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The Sensitivity of the Bible Verse Selection Task to the Relationship
Between Christian Fundamentalism and Religious Outgroup Prejudice

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Abstract

Four different studies provide evidence to support the validity of the Bible Verse Selection Task (BVST) as a measure of the strength of Christian fundamentalist beliefs by showing correlations between BVST scores and measures of negativity toward people who often represent “outgroups” for Christians. That is, respondents who obtained high scores on the BVST (representing a greater tendency to select Biblical passages associated with fundamentalism as most central to their faith or belief system) also showed a tendency to obtain high scores on measures of negative feelings, beliefs, behaviors, and attitudes toward atheists, gay men, lesbian women, and Muslims. These relationships were generally consistent across both Christian-only samples and general samples, with statistically significant coefficients obtained for 30 of 32 predicted correlations. These results support the utility of this scale for research purposes.

Keywords: Christian fundamentalism, prejudice, Islam, Muslims, LGBTQ+, Islamophobia, sexual prejudice, atheist
The Sensitivity of the Bible Verse Selection Task to the Relationship Between Christian Fundamentalism and Outgroup Prejudice

Often, Christian fundamentalism is considered to be associated with the rigidity and dogmatism of beliefs, rather than the specific beliefs themselves. For example, Beck and Haugen (2013) concluded that “fundamentalism has less to do with the contents of belief than the way the believer holds those beliefs… (F)undamentalism, of whatever stripe, is strongly associated with dogmatism: the degree to which beliefs (whatever they are) are considered to be unassailable and held with fervent certainty” (p. 705). However, recent research has suggested that Christians at high and low ends of the fundamentalism spectrum may differ in the content of their beliefs to an extent that may not be initially apparent. At the completion of the decade-long Fundamentalism Project, Almond et al. (2003) synthesized the work of several teams of researchers who sought to understand the worldwide growth of religious fundamentalism. They identified core ideological characteristics of fundamentalism that are common across various religions.

First, most forms of religious fundamentalism are characterized by a reactivity to the marginalization of religion (Almond et al., 2003); a core concern of fundamentalisms is the threat posed by the recognition that secular societies, philosophical relativism, and cultural pluralism are displacing “true” religion. “They are, by definition, militant, mobilized, defensive reactions to modernity” (p. 99). However, this militant and mobilized stance, which can be perceived by others as threatening, might be understood from the perspective of a fundamentalists as a response to threats; that is, fundamentalists might perceive threats against their worldviews, and the militant stance might be a protective one. Wuthnow and Lawson
(2004) noted that a social scientific perspective might simply reduce Christian fundamentalism to a function of authoritarianism, thus emphasizing its association with prejudicial thinking and bigotry without considering its theological perspective. However, a central core of Christian fundamentalism is a set of beliefs about the meaning and value of life. Wuthnow and Lawson (2004) concluded that Christian fundamentalism’s distinguishing feature is the assumption that life has meaning only in relation to certain of these frameworks, especially the historic role of Jesus in atoning for the sinfulness of humankind, the authority of the Bible as God’s unique and inerrant revelation of divine truth, and the importance of following certain moral prescriptions for behavior and belief. (p. 39)

If this is believed by a Christian fundamentalist to be the unique framework in which life has meaning, then opposing views might undermine the certainty of one’s own life meaning. As a result, attitudes that might be described (from an external perspective) as prejudice against religious outgroups might also be described (from the perspective of a Christian fundamentalist) as a response against the threat of the marginalization of their religious worldview.

Previous research has supported this interpretation of Christian fundamentalism as reactivity against threat to meaning (Beller & Kroeger, 2018; Brandt & Van Tongeren, 2017; Gribbins, 2012; Kossowska, et al., 2017). For example, Williamson and Hood (2014) showed that Christians with high levels of fundamentalism were not necessarily more punitive than Christians with low fundamentalism levels; instead, the militancy arises in situations in which the person feels that the Christian belief system has been threatened.

From this perspective, three religious outgroups—Muslims, atheists, and sexual minorities—can be seen as groups that might be perceived by a Christian fundamentalist as representing a threat to their meaning system, especially in the context of the three core beliefs
noted by Wuthnow and Lawson (2004). For example, the belief in Jesus’ role in salvation might be threatened by exposure to the Muslim faith, the belief in the Bible as an inerrant source of truth might be shaken by exposure to the views of atheists, and the belief in the importance of moral prescriptions for behavior might be undermined by exposure to lesbian, gay, bisexual, transgender, queer, and other non-heterosexual (LGBTQ+) people.

A second core ideological characteristic of fundamentalism noted by Almond et al. (2003) was a messianic or apocalyptic belief system. From such a perspective, history is expected to have an end-point, at which spiritual justice will be meted. Almond and colleagues argued that the messianic theme applies to some religious fundamentalisms but not others. Certainly, though, they recognized that this is a defining feature of Christian fundamentalism, especially the forms arising from U.S. Protestant belief systems. Thus, Christian fundamentalism appears to be best understood not merely as rigidity and certainty of beliefs, but rather as a specific set of beliefs within the family of Christian faiths.

If fundamentalist and nonfundamentalist Christians differ in their tendency to emphasize specific religious beliefs, there may be some Biblical passages that resonate more clearly for fundamentalist Christians and others that resonate more clearly for nonfundamentalist Christians; Rouse and colleagues (2019) noted that different Christians might use the “same book” but “different bookmarks”. Rouse et al. collected a set of 100 passages from the Christian Bible that had been frequently accessed via an online Bible resource. Using these passages as the basis of a Q-Sort, they asked a sample of participants to sort the 100 passages into five piles of 20 passages each, representing the degree to which each passage was central to their religious faith or worldview. When they entered these passage ratings into a factor analysis that had been seeded with the items from a well-researched measure of Christian fundamentalism, Rouse and
colleagues demonstrated that the centrality ratings for some Biblical passages were positively associated and others negatively associated with Christian fundamentalism. These findings suggested that fundamentalist Christians place greatest importance on passages of the Bible emphasizing concepts of sin, salvation, Jesus’ role in the salvation from sin, and an evangelical imperative; conversely, they suggested that nonfundamentalist Christians place a greater importance on Biblical passages that address emotionally empowering and emotionally comforting aspects of Christian faith. The specific Biblical passages identified by Rouse et al. (2019) may be a reflection of the messianic ideological core noted by Almond et al. (2003); if Christian fundamentalism is characterized by a messianic theme, it is understandable that fundamentalists consider their faiths to be most clearly represented by Bible verses emphasizing the belief that all have sinned, that sin leads to damnation, that Jesus saves believers from the consequence of sin, and that a Christian’s responsibility is to inform others of this belief.

Rouse and colleagues (2019) then used the Biblical passages associated with high and low Christian fundamentalism to create a new research measure, the Bible Verse Selection Task (BVST). Rather than measuring the strength of fundamentalist beliefs with Likert-based items, the forced-choice BVST presents respondents with ten pairs of Bible verses, asking the respondents to select the passage from each pair that is most central to their belief system. For example, one item asks respondents to determine whether their worldview, faith, or belief system is best reflected by the passage “If you confess with your mouth, ‘Jesus is Lord,’ and believe in your heart that God raised him from the dead, you will be saved” (the high fundamentalism option) or “Finally, brothers, whatever is true, whatever is noble, whatever is right, whatever is pure, whatever is lovely, whatever is admirable—if anything is excellent or praiseworthy—think about such things”. Some items contrast a Bible verse that had a high factor analytic loading for
fundamentalism with a verse that had a neutral loading; for these items, respondents receive a score of 1 or 0 depending on the verse they select. Other items contrast a Bible verse that had a negative factor analytic loading for fundamentalism with a verse than had a neutral loading; for these items, respondents receive a score of -1 or 0 depending on the verse they select. The final score, then, ranges from -3 to 7 and reflects the number of times respondents selected the passages associated with high and low levels of Christian fundamentalism. Rouse et al. (2019) demonstrated internal consistency reliability estimates ranging from .77 to .86. Correlations between BVST scores and other measures of Christian fundamentalism ranged from .52 to .75, and these associations were seen regardless of whether the measure was used for a general sample or a sample consisting only of self-identified Christians. Moreover, correlations between BVST scores and measures of other constructs that had been previously associated with the fundamentalism (such as right-wing authoritarianism, traditionalism, and political conservatism) ranged from .37 to .67. Although it is somewhat non-intuitive to expect that the prioritization of Bible verses would be associated with various socio-political beliefs, the early research on the BVST is supportive of its validity as a measure of the strength of Christian fundamentalist beliefs.

Confidence in the use of the BVST would be bolstered by additional validation data showing relationships between these scores and measures of other constructs that have been correlated with Christian fundamentalism. One such association that could be replicated with the BVST is the frequently observed relationship between the strength of Christian fundamentalist beliefs and prejudicial attitudes towards members of religious outgroups. Specifically, several studies have documented that Christians at the upper end of the fundamentalist belief dimension hold negative attitudes toward LGBTQ+ people (Cunningham & Melton, 2012; Cunningham &
The purpose of the present studies was to determine whether BVST scores correlated with measures of negative beliefs and attitudes toward LGBTQ+ individuals, Muslims, and atheists in order to provide additional support for the validity of the BVST as a measure of the strength of Christian fundamentalist beliefs.

**Study 1: Anti-Islam Prejudice**

The purpose of the first study was to examine the relationship between BVST scores and scores on measures of anti-Muslim attitudes and beliefs. Therefore, I predicted positive correlations between the BVST and measures of negative attitudes, feelings, and beliefs about Islam and Muslims, and a negative correlation between the BVST and a measure of the affirmation that Islam is in the same Abrahamic religious family as Christianity. The study was designated as Exempt by the Pepperdine University (Seaver College) Institutional Review Board (IRB). I pre-registered the method, hypotheses, materials, and data analysis plan at https://osf.io/psjr5. Following data collection and analysis, I publicly archived the survey, data, and output files at https://osf.io/5fcbn/.

**Method**

**Materials**

I developed an online survey to be administered within the Amazon Mechanical Turk (MTurk) platform. MTurk is an online resource that allows individuals to hire workers for brief computer-based tasks. This resource has been used frequently for psychological research purposes and, when following best practices, results in reliable and valid data from a diverse
population, yielding data comparable to that obtained with more traditional research methods (Rouse, 2015).

The survey began with informed consent information and items to assess gender, race/ethnicity, age, and religious affiliation. Next, it presented the Bible Verse Selection Task (BVST; Rouse, et al., 2019), the measure of Christian fundamentalist beliefs described above.

Next, the survey presented the Islamophobia Scale (IS; Lee, et al., 2009) and the Dual Abrahamic Categorization (DAC; Kunst, et al., 2014). The IS is a 16-item Likert-type scale that provides separate subscales for Affective/Behavioral (IS-AB) and Cognitive (IS-CG) biases toward Muslim people, with high scores representing negative biases. Lee and colleagues (2013) provided evidence of score reliability with alpha coefficients at or above .86 for all samples, and validity was supported in the form of theory-consistent correlations with measures of Christian fundamentalism, racism, and right-wing authoritarianism. The DAC is a 4-item Likert-type measure of the degree to which a person recognizes that Christianity and Islam are both in the Abrahamic family of religious faiths; high scores represent a recognition of the historical commonality of these faiths. Kunst et al. (2014) documented alpha coefficients above .86 both for Christian and Muslim respondents, and demonstrated negative correlations between measures of Christian fundamentalism and DAC scores for Christian respondents.

The survey ended with an Opt-In/Opt-Out question, as recommended by Rouse (2015) for MTurk studies. This question acknowledged that some MTurk respondents may not be attentive when completing the survey, and asked respondents to simply indicate whether their data should be included or deleted from analyses; respondents were told that they would be paid regardless of their response.
Pilot testing suggested that it would be reasonable to expect that the survey could be completed in 5 minutes. Therefore, in alignment with local minimum wage standards, I set the payment level at $0.83 for completion of the survey.

Participants

The survey was completed by 200 MTurk Workers located in the United States, 199 of whom answered the Opt-In/Opt-Out question by indicating that their data should be used; the one individual who indicated that his data should not be used was eliminated from all analyses. Of the remainder, 61.3% self-identified as male, 36.2% as female, 1.5% as gender nonconforming, genderqueer, or other, 0.5% as transgender female, and 0.5% as transgender male. Ages ranged from 19 to 68 ($M = 34.57, SD = 11.03$). The most common race or ethnicity was European American or White (77.9%), followed by African American or Black (11.6%), Latinx or Hispanic (7.5%), Asian American (7.0%), Native American (1.0%), and Middle Eastern or North African (0.5%); because respondents could endorse multiple race and ethnicity identifications, these percentages exceed 100%. The sample included participants who self-identified as Christian (50.8%), Agnostic (20.1%), Atheist (19.1%), Nothing in Particular (6.0%), Other (2.0%), Muslim (1.0%), Buddhist (0.5%), and Jewish (0.5%). Of those self-identifying as Christian, the most common religious affiliation was Catholic (22.6% of the full sample), followed by Baptist (10.1%), Nondenominational (7.5%), Other Christian (5.0%),

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1 In previous research with data collected from MTurk, I have found that roughly 40% to 50% of the participants self-identify as Christian. A power analysis suggested a minimum sample size of 75 for all Christian-only analyses. In order to have at least 75 self-identifying Christians, a general sample should be 188 or larger. I rounded up to 200 in order to have sufficient numbers to account for any individuals who opted out of the study. The same rationale was used for Studies 2 through 4.
Methodist (1.5%), Presbyterian (1.5%), Church of Christ (0.5%), Episcopal (0.5%), Lutheran (0.5%), Mormon (0.5%), and Orthodox (0.5%).

**Results**

Descriptive statistics and bivariate correlations for the BVST, DAC, IS, IS-AB, and IS-CG are presented in Table 1. As anticipated, BVST scores were correlated with all measures of anti-Muslim prejudice; they were positively correlated with IS, IS-AB, and IS-CG and negatively correlated with DAC. When the correlation coefficients were recalculated for the subset of respondents who self-identified as Christian, BVST scores continued to be positively correlated with IS, IS-AB, and IS-CG and negatively correlated with DAC.

**Conclusion**

The results of the first study suggest that BVST scores are predictive of anti-Muslim prejudice, such that high scores (representing higher levels of fundamentalist beliefs) are associated with affective/behavioral and cognitive biases toward Muslims, along with rejecting the belief that Islam belongs to the Abrahamic family of religions. These coefficients (ranging in absolute value from .33 to .57) suggest that the BVST shared 11% to 32% of its variance with measures of anti-Muslim attitudes, despite representing hetero-trait (fundamentalist beliefs vs. prejudicial attitudes)/hetero-method (forced choice vs. Likert-based) correlations.

**Study 2: Sexual Orientation Prejudice**

The purpose of the second study was to examine the relationship between BVST scores and scores on measures of sexual prejudice toward the LGBTQ+ communities. I predicted positive correlations between the BVST and measures of negative affect, behavioral aggression, and negative cognitions toward gay people. The study was designated as Exempt by the Pepperdine University (Seaver College) IRB. I pre-registered the method, hypotheses, materials,
and data analysis plan at https://osf.io/e33jg. Following data collection and analysis, I publicly archived the survey, data, and output files at https://osf.io/hh8qp.

**Method**

**Materials**

This study used an online survey similar to the one used in Study 1. The survey began with informed consent information. Second, it included questions to elicit demographic information, with the inclusion of a Kinsey Scale question on which participants indicated their sexual orientation ranging from 1 (Exclusively attracted to members of the opposite sex) to 7 (Exclusively attracted to members of the same sex) and a categorical sexual orientation question. Third, it included the BVST. Fourth, it included the Homophobia Scale (Wright, et al., 1999), a 25-item Likert-type inventory that is comprised of a Negative Affect scale (H-NA), a Behavioral Aggression scale (H-BA), and a Cognitive Negativism (H-CN) scale; thus it separately assesses emotional, behavioral, and cognitive negativity toward homosexuality. Wright et al. (1999) documented a test-retest reliability estimate of .96 and an alpha coefficient of .94. Finally, the survey ended with the same Opt-In/Opt-Out question used in Study 1. Based on pilot testing and in accordance with local minimum wage rates, I set a payment rate of $2.00 for completion of this survey.

**Participants**

The survey was completed by 200 MTurk Workers located in the United States. Of these, two participants experienced technical problems and one participant indicated that his data should not be used. All following analyses were conducted on data from the 197 participants who indicated that their data should be used.
The analyzable sample included men (62.9%), women (33.5%), transgender women (1.5%), transgender men (0.5%), and gender nonconforming or genderqueer individuals (0.5%); two individuals (1.0%) opted not to indicate their gender. Although self-ratings on the Kinsey scale ranged across the entire scale continuum, the median and modal response was 1 which referred to “Exclusively attracted to members of the opposite sex”, accounting for 78.2% of the sample and another 10.2% provided a rating of 2, showing that the majority of respondents were exclusively or primarily attracted to the opposite sex. Mid-range ratings of 3, 4, or 5 were provided by 9.4% of the sample, and 2.6% of the sample provided high ratings of 6 or 7, suggesting that bisexual attraction and same-sex attraction represented a small proportion of the sample. On the categorical sexual orientation item, the majority of the participants self-identified as straight or heterosexual (84.3%), with other participants self-identifying as bisexual (10.2%), asexual (2.5%), gay (1.5%), and pansexual (1.0%); no participants identified as lesbian, and one participant (0.5%) opted not to indicate a sexual orientation.

Participants ranged in age from 20 to 69 ($M = 34.17$, $SD = 8.93$). Although the majority of the participants self-identified as White or European American (79.2%), participants also self-identified as Black or African American (9.1%), Asian American (6.6%), Hawaiian or Pacific Islander (6.6%), Latinx or Hispanic (3.6%), Native American (2.0%), and Middle Eastern or North African (1.0%). The sample included participants who self-identified as Christian (40.1%), Atheist (26.9%), Agnostic (20.8%), Nothing in Particular (7.6%), Jewish (1.5%), Muslim (1.5%), Buddhist (1.0%), and Other (1.0%) The participants who self-identified as Christian indicated religious affiliations as Catholic (19.8% of the full sample), Baptist (5.1%), Nondenominational Christian (4.1%), Church of Christ (2.5%), Episcopalian (2.0%), Other
Christian (2.0%), Orthodox (1.5%), Lutheran (1.0%), Presbyterian (1.0%), Methodist (0.5%), and Mormon (0.5%).

**Results**

Descriptive statistics and bivariate correlations for the BVST, H-NA, H-BA, and H-CN are presented in Table 2. As anticipated, the BVST was positively correlated with all scales from the Homophobia Scale, both for the full sample and for the subset of self-identified Christians.

**Conclusion**

The second study confirmed the hypothesis, with high scores on the BVST associated with negative attitudes, behaviors, and feelings toward gay individuals. This is consistent with the growing evidence that BVST scores assess the strength of Christian fundamentalist beliefs. These hetero-trait/hetero-method correlation coefficients (which ranged from .32 to .53) suggest that the BVST shared between 10% and 28% of its variance with measures of sexual orientation prejudice.

**Study 3: Anti-Atheist Prejudice**

The purpose of the third study was to examine the relationship between BVST scores and scores on a measure of anti-atheist attitudes. I predicted that BVST scores would be positively correlated with a measure of negative beliefs, feelings, and attitudes about atheists. The study was designated as Exempt by the Pepperdine University (Seaver College) IRB. I pre-registered the method, hypotheses, materials, and data analysis plan at https://osf.io/u3qdb. Following data collection and analysis, I publicly archived the survey, data, and output files at https://osf.io/yrufe.

**Method**

**Materials**
An online survey, created to be administered on the MTurk platform, included informed consent information, questions about demographic characteristics, and the BVST. Next, it presented the Negative Attitudes Toward Atheism Scale (NATAS; Gervais, 2011), a seven-item Likert-type self-report scale measuring overt discomfort toward atheists. One item that referred to concern about a hypothetical nonreligious Prime Minister was reworded to refer to a United States President. Gervais (2011) reported an internal consistency estimate of .84 for the development sample. Finally, the survey ended with the same Opt-In/Opt-Out question used in the previous studies.

Results from a pilot sample suggested that the survey could be reasonably completed in 5 minutes, so I set a payment rate of $1.00 for completion of this survey.

Participants

The survey was completed by 200 MTurk workers located in the United States. One respondent used the final item to opt out of being included in the data set; all analyses were performed using data from the 199 who opted in on that item.

The participants identified as male (60.3%), female (38.2%), transgender male (0.5%), and genderqueer or gender nonconforming (0.5%); one participant opted not to self-identify (0.5%). The participants identified as European American or White (81.4%), Asian American (14.1%), Latinx or Hispanic (10.1%), African American or Black (4.0%), Native American (2.0%), Other (2.0%), Hawaiian or Pacific Islander (1.0%), and Middle Eastern or North African (0.5%). Ages ranged from 20 to 70 (\(M = 34.96, SD = 9.99\)).

The sample included individuals who identified as Christian (48.2%), Atheist (20.1%), Agnostic (19.6%), Nothing in Particular (7.0%), Buddhist (1.5%), Other (1.5%), Jewish (1.0%), and Unitarian (1.0%). The participants who identified as Christian included Catholics (24.6% of}
the full sample), Baptists (5.5%), Nondenominational Christians (5.5%), Other Christians (3.0%), Methodists (2.0%), Orthodox (2.0%), Church of Christ (1.5%), Episcopalians (1.5%), Lutherans (1.5%), and Presbyterians (1.0%)

**Results**

Descriptive statistics and correlations between BVST and NATAS scores are presented in Table 3. Significant correlations were observed both for the full sample and for the subset of 96 participants identifying as Christian.

**Conclusion**

The results of the third study supported the hypothesis that the BVST is predictive of negative attitudes, beliefs, and feelings about atheists, such that high scores on the BVST (suggesting a fundamentalist approach to Christianity) were associated with more negativity toward atheists. These hetero-trait/hetero-method correlations suggest that the BVST shared 49% of its variance with a measure of anti-atheist attitudes for the full sample and 32% for the Christian-identifying subsample.

**Study 4: Feeling Thermometers and Voting Probabilities**

The purpose of the fourth study was to examine the relationship between BVST scores and outgroup prejudice within the context of attitudes toward diverse groups of people. Each of the preceding studies used surveys in which the BVST was administered along with surveys clearly focused on one specific group; as a result, a savvy survey-taker might be able to infer the topic of focus for that survey. By using single-item attitude measures mixed in with a variety of groups, the respondent would be less likely to infer the specific group attitudes addressed in this study. Specifically, I predicted negative correlations between BVST scores and measures of positive feelings toward atheists, gay men, lesbian women, and Muslims; furthermore, I
predicted that BVST scores would be negatively correlated with indications that a person would be likely to vote for the same four groups in a presidential election. After being designated as Exempt by the Pepperdine University (Seaver College) IRB, I pre-registered the study at https://osf.io/jgmvk. The survey, data, and output files are publicly accessible at https://osf.io/n3f5y/.

Method

Materials

I created a survey to be administered within the MTurk platform. The survey began with informed consent information and items to assess gender, age, race/ethnicity, and religious orientation. Second, the survey presented the BVST. Third, a set of 25 Feeling Thermometer questions asked respondents to consider various groups of people and then to rate their feelings on a scale from 0 (Very unfavorable feelings) to 10 (Very favorable feelings). The four target items (i.e., Atheists, Gay men, Lesbians, and Muslims) were mixed with 21 filler items\(^2\). Fourth, the survey included a set of 11 Voting Probability items, in which respondents were asked to imagine that their political party had selected a nominee for President of the United States. They were asked to indicate how specific characteristics would affect their probability of voting for the candidate on a scale from 1 (Much less likely to vote for this person) to 7 (Much more likely to vote for this person). The four target items (i.e., Atheist, Gay man, Lesbian, and Muslim) were mixed with seven filler items\(^3\). Finally, the survey ended with the same Opt-In/Opt-Out question

\(^2\) The Feeling Thermometer filler items were African-Americans, Asian-Americans, Catholics, College fraternity and sorority members, Democrats, Elementary school teachers, Evangelical Christians, Feminists, Hispanics/Latinos, Labor union leaders, Lawyers, Middle-class people, Military enlisted personnel, Mormons, People on welfare, Reporters, Republicans, Small business owners, Undocumented workers, White people, and Working-class people.

\(^3\) The Voting Probability filler items were Catholic, College professor, Combat veteran, Evangelical Christian, Latino, Mormon, and Woman.
used in the previous studies. Pilot testing of the survey suggested that it could be completed in 10 minutes. Therefore, in alignment with local minimum wage rates, a payment level of $1.67 was set for the completion of this survey.

**Participants**

The survey was completed by 200 respondents, 197 of whom opted-in on the final question; the other three respondents were eliminated from all analyses. Of these, 58.4% self-identified as male, 38.6% as female, 1.5% as genderqueer or gender nonconforming, 0.5% as transgender female, 0.5% as transgender male, and 0.5% opted not to respond. Ages ranged from 19 to 74 ($M = 34.31, SD = 10.58$). Although 76.1% of the sample self-identified as European American or White, participants also self-identified as African-American or Black (10.1%), Asian-American (9.1%), Latinx or Hispanic (6.1%), Native American (2.5%), Middle Eastern or North African (1.0%), and Other (0.5%). The sample included participants who self-identified as Christian (48.2%), Atheist (19.3%), Agnostic (17.8%), Nothing in particular (8.1%), Other (3.0%), Unitarian (1.5%), Buddhist (1.0%), Jewish (0.5%), and Muslim (0.5%). For the 95 self-identified Christians, the most common denominational affiliation was Catholic (16.8% of the full sample), followed by Baptist (10.7%), Nondenominational Christian (5.1%), Methodist (4.1%), Presbyterian (3.0%), Lutheran (2.5%), Other Christian (2.5%), Orthodox (1.5%), Church of Christ (1.0%), and Episcopalian (1.0%).

**Results**

Descriptive statistics and Spearman rho correlation coefficients between BVST items and the eight target items are presented in Tables 4 and 5.

For the subset of respondents self-identifying as Christian, BVST scores had significant negative correlations with Feeling Thermometer items for atheists, gay men, and lesbians, but
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not for Muslims. BVST scores also had significant negative correlations with Voting Probability items for atheists, gay men, lesbians, and Muslims.

For the full sample, BVST scores had significant negative correlations with Feeling Thermometer items for atheists, gay men, and lesbians, but not for Muslims. In addition, significant full-sample negative correlations were obtained between BVST scores and the likelihood of voting for atheists, gay men, lesbians, and Muslims.

Conclusion

The fourth study provided data that aligned with the data from the first three studies. When single-item measures of emotional positivity and voting likelihood were correlated with BVST scores, those obtaining high scores (which are reflective of Christian fundamentalist beliefs) were more likely to provide negative item responses for atheists, gay men, lesbian women, and Muslims. Although BVST scores correlated with negative feelings toward atheists, gay men, and lesbian women, the correlation with negative feelings toward Muslims was not significant. However, BVST scores were negatively associated with the likelihood of voting for members of all four target groups. With the exception of the nonsignificant correlations with

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4 For exploratory purposes, correlations were calculated between BVST scores and each of the filler items. For the Christian subsample, BVST scores were significantly correlated with Feeling Thermometer items for Evangelical Christians ($\rho = .32, p = .002$), Feminists ($\rho = -.29, p = .004$), Democrats ($\rho = -.25, p = .016$), Reporters ($\rho = -.24, p = .018$), and Working-class people ($\rho = .22, p = .038$). BVST scores were also significantly correlated with the Voting Probability item for Evangelical Christians ($\rho = .45, p < .001$).

5 When exploratory analyses were conducted for the full sample, significant correlations were obtained between BVST scores and Feeling Thermometer items for Evangelical Christians ($\rho = .43, p < .001$), Republicans ($\rho = .31, p < .001$), Catholics ($\rho = .23, p = .001$), Feminists ($\rho = -.21, p = .003$), Reporters ($\rho = -.19, p = .006$), Mormons ($\rho = .19, p = .007$), and College Fraternity/Sorority Members ($\rho = -.17, p = .018$). BVST scores were also significantly correlated with Voting Probability items for Evangelical Christians ($\rho = .48, p < .001$), Catholics ($\rho = .19, p = .007$), Women ($\rho = -.18, p = .010$), Mormons ($\rho = .17, p = .020$), and Combat Veterans ($\rho = .15, p = .031$).
feelings toward Muslims, these hetero-trait/hetero-method correlations suggests that the BVST shares between 3% and 23% of its variance with single-item measures of feeling warm toward and being willing to vote for members of religious outgroups.

**General Discussion**

A series of four studies demonstrated that high scores on the BVST were associated with negative affect, negative behaviors, and negative beliefs toward atheists, members of the LGBTQ+ communities, and Muslims. In the context of previous research showing associations between Christian fundamentalism and prejudice toward religious outgroups, this data strengthens the validation evidence for the BVST as a measure of the strength of fundamentalist Christian beliefs. This pattern was observed for 30 out of 32 hypothesized correlations, and it was consistent both for general samples as well as for samples that were limited to self-identified Christian respondents.

The confirmation of these hypothesized correlations is not the most noteworthy aspect of these findings; the association between various measures of Christian fundamentalism and religious outgroup prejudice has been well documented. What may be the most noteworthy aspect is that these associations exist despite the dramatically different format for the BVST relative to extant measures of Christian fundamentalism. Generally, measures of Christian fundamentalism present respondents with a doctrinal or theological assertion and ask respondents to indicate on a Likert-type scale the degree to which they agree or disagree with that claim. As noted by Rouse et al. (2019), this traditional method of assessment has strengths (including high face validity) and weaknesses (including a concern that some religious individuals might have a tendency to mark what they think they should believe, rather than their actual beliefs). The BVST is unique in its forced choice format, presenting respondents with
pairs of Bible verses and asking the respondents to indicate which one is most reflective of their faith or worldview. This method also has weaknesses (such as lower face validity) and strengths (such as the avoidance of contamination for a religious person regarding thoughts of what they should believe since both options are drawn from Biblical passages), making it a valuable supplement to existing measures. The nature of the BVST makes the correlations reported in the present studies noteworthy, demonstrating that there are systematic relationships between religious outgroup prejudices and the emphasis of some Biblical passages over others. Although different Christians may base their religious faith on the same canonical text, these results suggest that religious traditions and personal faiths that emphasize certain Biblical themes and passages may be more prone toward negative beliefs, behaviors, and feelings toward religious outgroups than others.

The present studies also documented acceptable levels of internal consistency for BVST scores, reinforcing earlier evidence of psychometric reliability reported by Rouse et al. (2019). Across the four studies, reliability estimates were higher for the full sample than they were when only limiting the sample to those participants who identify as Christian. Nevertheless, these results bolster confidence in the psychometric appropriateness of the use of this measure for research purposes.

One limitation of the present studies is that the samples, drawn from MTurk, were overrepresented by white cisgender male participants, raising questions about the generalizability of the findings; this is a common concern about MTurk data. Although Buhrmester et al. (2018) noted that MTurk samples tend to be much more demographically diverse than college student samples, one cannot presume that data collected from MTurk samples generalize to the broader population or to other types of samples. In addition to race and gender differences between
MTurk samples and those from other research settings (Casler et al., 2013), documented differences between MTurk and traditional samples have been observed for personality traits (Colman et al., 2018) and religiosity, with MTurk samples having a much higher proportion of religiously unaffiliated than representative of the U.S. population (Burnham, et al., 2018; Lewis et al., 2015). As future research explores the use of the BVST with data from various sources, greater clarity will emerge regarding the generalizability of BVST research results.

A second notable limitation of the present studies is that the surveys consisted entirely of self-report measures of prejudicial attitudes, beliefs, behaviors, and feelings, rather than using implicit measures of prejudice. To date, the published literature suggests that traditional Likert-based measures of Christian fundamentalism are better suited for predicting explicit prejudice than implicit prejudice. For example, Rowatt et al. (2005) presented a correlation of .56 between a traditional Likert-based measure of Christian fundamentalism and explicit preference of Christians over Muslims; the correlation between the same fundamentalism measure and an implicit measure of preference of Christians over Muslims was only .14. Similarly, Rowatt et al. (2006) showed that the traditional fundamentalism measure had correlations ranging from -.56 to -.51 for explicit positive attitudes toward lesbian women and gay men, but its correlation with an implicit measure was only -.23. Hofshi (2017) also found that a Likert-based measure of Christian fundamentalism was correlated with Likert-based measures of anti-LGBTQ+ prejudice in the range of .46 to .49, but the correlation dropped to .11 for an implicit measure. Furthermore, Jonathan (2008) showed that the same Likert-based measure of Christian fundamentalism was only correlated with an implicit measure of anti-LGBTQ+ attitudes at the level of .10; other research has shown correlations between the same Likert-based measure and
explicit measures of anti-LGBTQ+ prejudice in the ranges of .49 (Cunningham & Melton, 2012), .64 (Mellinger & Levant, 2014), and .69 (Cunningham & Melton, 2013).

It is plausible that the magnitude of the correlations obtained in the present studies might be related to the distinction between implicit and explicit measures. In the present studies, most of the correlations between the BVST and the measures of outgroup prejudice ranged from the low .30s to the high .50s. Thus, these correlations represent relationships that are conventionally considered weak to moderate. Even in these ranges, the observed correlations suggest systematic relationships between the strength of fundamentalist Christian beliefs (as measured by the BVST) and the strength of prejudice toward religious outgroups. Nevertheless, these correlations are not as strong as those often seen in the research literature, often reported as ranging from the mid .40s to the high .60s (Cunningham & Melton, 2012; Cunningham & Melton, 2013; Hofshi, 2017; Jonathan, 2008; Mellinger & Levant, 2014; Rowatt et al., 2005; Rowatt et al., 2006).

However, those previously reported correlations represented the relationships between Likert-based measures of fundamentalism and Likert-based measures of religious outgroup prejudice; therefore, these could be conceptualized as hetero-trait/mono-method correlations that might share a substantial degree of method variance in addition to the variance shared by the relationship between the two constructs. Moreover, because of the face-valid and explicit nature of those measures, the previously reported correlations may share some variance due to social desirability. For these reasons, traditional measures of Christian fundamentalism might be most useful in the study of explicit aspects of prejudice toward religious outgroup members. In contrast, because of the lower level of social desirability documented by Rouse et al. (2015) and because the task of selecting between two different Biblical passages may be less explicitly related to Christian fundamentalism, the BVST might function as a somewhat implicit (though
BVST and Religious Outgroup Prejudice

still self-report) measure of the strength of fundamentalist Christian beliefs. If this is the case, the BVST might be most useful in the study of implicit aspects of prejudice toward religious outgroup members. Future research should systematically examine the relative strengths of the BVST and traditional Likert-based measures of fundamentalist beliefs in the prediction of both explicit and implicit religious outgroup prejudice. It is plausible that the BVST and traditional measures might function in a complementary manner, with the BVST assessing an implicit element of Christian fundamentalism to supplement traditional measures of explicit fundamentalist beliefs. If this is the case, the combination of assessment styles could provide a more nuanced measurement of the complex dimension of Christian fundamentalism.

Despite limitations of the present studies, the documentation of associations between BVST scores and measures of prejudice toward religious outgroups aligns with a scholarly understanding of Christian fundamentalism. For example, these findings are consistent with core ideological characteristics that Almond et al. (2003) noted as being common among fundamentalists. Almond et al. (2003) noted that militant reactivity against the marginalization of religion was a defining feature of fundamentalism. In the present studies, BVST scores representing high fundamentalism were consistently associated with negative feelings, beliefs, and attitudes toward three groups that might represent a threat to fundamentalist beliefs: LGBTQ+ individuals, Muslims, and atheists. Even the exploratory analyses from the present Study 4 support the view of Christian fundamentalism as reactivity against threat to meaning. Although included in this study as simple filler items, BVST scores were positively correlated with attitudes toward groups that might be expected to bolster a Christian fundamentalist’s worldview (i.e., Evangelical Christians, working class people, Republicans, Catholics, Mormons, and combat veterans) and negatively correlated with attitudes toward groups that might be
expected to be misaligned with a Christian fundamentalist’s worldview (i.e., feminists, Democrats, reporters, and college fraternity and sorority members). These findings suggest that BVST scores are sensitive to prejudice toward those who might be viewed as outgroups by Christian fundamentalists. Thus, the present studies suggest that the BVST is an effective and subtle resource for measuring the complex set of fundamentalist Christian beliefs.
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Table 1

Descriptive statistics and correlations between BVST scores and measures of anti-Muslim prejudice

<table>
<thead>
<tr>
<th>Measure</th>
<th>alpha</th>
<th>M</th>
<th>SD</th>
<th>alpha</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. BVST</td>
<td>.81</td>
<td>.38</td>
<td>2.87</td>
<td>.75</td>
<td>1.85</td>
<td>2.70</td>
<td>—</td>
<td>-.57</td>
<td>.37</td>
<td>.38</td>
<td>.33</td>
</tr>
<tr>
<td>2. DAC</td>
<td>.90</td>
<td>13.91</td>
<td>4.23</td>
<td>.89</td>
<td>12.09</td>
<td>4.04</td>
<td>-.47</td>
<td>—</td>
<td>-.62</td>
<td>-.62</td>
<td>-.58</td>
</tr>
<tr>
<td>3. IS</td>
<td>.98</td>
<td>36.62</td>
<td>17.93</td>
<td>.98</td>
<td>40.75</td>
<td>18.08</td>
<td>.41</td>
<td>-.73</td>
<td>—</td>
<td>.96</td>
<td>.97</td>
</tr>
<tr>
<td>4. IS-AB</td>
<td>.96</td>
<td>17.27</td>
<td>8.92</td>
<td>.95</td>
<td>19.27</td>
<td>9.00</td>
<td>.38</td>
<td>-.67</td>
<td>.96</td>
<td>—</td>
<td>.86</td>
</tr>
<tr>
<td>5. IS-CG</td>
<td>.97</td>
<td>19.36</td>
<td>9.65</td>
<td>.97</td>
<td>21.49</td>
<td>9.77</td>
<td>.40</td>
<td>-.73</td>
<td>.97</td>
<td>.85</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. All correlation coefficients were significant at $p < .01$ (one-tailed). Correlation coefficients presented above the diagonal were obtained for the full sample ($n = 199$), while those presented below the diagonal were obtained for the subset that self-identified as Christians ($n = 101$). BVST = Bible Verse Selection Task; DAC = Dual Abrahamic Categorization; IS = Islamophobia Scale; IS-AB = Islamophobia Scale, Affective/Behavioral; IS-CG = Islamophobia Scale, Cognitive.
Table 2

*Correlations between BVST scores and measures of sexual prejudice*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Descriptive statistics for full sample</th>
<th>Descriptive statistics for Christian sample</th>
<th>Pearson correlation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>alpha</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1. BVST</td>
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<td>2.69</td>
<td></td>
</tr>
<tr>
<td>2. H-BA</td>
<td>.94</td>
<td>16.69</td>
<td>8.68</td>
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<td>3. H-NA</td>
<td>.92</td>
<td>18.06</td>
<td>8.30</td>
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<td>4. H-CN</td>
<td>.90</td>
<td>9.99</td>
<td>5.38</td>
</tr>
</tbody>
</table>

*Note.* All correlation coefficients were significant at $p < .01$ (one-tailed). Correlation coefficients presented above the diagonal were obtained for the full sample ($n = 197$), while those presented below the diagonal were obtained for the subset that self-identified as Christians ($n = 79$). BVST = Bible Verse Selection Task; H-BA = Homophobia Scale, Behavioral Aggression; H-NA = Homophobia Scale, Negative Affect; H-CN = Homophobia Scale, Cognitive Negativism.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Descriptive statistics for full sample</th>
<th>Descriptive statistics for Christian sample</th>
<th>Pearson correlation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>alpha</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1. BVST</td>
<td>.83</td>
<td>0.25</td>
<td>2.90</td>
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<tr>
<td>2. NATAS</td>
<td>.90</td>
<td>16.12</td>
<td>6.96</td>
</tr>
</tbody>
</table>

*Note.* All correlation coefficients were significant at $p < .01$ (one-tailed). Correlation coefficients presented above the diagonal were obtained for the full sample ($n = 197$), while those presented below the diagonal were obtained for the subset that self-identified as Christians ($n = 96$). BVST = Bible Verse Selection Task; NATAS = Negative Attitudes Toward Atheism Scale.
<table>
<thead>
<tr>
<th>Measure</th>
<th>alpha</th>
<th>M</th>
<th>SD</th>
<th>alpha</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<td>.85</td>
<td>0.26</td>
<td>3.02</td>
<td>.77</td>
<td>2.09</td>
<td>2.82</td>
<td>—</td>
<td>-.38**</td>
<td>-.35**</td>
<td>-.33**</td>
<td>-.06</td>
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<tr>
<td>2. Atheists</td>
<td>—</td>
<td>6.04</td>
<td>2.75</td>
<td>—</td>
<td>4.74</td>
<td>2.62</td>
<td>—</td>
<td>-.30**</td>
<td>—</td>
<td>.55**</td>
<td>.50**</td>
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<tr>
<td>3. Gay men</td>
<td>—</td>
<td>6.09</td>
<td>2.66</td>
<td>—</td>
<td>5.39</td>
<td>2.62</td>
<td>—</td>
<td>-.37**</td>
<td>.55**</td>
<td>—</td>
<td>.83**</td>
</tr>
<tr>
<td>4. Lesbians</td>
<td>—</td>
<td>6.20</td>
<td>2.66</td>
<td>—</td>
<td>5.51</td>
<td>2.61</td>
<td>—</td>
<td>-.35**</td>
<td>.42**</td>
<td>.73**</td>
<td>—</td>
</tr>
<tr>
<td>5. Muslims</td>
<td>—</td>
<td>5.03</td>
<td>2.78</td>
<td>—</td>
<td>4.96</td>
<td>2.74</td>
<td>-.20</td>
<td>.37**</td>
<td>.59**</td>
<td>.45**</td>
<td>—</td>
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</tbody>
</table>

Note. ** = p < .01 (one-tailed). Correlation coefficients presented above the diagonal were obtained for the full sample (n = 197), while those presented below the diagonal were obtained for the subset that self-identified as Christians (n = 95). Feeling Thermometer ratings could range from 0 (“Very unfavorable feelings”) to 10 (“Very favorable feelings”). BVST = Bible Verse Selection Task.
Table 5
*Correlations between BVST scores and Voting Probability items*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Descriptive statistics for full sample</th>
<th>Descriptive statistics for Christian sample</th>
<th>Spearman correlation coefficients</th>
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<tr>
<td></td>
<td>alpha</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>1. BVST</td>
<td>.85</td>
<td>0.26</td>
<td>3.02</td>
</tr>
<tr>
<td>2. Atheists</td>
<td>—</td>
<td>4.01</td>
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<td>3. Gay men</td>
<td>—</td>
<td>3.90</td>
<td>1.33</td>
</tr>
<tr>
<td>4. Lesbians</td>
<td>—</td>
<td>3.90</td>
<td>1.35</td>
</tr>
<tr>
<td>5. Muslims</td>
<td>—</td>
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<td>1.39</td>
</tr>
</tbody>
</table>

*Note.* ** = $p < .01$; * = $p < .05$ (one-tailed). Correlation coefficients presented above the diagonal were obtained for the full sample ($n = 197$), while those presented below the diagonal were obtained for the subset that self-identified as Christians ($n = 95$). BVST = Bible Verse Selection Task.