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Fixed or flexible: the effect of negative feedback on one's religious identity

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The purpose of this study was to investigate the effect of negative feedback on self-reported religious identity among Christian students. After initially rating themselves on a computer-administered continuous scale ranging from *as religious as possible* to *not at all religious*, participants completed a difficult Bible trivia quiz and received negative feedback regarding their performance. The participants were then made to believe that their initial computer ratings had been lost, and were asked to rate themselves a second time. Individuals also completed the Spiritual Involvement and Beliefs Scale and were divided into high and low religiosity groups. Statistical analyses revealed that participants were consistent in their pre- and post-ratings despite the negative feedback on the quiz; low and high religiosity groups were equally consistent. The results therefore suggest that self-reported religiosity is a resilient construct. Given the low level of statistical power of this study, however, more research is needed before more definitive conclusions can be drawn.

The question is not whether people identify themselves as religious or not, but rather, if this self-proclaimed title is fixed or flexible in the face of some negative event. It is all-to-common to hear stories of individuals who, in the face of difficulty, throw in the towel and turn away from the very beliefs once held so strongly. Within the Christian faith alone, arguably one of the most well-known examples follows Jesus' arrest, when the disciple Peter denied knowing Jesus three times (Luke 22:54-62, New International Version). Moreover, later in the third century, early Christians faced persecution under the emperor Decius and thousands lapsed in their faith. Even today, it is common for individuals experiencing bereavement to re-evaluate, question, or doubt one's religious understanding or worldview (Tedeschi, 2006). Stories such as the young Cassie Bernall (who, before being shot at Columbine in 1999, was asked if she believed in God, to which she is reported to have replied "yes"), while inspiring to some, are rare and shocking to others.

Religiosity, here, is defined as how one perceives himself or herself as a religious person; including both activities associated with an organized religion or community, such as attending a religious service, and activities that are more subtle or personal, such as praying or committing random acts of benevolence in the name of faith, specifically focusing on Christianity. Is it true, then, that one's religiosity fluctuates in the face of challenges? If so, who is affected by this change, those with high or

low religiosity? This is an important question that has been overlooked in the prior literature. Previous literature has focused primarily on the influence of negative events on one's overall self-esteem, rather than applying it specifically to religiosity. For example, DeHart and Pelham (2007) looked at the effects of daily negative events on fluctuations in state implicit self-esteem. They found that individuals, who had low self-concepts, showed decreases in state implicit self-esteem following negative experiences, whereas individuals who had high self-concepts, maintained a stable implicit self-esteem.

A study by Kernis, Grannemann, and Barclay (1992) examined how the stability of self-esteem might factor in the process of excuse making following feedback on a test in a course. One hundred and thirty-eight undergraduate psychology students completed several self-esteem measures about two weeks into the semester, including Rosenberg's Self-Esteem Scale, the Rosenberg's Stability Scale, the overgeneralization subscale of the Attitudes Toward Self Scale, the Crowne-Marlowe Social Desirability Scale and the Self-Validation Scale. About one week later, the students stated the lowest grade they would be happy with on the first test and filled out the Need for Cognition Scale. Two weeks later, students received feedback of success (i.e, a score equal to or above the stated score) or failure (i.e, a score lower than the stated score) on the first test. Students were then given materials that included measures of excuse making behaviors. The results showed unstable high self-esteemed participants were more likely to make excuses following success (positive feedback) but not failure (negative feedback), whereas unstable low self-esteemed participants were more likely to make excuses following a failure rather than a success.

More recently, Abela and Taylor (2003) examined the moderating role of self-esteem on depressive mood reactions in schoolchildren. During the first assessment, third and seventh grade children filled out questionnaires regarding depressive mood, self-criticism, dependency and self-esteem. Six weeks later a second assessment took place, during which measures for depressive mood and negative events were administered. The results showed that high self-criticism and negative events lead to an increase in depressive moods for the children with low self-esteem, but not for those children with high self-esteem. Consequently, the researchers stated: "the results of this study suggest that high levels of self-esteem may buffer children with high levels of self-criticism against such reactions" as depressive moods (p. 416). In other words, children with high self-esteem were unaffected by self-criticism, but children with low self-esteem suffered the consequence of developing a depressive mood.

When the literature discusses religiosity specifically, much of the attention is focused on whether maintaining spiritual beliefs is correlated to a higher level of emotional well-being or a better quality of life. Hodges (2002) makes the argument that an emotionally healthy adult is one who leads "an active spiritual life, who finds meaning and purpose in life and who operates from an intrinsic value system that guides [his or her] life's work and decisions" (p. 114). Intrinsic values involve an orientation toward religion that is neither self-serving, nor influenced by peer pressure, but stable across time and situations; forming the foundation on which meaning is found in life. This conclusion was met by looking at four major dimensions of spiritual well-being that have been predominantly agreed upon in the literature; meaning in life, intrinsic values, transcendence, and community of shared values and community support.

Elam (2001) used a battery of surveys, including the Spiritual Involvement and Beliefs Scale and the SIU Religiosity Scale, to look at whether there was a relationship between spirituality and religiosity and positive and/or negative affect. The results showed spirituality to be positively correlated with positive affect and negatively correlated with depression and anxiety. Religiosity was further found to be a predictor of ones overall life satisfaction. It is interesting that there is a distinction made between spirituality and religiosity; both appear to be separate concepts that overlap.

Keyes and Reitzes (2007) compared the religious identity of older working and retired adults to their mental health. They defined religious identity as "the self meanings attached to a religious role,

religious group, or the way that individuals perceive themselves as a religious person who holds religious or spiritual values or beliefs" (p. 435). The sample consisted of residents of a North Carolina metropolitan area, who were an average age of 65. Religious identity (personal attributes, such as competence, confidence, and sociability as a religious individual), religiosity (measured as a response ranging from *deeply religious* to *not at all religious*), along with other activities, such as attending religious services, reading the Bible and watching or listening to religious TV or radio programs were measured. The respondents' mental health was measured using Rosenberg's 10-item scale of overall self worth and the Center for Epidemiological Studies Depression Scale (CES-D). The findings indicated that one's religious identity was positively correlated to self-esteem and negatively to depressive symptoms; however, church attendance was not.

Interestingly, however, Mullet, Barros, Frongia, Usai, and Shafighi (2003) found that individuals were more willing to forgive and less likely to exact revenge or hold a grudge based primarily on church attendance, or a social commitment, rather than a personal belief in God. In a second study, they included individuals with a greater social commitment to religion (i.e., priests, nuns) and found similar results. It appears that although a personal commitment is indicative of higher emotional well-being and lower depressive symptoms, it is the social, rather than personal, aspect that determines one's likelihood to forgive others.

Further research has found that higher levels of spirituality are indicative of improved psychological adjustment among cancer patients diagnosed within the previous five years, as seen in reduced stress and depression levels and increased quality of life (Laubmeier, Zakowski, & Bair, 2004). These results were consistent across all forms of cancer, regardless of how life threatening.

More specific to the interest of the current research is whether one's religiosity, though it may consistently exude an array of positive benefits, changes. The literature seems to be in agreement that it is part of human nature to look for meaning in life, and in doing so, there are different stages that one's faith will progress through over one's lifespan; however, the process of moving between stages is somewhat debated. On one side, Fowler (1991) depicts seven distinct stages of faith development that an individual progresses through as he or she ages. Beginning with Primal Faith in infancy, an infant forms trust and mutuality with a caregiver before the development of language, which forms the foundation on which later faith develops. Once the child is older and in the third stage, Mythical-Literal, he or she begins to see faith as fulfilling mythical (emotional) needs, literal (cognitive) needs, both or neither, as critical thinking skills begin to develop. The process ends in adulthood with Universalizing Faith, where the individual's perspective is no longer centered on the self, but on God.

From the other perspective, Clore and Fitzgerald (2002) agreed that there is a progression in faith development; however, they mention a more succinct four levels (Self-Moral, World Coherence, Symbolic Function, and Authority), rather than seven. Also, the method of progression differs according to Clore and Fitzgerald; they found that "rather than a sequential set of displacements, faith involves a progressive integration of new elements into an existing base" (p. 104). This process is less a result of one's development and more an intentional re-evaluation of one's faith.

More closely related to the current research is a study by Shaffer and Hastings (2007). They looked at how Catholics high or low in authoritarianism responded to a threatening or non-threatening essay about Catholicism with regards to a measure of religious fundamentalism, amount of doubts conveyed, and identification with their religious affiliation. They found that those who read the threatening essay conveyed fewer doubts, identified more with their religious affiliation, and supported religious fundamentalism more than those who read the neutral essay, especially if they also possessed an authoritarian personality.

The purpose of this study is rooted in past research, but the specific issue has not been dealt with directly. This study will examine the effect of receiving negative feedback on individuals who identify themselves as being "high" or "low" on religiosity. As stated above, religiosity is defined here

as how one perceives himself or herself as a religious person; including both activities associated with an organized religion or community, such as attending a religious service, and activities that are more subtle or personal, such as praying or committing random acts of benevolence in the name of faith, specifically focusing on Christianity. For the purpose of the current study religiosity will be used interchangeably with religious identity. Negative feedback is defined as informing individuals of their lack of knowledge, regarding the beliefs of their faith, after completion of a difficult Bible quiz. The goal is to investigate if one's religiosity can be affected in the short term, after learning that one's performance is sub-par compared to one's religious peers. Therefore, the research questions here are: a) Will participants re-evaluate the level of their religious identity based on evidence that contradicts what was originally believed, or will they hold to their original convictions?, and b) If negative feedback does result in a re-evaluation, will there be a difference in how those originally high or low in religiosity change their perspectives?

The first research question is specifically consistent with Clore and Fitzgerald's (2002) research that individuals intently re-evaluate and incorporate new pieces of information into their religious identity. The second question deals more broadly with research by Shaffer and Hastings (2007); however, here the idea is that reasonable and personal feedback is given that, although negative, is not presented as threatening. Also, Laubmeier et al. (2004) deal with this question to some degree, except that, although they find religiosity to be a flexible trait, their participants are also dealing with a threatening situation, namely cancer.

The anticipated outcomes are not entirely in accordance with the results of the literature reviewed above. Typically, an individual with high self-esteem maintains a stable self-esteem or experiences less distress when faced with a negative event, whereas an individual with low self-esteem is more likely to experience a further drop in self-esteem or greater distress as a consequence. Likewise, when individuals are threatened, either with an illness or about their beliefs, they tend to hold more firmly to their beliefs and exhibit fewer doubts. However, it is hypothesized that participants high on religiosity will have a strong and personal tie to their religious identity that they consider highly important (Princeton Religious Research Center, 1996). Consequently, reasonable negative feedback regarding one's religiosity would be interpreted as more distressing to those participants who hold strong ties to their religious identity than to those participants who are low on religiosity. This is specifically because the participants should not feel threatened and can therefore make a conscious and honest effort to consider the validity and consequences of the feedback. Therefore, it is hypothesized that high religiosity participants should lower their personal ratings of their religious identity significantly more than low religiosity participants after receiving negative feedback.

Method

Participants

Participants in this study received course credit as compensation for participation. A total of 24 participants, who identified themselves as Christians, were recruited. There were no restrictions on specific denominations. The mean age of the participants was 19.75 years, and 62.5% ($n = 15$) were female. The majority were Caucasian (79.2%), followed by African American (8.3%), Hispanic (4.2%), Native American (4.2%) and Other (4.2%).

Materials

The Spiritual Involvement and Beliefs Scale (SIBS) was administered to each participant to determine religiosity and divide them into the high and low religiosity groups. This scale is designed to measure actions as well as beliefs, in order to achieve a complete measure of religiosity. It consists of 26 items, scored on a Likert-type scale. It consists of four main domains (internal beliefs, external practices, personal application, and existential and meditative beliefs) with wording that is general enough to be used within the framework of most faiths. The SIBS scale has been shown to yield scores that are reliable and valid. Internal consistency has yielded a Cronbach's alpha of 0.92,

test-retest reliability of 0.92, and the convergent construct validity of 0.80 (Hatch, Burg, Naberhaus, & Hellmich, 1998; Mystakidou, Tsilika, Parpa, Smyrnioti, & Vlahos, 2007). The top 50% of the scores made up the high religiosity group and the bottom 50% of the scores made up the low religiosity group.

Idiogrid (Grice, 2002) was also used to administer a personal rating of the participant's religiosity. Idiogrid is software designed to allow the researcher to create and analyze repertory grids using a Dynamic Analog Scale (DAS) (Grice & Mignogna, 2008). The participant was prompted to enter the names of five people who fit particular role titles (viz., mother figure, father figure, a close friend, a romantic partner, and a person whom he or she dislikes). Next the participant selected and placed each name, along with *Your Self* on an analog scale ranging from *as religious as possible* to *not at all religious* to create a comparative rating of his or her self. The possible scale range was from -200 to +200. A religious person was defined as:

> Someone who has or shows a belief in or reverence for God. This can be exhibited by taking part in activities, such as attending religious services, taking part in Eucharist, reading or studying the Bible, or committing random acts of kindness. This belief can also be exhibited in a more subtle manner, such as praying, forgiving others, show a high level of ethical responsibility, or using faith in daily life.

A basic knowledge quiz was also administered to each participant, which consisted of 20 questions randomly selected from Bob Phillips' Hard Trivia section from *The Awesome Book of Bible Trivia* (2004). It was therefore expected that all participants would perform very poorly on the quiz. The quiz contained questions such as naming the twelve apostles. Lastly, a 100-item Big-Five personality questionnaire (Goldberg, 1999) was administered as a distracter task and was not used in any of the analyses.

Procedure

Participants were tested individually in a private room with four computer work stations divided by privacy panels. They were told that they would be participating in a study titled "Religiosity and Personality" in order to protect the nature of the study. Participants were first asked to complete a demographics sheet and the Spiritual Involvement and Beliefs Scale. Next participants were asked to turn on the computer monitor, where Idiogrid was already set up. Each participant completed the first DAS by providing five names (mother figure, father figure, a close friend, a romantic partner and a person whom he or she dislikes) and then comparatively rating himself or herself on a continuous scale ranging from *as religious as possible* to *not at all religious*. Upon completion, participants were moved to an adjacent computer station, separated by a privacy panel. The experimenter handed the participant the Bible quiz to complete. If participants asked what to do on unknown questions, they were told they could either guess or leave it blank. As much time was provided as the participants needed (typically no more than 7-10 minutes).

While the participant worked on the quiz, the experimenter saved the DAS ratings; however, the experimenter also began a ruse. Specifically, while saving the DAS ratings, the experimenter exclaimed "Oh shoot!" and then remained silent while pressing several random keys on the keyboard to mimic computer activity. Once the participant completed the quiz, any comments about his or her performance were politely deflected by asking the participant to turn on the computer monitor (participants were still adjacent to the work station where the first DAS ratings were completed). They were then asked to complete the personality inventory (already set up on the computer).

The experimenter then graded the Bible quiz, marking wrong answers with a red marker and writing the number correct (i.e., 2/20) at the top and circling it. Once the participant finished with the personality inventory, he or she received negative feedback using the following script:

> Thanks! Normally, this is the end of the study, but… I hate to ask this… could you please complete the computer ratings again? Dr. X [professor's name] is going to kill me… but I accidentally deleted your first ratings. It will only take a few minutes.

All participants agreed to complete the ratings again, and the following statements were made:

> Great! Thanks, I really appreciate it. While I set up the file, you can look over your Bible quiz. I'm afraid, as you might have guessed, you didn't do very well. You only got (#) of the items right. We've found that most Christians actually tend to get at least 12 of the 20 items right.

Any questions or comments made by the participant were politely deflected, and the experimenter continued setting up the file (15-20 seconds). The participants then completed the DAS for the second time on the computer. This minor deception was necessary to reduce the demand characteristics of the experiment; namely that the change in rating was what was of interest. Specifically, making the participants believe that the previous rating was lost should have allowed them to feel comfortable changing their rating upon receiving negative feedback without feeling restricted by their initial rating. IRB approval for this deception was both sought and attained prior to any participants' taking part in the study.

Lastly, all participants were debriefed regarding the purpose and nature of the study, specifically discussing the necessity of the deception used. A written debriefing statement was read with them and any questions were answered. Given that the mild deception needed to be protected from future participants, the participants did not receive a copy of the debriefing statement.

Results

The difference between the participants' DAS rating of the self at Time 1 and Time 2 was analyzed with a matched-pairs t test. Time 2 ($M = 109.92$, $SD = 56.02$) ratings did decrease slightly from Time 1 ($M = 122.08$, $SD = 44.93$), but this difference was not statistically significant, $t(23) = 1.79$, $p = .086$, two-tailed. Although the mean difference was small ($M_{diff} = 12.17$, $SD_{diff} = 33.25$, $d = .24$), the effect was in the predicted direction, indicating that overall participants decreased their religiosity rating by an average of roughly 12 points (on a -200 to 200 point scale) after receiving negative feedback on quiz performance. The 95% confidence interval was fairly narrow (-1.87 to 26.21) on the 400 point scale.

There was one outlier, with a decrease from Time 1 to Time 2 of 109 points. Removing this extreme score, the data were analyzed again with another matched pairs t test. Time 2 ($M = 114.70$, $SD = 52.04$) still decreased slightly from Time 1 ($M = 122.65$, $SD = 45.85$), but this difference also was not statistically significant, $t(22) = 1.43$, $p = .166$, two-tailed. The mean difference was even smaller ($M_{diff} = 7.96$, $SD_{diff} = 26.66$, $d = .16$), but the 95% confidence interval was narrower (-3.57 to 19.49) on the scale.

An independent samples t test was performed comparing the mean Self$_{diff}$ scores (Time 1 – Time 2) of the top and bottom 50% of the SIBS scores. No significant difference between high ($M = 8.00$, $SD = 39.06$, $n = 12$) and low ($M = 16.33$, $SD = 27.34$, $n = 12$) religiosity was found, $t(22) = -.605$, $p = .551$, two-tailed. The mean difference of -8.33 scale units indicated a small effect (400 point scale range, $d = .25$), and the 95% confidence interval around the difference between group means was wide (-36.88 to 20.21). The outlier was included in the high religiosity group, and, therefore, accounts for a more extreme decrease in ratings and a higher standard deviation.

In order to make the difference between high and low religiosity more extreme (as well as to exclude the outlier), the top and bottom third of the SIBS scores were compared on their mean Self$_{diff}$ scores with another independent samples t test. Still, no significant difference between high ($M = -5.63$, $SD = 25.46$, $n = 8$) and low ($M = 17.63$, $SD = 25.55$, $n = 8$) religiosity was found, $t(14) = -1.823$, $p = .090$, two-tailed. The mean difference of -23.25 scale units, however, was large (400 point scale range, $d = .91$), and the 95% confidence interval was again wide (-50.60 to 4.10). Although not significant, the direction of the effect was, interestingly, opposite of what was expected; low religiosity individuals decreased their DAS ratings more so than high religiosity individuals.

Further, a number of exploratory analyses were conducted. A Pearson's r was conducted to compare DAS ratings at Time 1, Time 2, and Self$_{diff}$

(Time 1 – Time 2) to SIBS scores. Time 2 compared with SIBS was mildly significant at the .05 level ($r = .424$), whereas Time 1 and $Self_{diff}$ compared to SIBS were not significant ($r = .398$ and -.177, respectively). This shows that participants' scores on the SIBS were similar to their DAS religiosity ratings at Time 2 (i.e., higher SIBS scores were correlated with higher ratings of religiosity at Time 2). However, the relationship between participants' scores on the SIBS and religiosity ratings at Time 1 was weak. Also, no relationship was found between SIBS scores and the difference in religiosity ratings.

A bivariate correlation was computed on each of the rated persons (self, mother figure, father figure, etc.) at Time 1 and Time 2 to evaluate the consistency of the religiosity rating. Participants tended to rate each person similar during the post-test (Time 2) to how they were rated during the pre-test (Time 1). All results yielded highly significant ($p < .01$) positive correlations, the lowest being for the participants' ratings of themselves ($r = .805$).

Further, each rated person was compared to itself at Time 1 and Time 2 again using a matched-pairs t test to investigate any changes. None of the results yielded were significant; however, the data on the mother figure ($M_{diff} = 10.33$, $SD_{diff} = 34.99$) were quite similar to that of the self. All other elements (Dad, Friend, Romantic Partner, and Dislike) stayed constant from Time 1 to Time 2, with the largest mean difference being the disliked person ($M_{diff} = -4.43$).

Bivariate correlations comparing participants' responses to each question on the SIBS to $Self_{diff}$ ratings were computed. Only two significant comparisons resulted from these analyses at the .05 level: $Self_{diff}$ was negatively correlated with the questions "I am thankful for all that has happened to me" and "When I am ashamed of something I have done, I tell," $r = -.446$ and -.412, respectively.

An independent samples t test was performed comparing the mean $Self_{diff}$ scores of males and females. There was no significant difference between males ($M = 15.33$, $SD = 25.23$, $n = 9$) and females ($M = 10.27$, $SD = 37.97$, $n = 15$), $t(22) = -.354$, $p = .726$, two-tailed. The mean difference of -5.07 scale units indicated a small effect (400 point scale range, $d = .15$), and the 95% confidence interval around the difference between group means was fairly wide (-34.71 to 24.58). As for the other demographics, a one-way ANOVA did not reveal any differences in ethnicity or age on the $Self_{diff}$ scores, ($p = .742$ and .879, respectively).

Discussion

Although the hypothesis of this study was not supported, it, nonetheless, yielded some interesting findings. The significant positive correlation of each individual person at Time 1 and Time 2 showed that participants did view their religiosity, and the religiosity of the other persons, in generally the same direction at Time 2 as they did at Time 1 (i.e., a person who rated himself as highly religious at Time 1 typically still saw himself higher on the scale at Time 2). This was consistent with the hypothesis; it was not expected that participants would rate themselves as "not religious," only that they would re-evaluate the magnitude.

However, in comparing the mean difference of the Dynamic Analog self ratings from Time 1 to Time 2, the re-evaluation was not significant, and so it cannot be said with any confidence that the overall slight decrease in rating was anything more than chance. Also, as mentioned above, there was an outlier who decreased 109 scale units at Time 2 (half of the scale). After conducting another analysis on the data excluding the outlier, the results still were not significant. Nonetheless, it is noteworthy that there was an influential case causing the overall mean at Time 2 to drop inordinately. The overall trend of the data to decrease at Time 2 remained the same to a lesser degree with the second analysis.

When the sample was divided in half based on SIBS scores, to create the high and low religiosity groups, the findings, although not significant, were opposite of what was anticipated. The high religiosity group had a mean decrease of 8.00 scale units lower at Time 2, whereas the low religiosity group had a mean decrease of 16.33 scale units. To investigate this further, the sample was divided into three groups, low, medium, and high, in order to create a more extreme difference between high and low. These results, although not significant, were

opposite of the hypothesis as well. The high religiosity group had a mean difference of 5.63 scale units higher at Time 2, and the low religiosity group had a mean difference of 17.63 scale units lower.

It was intriguing that in the more extreme high religiosity group the scores actually went up at Time 2. As a possible explanation for this behavior, those who are more religious may be more in tune with actions or behaviors that are characteristic of being religious. If this is true, by redoing the DAS ratings that the experimenter "lost," they were displaying their good character, which is a result of being a religious person. After receiving the bad news that they performed sub-par on the quiz, they may have overcompensated with this helpful act and rated themselves higher. It should be noted that the range of the SIBS scores used in developing the high and low religiosity groups was quite restricted overall (see Table 1). All scores were relatively high, presumably because all participants identified themselves as Christian, and consequently both the high and low religiosity groups were relatively high. It would be beneficial in the future to obtain scores across the whole range, perhaps by including individuals of other religions or individuals who do not hold strong religious convictions.

Another potential issue to be addressed with this study is construct validity. From the insignificant correlation of Time 1 to SIBS scores, it can be assumed that the individuals made some type of differentiation between *religious* and *spiritual*. (Correlations of SIBS scores with DAS ratings at Time 1 and Time 2 were both low to moderate, $r = .398$ and $.424$, respectively, thus showing that they – SIBS scores and DAS ratings – are largely different.) The DAS ratings used the term *religious* and not *spiritual*, whereas the SIBS used only *spiritual* and does not mention *religious*. Given that the two concepts of spirituality and religiosity were merged in this study, the best solution would be to reword the DAS definition of what a religious person is to include both religious and spiritual aspects.

Dealing further with the construct validity, it is possible that there was no significant re-evaluation of religiosity from Time 1 to Time 2 because the feedback was unimportant to the participants. It is

likely that Bible knowledge competence is only one small portion of what it means as a whole to be religious. Therefore, it could be advantageous in ensuring the study is tapping in on the desired religiosity construct, if more complete backgrounds of the participants were collected, specifically on what aspects of being religious they value. For example, an individual who finds it highly important to thoroughly know the Bible might respond in line with the hypothesis, compared to someone who puts more weight on leading a moral life.

A further aspect of the data that was fascinating was the analysis of each of the other rated people at Time 1 and Time 2. The mean difference of all of the elements was essentially nil (less than 4.50 scale units), except for *Mom* (10.33 scale units), whose mean difference most closely resembled that of the self (12.17 scale units). This could be explained in that the majority (62.5%) of the sample was female. Girls tend to identify themselves more with their mother figure, and, as a result, a decrease in the Self could be transferred to whom they feel the most similar to, causing a similar change in the *Mom* rating.

Lastly, each individual question on the SIBS was correlated to the mean difference of the DAS self rating. Two of the 26 questions resulted in significant negative correlations, "I am thankful for all that has happened to me" and "When I am ashamed of something I have done, I tell." In understanding the former correlation, perhaps individuals were thankful to know an apparent weakness of theirs and maintained the original ratings with the intent to improve. Conversely, individuals who were not thankful for everything may have been unhappy with the feedback and changed their rating due to cognitive dissonance. With respect to the latter question, assuming the feedback made participants at least mildly ashamed, individuals who tell when they are ashamed could have maintained their overall rating of religiosity, knowing and accepting they have their faults. On the other hand, perhaps individuals who tend to remain silent when they are ashamed changed their ratings as a defense, saying that they have nothing to be ashamed of. On a different note, it is strange that the question "I probably will not reexamine my spiritual beliefs" was not correlated to

whether individuals changed their ratings; one would expect the two to be somewhat correlated.

In conclusion, the overall results of this study seem to show religiosity as a fixed construct, a finding inconsistent both with this study's hypothesis as well as research by Laubmeier et al. (2004), who found one's religiosity after a diagnosis of cancer to be flexible. The findings here are, however, consistent with Shaffer and Hastings' (2007) findings, who found that people, especially those with an authoritarian personality, hold more firmly to their religious identity and possess fewer doubts when faced with threats. Also, this finding supports previous research on self-esteem, namely that individuals with high self-esteem are less affected by negative events than those with low self-esteem (Kernis et al. 1992; Abela & Taylor, 2003; DeHart & Pelham, 2007).

There are several aspects of this study that could be improved in the future. Foremost, this study had a low level of power, and thus the likelihood of making a Type II error was increased. The population effect, if in fact there is one, is likely small or medium, and so a larger sample size is warranted in future studies in order to uncover any findings. Also, with a restricted range of the SIBS data, only the top portion of the spectrum was represented. Any restricted range comes with the risk of attenuated results, further increasing the possibility of a Type II error. Future studies could replicate the present one with a representation of the whole range, by perhaps adding other religions in the analysis.

Lastly, there are many avenues of research expanded from the present study that could foster a better understanding of one's religious identity in the future. For example: a) the sample could be expanded to include clergy as well as lay persons of a variety of faiths (other than only Christianity), b) more figures could be added in the DAS ratings, giving the participant more of an elaborate basis of comparison (i.e., Jesus, the Pope, Billy Graham, Satan, the Ideal Self, or the typical Christian), c) the quiz could be made verbal, as opposed to written, d) positive feedback could be given, as opposed to negative, e) a broader scope of *religious* values could be used, besides only knowledge of the Bible,

or f) individuals with more intrinsic versus extrinsic religious views could be compared. It is apparent that there is still much room for research in this area. Only after a more thorough basis of research is obtained can more definitive conclusions of one's religious identity be drawn.

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Table 1

Spiritual Involvement and Beliefs Scale Scores

Participant	Score	Participant	Score
1	100	13	108
2	98	14	110
3	74	15	106
4	102	16	81
5	111	17	110
6	89	18	105
7	96	19	99
8	92	20	117
9	100	21	117
10	103	22	98
11	102	23	91
12	85	24	99

Note. Observed scale range was 74 to 117 on a possible scale range of 26 to 130