion promotes gratitude perception through a religious lens, which may provide followers with unique opportunities to experience gratitude. The researchers also suggest that religious gratitude is likely to be experienced among followers more frequently (e.g. recognizing one’s blessings in everyday life), as compared to non-religious gratitude, which is more likely to be experienced solely in interpersonal contexts (e.g. receiving a favor from someone).

A small study by Tsang, Schulwitz and Carlisle (2012) utilized an experimental design, but had findings that conflict with Rosmarin’s study and the hypothesis of this thesis. In Tsang’s paradigm, participants were told they would be working with an unseen female partner. The study task involved 3 rounds of an exchange game, where money was distributed either by chance or by the choice of the player randomly assigned to be the money distributor. In round one, the real participant received very little money by chance. In round two, the confederate was assigned to be the money distributor, and gave the participant extra money with a benevolent note. In the third round, the participant was assigned to be the money distributor and, along with several self-report measures, gratitude was measured by how much the participant gave to his or her partner. Tsang’s study found that self-reports of intrinsic religiousness were unrelated to grateful emotion and behavior in response to this standardized favor in the lab. In Tsang’s study, this resource distribution is a part of the paradigm, which makes the gratitude eliciting situation less realistic and may present some social pressure in regard to giving. In the present study, the standardized lab favor appears to be unprompted and occurring outside of the study itself, which arguably makes it more ecologically valid.

An important dimension that the current study adds to the research is the utilization of an experience sampling method to assess the variability of emotional experiences, specifically in
regard to gratitude in participants’ daily lives. This method involved asking individuals to provide nightly self-reports which included questions such as: “In the past 24 hours, how grateful have you felt?” This type of measure gives researchers a more accurate picture of an individual's average level of an emotional state, behavior, or belief (Fisher & To, 2012). The present study also utilizes “real-world” virtue probes, which allow participants to engage in lab-based virtue paradigms online in groups. In these groups, we constructed a standardized situation where participants were offered help with online problems in order to potentially prompt a grateful response. We then assessed participants’ behavior in response to this situation as a measure of gratitude (e.g. whether or not they said thank you). Additionally, participants nominated two peers to provide the lab with observer measures of gratitude.

An experimental design that utilizes multiple measures of gratitude including peer report and “real-world” virtue probes does not yet exist in the body of research when examining religiosity and gratitude. The study compared the results of the Centrality of Religiosity Scale (CRS; Huber & Huber, 2012) to participants’ levels of gratitude by means of a unique construct validated behavioral paradigm, experience sampling, and “real-world” virtue probes. Together, these provided us with a comprehensive measure of participants’ personal level of gratitude. Based on the importance of gratitude in religious teaching and the relationship between gratitude and religiosity in the previous literature, I predict that that religious belief may be instrumental in the promotion of grateful behavior and grateful personality.

**Method**

**Participants**

Participants in this study were a group of 79 (61 female) undergraduate students at Northeastern University. The range of age was 18 to 24 ($M = 18.78$, $SD = 2.41$). All participants

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1 This measure is not discussed in this thesis.
were required to submit Northeastern approved consent documentation prior to their participation. Participants were either compensated monetarily, and/or given credit for a Foundations in Psychology course.

Procedure

This study occurred in two phases. Phase one involved an assessment of gratitude using the following behavioral paradigm: A participant and a confederate were brought into the lab for a study about problem solving in virtual groups, seated at computers next to each other, and given study instructions and consent forms. They started off by doing a five minute task together in which they tried to answer general trivia questions. This task was administered to uphold the cover story and legitimize our emotional manipulation checks. Then participants turned to their computer to individually complete a so called “lexical decision task.” This task was tedious and repetitive. After working for 10 minutes on this onerous task, the participant’s computer was rigged to short-circuit and go black. Meanwhile, the confederate gathered her belongings and started to leave the room, when she noticed that the participant was having a problem. The experimenter then entered the room and explained that a technician would be called to fix the computer and the participant would need to start the task over from the beginning. After the experimenter left to call the technician, the confederate stayed behind to help the participant determine what happened with the computer, while she followed a scripted set of comments and behaviors. At a given point, the confederate hit a key which, after a 30 second delay, was programmed to bring the computer back to normal. The computer came back to normal as the confederate was supposedly fixing loose wires, making it appear as though the confederate found the problem and saved the participant from having to do the tedious task over again. After this
task was administered, the participants completed a number of questions on the computer including a manipulation check.

Phase two involved assessment of gratitude using experience-sampling, “real-world” virtue probes, and peer-based ratings of participants; these measures allowed for the assessment of averages and variability of gratitude for individual participants over time. We compared these measures of gratitude to participants’ scores of religiosity. The religiosity measure (CRS; Huber & Huber, 2012) was given at the end of the six weeks, along with the gratitude questionnaire (GQ-6; McCullough, Emmons, & Tsang, 2002)

To assess variability in levels of gratitude, we used a survey based experience-sampling technique. Participants were e-mailed nightly to report experiences of gratitude and other emotions over a three-week period. They were prompted to answer questions in regard to how much they have experienced a given emotion in the past 24 hours. We used the service Qualtrics to manage the surveys.

In addition to experience sampling, participants engaged in online interactions with confederates during phase two of this study. Each “group” consisted of two confederates and one true participant. During the three-week period, the groups interacted via e-mail, and each member was given a puzzle assignment to solve by the end of each week. Within the three-week period, the confederates provided the participant with scripted opportunities for demonstrations of a grateful response. An example of a gratitude probe would be the confederate offering help to the true participant on an intentionally difficult problem set, and the participant accepting the help. We were able to measure grateful response to these probes via experience sampling surveys soon after the helping behavior took place.
Measures

Directly following the lab task, participants completed computer questionnaires to assess their emotional states and feelings toward their partner (i.e., the confederate). Participants used a 7-point Likert scale to identify how well different emotion descriptors represented their current emotional state feelings toward their partner, with 1 being “not at all” and 7 being “extremely”. Gratitude was assessed as the mean response to the following three questions: “How grateful, appreciative and positive do you feel toward the other participant?” This measure has been used in previous research and shows strong internal reliability (Bartlett, Condon, Cruz, Baumann, & DeSteno, 2012).

To measure gratitude in the experience sampling surveys, we made a gratitude index by asking two questions: “In the past 24 hours to what degree have you experienced each of the following states: Grateful? Appreciative?” Participants answered on likert scale of 1-7 with one being “not at all” and 7 being “extremely”. We took the average of these to make a gratitude index. We also made a general positivity index by asking the same questions in regard to feeling happy, content, and positive. We used this index to distinguish gratitude from just general positive valence.

The Centrality of Religiosity Scale (see appendix; Huber & Huber 2012) is a three-part, 15-question, computer-based questionnaire that was administered to participants at the end of the study. Questions in the CRS relate to intellect, ideology, public practice, private practice, and experience. An example of a question asked for the measure of public practice is: “How important is it to take part in religious services?” The participant then scores her answer from 1 (“not at all important”) to 5 (“very important”). Religiosity was assessed as the mean response to all 15 questions.
The GQ-6 (McCullough, Emmons, & Tsang, 2002) is a six-question computer based questionnaire and was administered to participants at the end of the study. Questions in the GQ-6 relate to gratitude. An example of question from is: “I have so much in life to be thankful for.” The participant then scores her answer from 1 (strongly disagree) to 7 (strongly agree). Gratitude was assessed as the sum of the score of all 6 questions.

Each participant also nominated two individuals who were non-relatives and knew him or her well for the peer-rating portion of the study. These individuals were asked to evaluate participants on their level of gratitude, in addition to other behavioral and emotional measures. Evaluations were both narrative (e.g “describe X’s level of gratitude in comparison to other members of your peer group.”) and quantitative (e.g “Rate X’s level of gratitude on a Likert scale of 1 to 5.”)

**Results**

The primary aim of this study was to examine the relationship between religiosity and gratitude. We were able to assess gratitude using multiple measures including trait level, state level, average self-reported gratitude over 3 weeks, and peer-reported grateful emotion and behavioral measures. For each of these relationships we ran correlational analyses. The results showed no significant correlation between gratitude and religiosity in terms of trait level gratitude $r(77)=.121$, $p=.288$; state level gratitude as assessed within the lab paradigm $r(77)=.096$, $p=.401$; average self-reported gratitude over 3 weeks $r(77)=-.077$, $p=.502$; and peer-reported grateful emotion $r(74)=.068$, $p=.561$.

The results did, however, show a significant positive correlation between religiosity and peer-reported instances of participants saying “thank you”, $r(74)=.283$, $p=.013$. This correlation suggests that the more religious a person is, the more he or she tends to say thank you, according
to peers. There was also a correlation between religiosity and peer reports of religiousness among participants, bolstering the validity of the religiosity measure, \( r(74)=.722, p < .001 \). However, it should be noted that the sample was relatively low on religiosity overall with the mean CRS score of 2.38 (SD=.97) and the mean peer-rating of religiosity of 2 (SD=.96).

**Discussion**

The results did not support the original hypothesis that gratitude is positively correlated with religiosity, despite examining gratitude using multiple measures. The only significant correlation was between religiosity and peer-reports of saying thank you, suggesting that religious people tend to express thanks more frequently according to their peers.

Although the hypothesis was not supported by the results of this study, it is still not possible to definitely conclude that religiosity does not have a positive relationship with gratitude. There are several limitations in this study that may have implicated the results. The first limitation is the sample size. There were 79 participants measured, and only eight of them fit

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Religiosity</td>
<td>2.38</td>
<td>0.97</td>
</tr>
<tr>
<td>2. Trait Level Gratitude (GQ6)</td>
<td>35.96</td>
<td>4.10</td>
</tr>
<tr>
<td>3. State Level Gratitude</td>
<td>5.30</td>
<td>0.91</td>
</tr>
<tr>
<td>4. Average Self-Reported Gratitude Over 3 Weeks</td>
<td>4.35</td>
<td>1.04</td>
</tr>
<tr>
<td>5. Peer Reported Grateful Emotion</td>
<td>3.80</td>
<td>0.53</td>
</tr>
</tbody>
</table>
the criteria of very religious, according to the standards established by the CRS (Huber & Huber, 2012). There were far more non-religious participants than religious or very religious participants, which would make a comparison disproportionate, and unrepresentative in regard to very-religious people. We would have liked to make a comparison between groups, but we were unable to do so given the numbers. For future individual difference research, a larger, more diverse sample is needed in order to be more representative of the general population.

The second limitation is the demographics of the sample. The mean age of the sample was 18.78 (SD=2.41) which was restricting in that our sample was unrepresentative of people in different age groups. Sixty-one percent of participants were female which made the sample less illustrative of males, and all participants were college students at Northeastern University which is limiting in that our sample only consists of students from one college in Massachusetts, and is unrepresentative of people from different colleges, occupations and walks of life. Lastly, this is an incomplete data set. This study was time limited and thus part of the data set is missing. Analyses should be run again once the data set is complete in order to see if any effect emerges.

I would like to further explore if saying thank you is related dispositional gratitude; is it simply a polite utterance or does it predict grateful experience? Also, does social learning associated with gratitude expression (i.e. upbringing, peers), influence one’s internal grateful experience, or is saying thank you somewhat disconnected from how one actually feels. I pose this question because according to the data, peer reports of saying thank you were unrelated to self-reported gratitude.

Besides the research conducted by Rosmarin, Tsang, and their colleagues, there is not much research on how religiosity influences gratitude. Tsang’s study found no positive relationship between religiosity and gratitude, and our findings confirm this view. However,
Rosmarin’s study found conclusive results that religiosity is positively related to gratitude, which provides evidence that this question is still open to investigation. We would have liked to clarify this topic for the field, but more research is warranted to examine this relationship.
References


Malloy, D. C., Sevigny, P. R., Hadjistavropoulos, T. T., Bond, K. K., McCarthy, E., Murakami,


Appendix

Figure 1. The Centrality of Religiosity Scale (CRS-15)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Items for both the basic and interreligious versions</th>
<th>Basic CRS versions</th>
<th>Additional Items for the interreligious versions only</th>
<th>Interreligious CRS versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellect</td>
<td>01: How often do you think about religious issues?</td>
<td>CRS-1, CRS-15</td>
<td>04b: How often do you meditate?</td>
<td></td>
</tr>
<tr>
<td>Ideology</td>
<td>02: To what extent do you believe that God or something divine exists?</td>
<td>CRS-10</td>
<td>05b: How often do you experience situations in which you have the feeling that you are in one with all?</td>
<td></td>
</tr>
<tr>
<td>Public practice</td>
<td>03: How often do you take part in religious services?</td>
<td>CRSI-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td>04: How often do you pray?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>05: How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?</td>
<td>CRS-15</td>
<td>09b: How important is meditation for you?</td>
<td></td>
</tr>
<tr>
<td>Intellect</td>
<td>06: How interested are you in learning more about religious topics?</td>
<td>CRS-1, CRS-15</td>
<td>10b: How often do you experience situations in which you have the feeling that you are touched by a divine power?</td>
<td>CRS-20</td>
</tr>
<tr>
<td>Ideology</td>
<td>07: To what extent do you believe in an afterlife—e.g., immortality of the soul, resurrection of the dead or reincarnation?</td>
<td>CRS-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public practice</td>
<td>08: How important is it to take part in religious services?</td>
<td>CRSI-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td>09: How important is personal prayer for you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>10: How often do you experience situations in which you have the feeling that God or something divine wants to communicate or to reveal something to you?</td>
<td>CRS-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellect</td>
<td>11: How often do you keep yourself informed about religious questions through radio, television, internet, newspapers, or books?</td>
<td>CRS-1, CRS-15</td>
<td>14b: How often do you try to connect to the divine spontaneously when inspired by daily situations?</td>
<td></td>
</tr>
<tr>
<td>Ideology</td>
<td>12: In your opinion, how probable is it that a higher power really exists?</td>
<td>CRS-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public practice</td>
<td>13: How important is it for you to be connected to a religious community?</td>
<td>CRSI-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private practice</td>
<td>14: How often do you pray spontaneously when inspired by daily situations?</td>
<td>CRS-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>15: How often do you experience situations in which you have the feeling that God or something divine is present?</td>
<td>CRS-15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>