

University of Richmond

UR Scholarship Repository

Honors Theses

Student Research

2009

Reducing the negative attitudes of religious fundamentalists toward homosexuals

John A. Frank
University of Richmond

Follow this and additional works at: <https://scholarship.richmond.edu/honors-theses>



Part of the [Leadership Studies Commons](#)

Recommended Citation

Frank, John A., "Reducing the negative attitudes of religious fundamentalists toward homosexuals" (2009). *Honors Theses*. 1277.

<https://scholarship.richmond.edu/honors-theses/1277>

This Thesis is brought to you for free and open access by the Student Research at UR Scholarship Repository. It has been accepted for inclusion in Honors Theses by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.

UNIVERSITY OF RICHMOND LIBRARIES



3 3082 01031 8151

Reducing the Negative Attitudes of Religious Fundamentalists

Toward Homosexuals

John A. Frank

University of Richmond

A handwritten signature in cursive script, appearing to read 'Crystal Hoyt', written over a horizontal line.

Crystal Hoyt, Advisor

A handwritten signature in cursive script, appearing to read 'Kristen Lindgren', written over a horizontal line.

Kristen Lindgren

A handwritten signature in cursive script, appearing to read 'Don Forsyth', written over a horizontal line.

Don Forsyth

Committee Members

Table of Contents

Acknowledgments.....	-3-
Abstract.....	-4-
Introduction.....	-5-
Method	
Participants.....	-11-
Measures.....	-12-
Interventions.....	-16-
Procedure.....	-17-
Results.....	-19-
Discussion.....	-24-
References.....	-34-
Appendices.....	-37-

Acknowledgments

I would like to thank everyone who has supported me through the completion of this project. Dr. Hoyt encouraged me to apply to start this thesis and has supported me in every step along the way. Drs. Forsyth and Lindgren have been tremendous resources and I am glad to have had them on my committee. I would also like to acknowledge the assistance I received from Dr. Williams, Christine Most, and Sue Murphy throughout this entire process. Drs. Zivi and Mitric have also given me academic and emotional support as I was completing my experiment in the second semester. I'd also like to thank Dr. Williamson for his input on the religious intervention. Also, I want to give a special thanks to Ashlee Murphy for her help in the lab. Finally, thank you to Dr. Price for supervising the program and Dr. Peart and the entire Jepson School of Leadership Studies for giving me the opportunity and resources to pursue my passion and conduct research that is personally meaningful.

Abstract

In this study, participants who vary in their level of religious fundamentalism were exposed to different interventions designed to change their attitudes toward homosexuals. The interventions involved writing a few paragraphs about positive gay figures in society or thinking about a passage from the Bible about acceptance. Their attitudes toward homosexuals were measured using the Implicit Association Test and Herek's Attitudes toward Gay and Lesbian scale. They also completed some behavioral intention measures that examined how their attitudes relate to their behaviors. It was hypothesized that short-term contact with an admired outgroup member would change the negative attitudes or behavioral intentions of people who scored low on a scale of religious fundamentalism but would have no effect on the negative attitudes of people who score high on religious fundamentalism. However, writing about lessons from the Bible that promote acceptance should temporarily reduce their negative attitudes and make their behavior more positive toward homosexuals. Although there were correlations found between religious fundamentalism and negative attitudes toward homosexuals, the main hypotheses were not supported. The interventions had no significant effect on the attitudes and behavioral intentions of any of the participants. Limitations and directions for future research are discussed.

Reducing the Negative Attitudes of Religious Fundamentalists

Toward Homosexuals

The effects of discrimination on a minority group are widespread. For homosexuals, discrimination can lead to difficulties at school, poor academic outcomes, increased levels of stress, a greater risk for stress-sensitive disorders, lower levels of quality of life, lower self-esteem, and suicide (Pearson et al., 2007; Cochran, 2001; Sandfort et al. 2003; Russell & Joyner, 2001; De Graaf et al., 2006). In order to reduce these negative outcomes, the problems of the homosexuals who face discrimination need to be addressed and the negative attitudes of the people who discriminate against homosexuals need to be changed. One group of people that traditionally has more negative attitudes toward homosexuals are those individuals who score high on scales of religious fundamentalism (Altemeyer, 2003; Rowatt et al., 2006). While researchers in the past have developed successful, short-term interventions to reduce the negative attitudes the general population towards homosexuals, no evidence has been given to show that these interventions were successful in reducing the attitudes of religious fundamentalists. If discrimination based in religion operates differently from other forms of discrimination, it is doubtful that the previous interventions will be successful for people who are religious. The goal of the current study is to test the ability of different short-term interventions to reduce the negative attitudes of religious fundamentalists' attitudes toward homosexuals.

I was once told that Hitler was the father of social psychology. The professor who told me this meant that the Holocaust had inspired many new lines of research and that this research effectively created a new field of psychology. Many psychologists

were baffled by the Germans' willingness to participate in the Holocaust and some of the most famous experiments in social psychology were attempts to try to understand what had happened. Everyone wanted to figure out how prejudice and discrimination could reach the level of mass extermination and how it could be stopped in the future.

Out of social psychology's attempts to understand the Holocaust in Europe and racism in the United States came many different techniques for reducing prejudice and discrimination. Perhaps the most effective and well-supported, as well as the simplest, approach to decreasing prejudice is Gordon Allport's (1954) contact approach. The theory behind this approach is that if two people from different groups come together to work toward a common goal, their attitudes toward each other will become more positive. Furthermore, their attitudes toward the social group that their partner comes from will likewise become more positive. Many of the negative beliefs that people hold towards people who are different come from false negative stereotypes. Working with someone from a group that has a lot of negative stereotypes enables people to see through the stereotypes and realize that he/she is not as different as they originally thought. This theory has been used in many successful attempts to reduce prejudice and discrimination. In a meta-analysis of 696 samples that were exposed to the contact approach, Pettigrew and Tropp (2006) found that "94% of the samples in [their] analysis show an inverse relationship between intergroup contact and prejudice" (p. 766).

Several studies have made attempts to use the contact theory to reduce negative attitudes toward homosexuals. Vonofakou, Hewstone, and Voci (2007) found that heterosexuals with gay friends had more positive attitudes toward homosexuals. In another recent study, Dasgupta and Rivera (2008) replicated these findings showing that

participants with high levels of previous contact with homosexuals had less antigay attitudes than people with low levels of contact. Because it is not always possible to get heterosexuals to interact with homosexuals, some methods for simulating interpersonal contact have been devised. Dasgupta and Rivera (2008) designed a short-term intervention in which participants were asked to read about positive homosexuals. The group that was exposed to “admired outgroup members” had less negative implicit attitudes toward homosexuals compared to participants without any previous contact with homosexuals (Dasgupta & Rivera, 2008).

For the general population, admired outgroup members challenge one’s stereotypes of that outgroup. Without these stereotypes salient in their minds, there is nothing substantial that differentiates outgroup members from ingroup members. However, while interventions grounded in contact theory may be successful for a general population, it is doubtful that they would work for participants who are high in religious fundamentalism. People who score high on measures of religious fundamentalist believe that the Bible is the “Word of God” and infallible. For religious fundamentalists, the Bible is the only source of absolute truth. While common stereotypes of homosexuals may be reversed, this intervention fails to address the belief that homosexuality is described as a sin in the Bible. In spite of the fact that homosexuals may be able to accomplish great things, the notion that they are still acting in ways that are not in accordance with the Bible remains unchallenged.

Because the “Golden Rule” of the Bible is to love your neighbor as yourself, it is surprising to find that people who have a strong belief in the Bible have more negative attitudes towards homosexuals than people without such beliefs (Altemeyer, 2003;

Rowatt et al., 2006). There are several theories to explain this relationship. Some researchers found that there is a personality trait, right-wing authoritarianism (RWA), that correlates positively with both religiosity and negative attitudes towards homosexuals (Wilkinson, 2004). People who are high in RWA have more traditional views of the world and tend to view their groups as morally superior to others (Wilkinson, 2004). However, although Tsang and Rowatt (2007) replicated the correlations between RWA, religious orientation, and negative attitudes toward homosexuals, they also found that when RWA was controlled for, religious orientation still predicted prejudice toward homosexuals. It appears as though something about believing in the Bible makes people more negative towards homosexuals.

Acknowledging the connection between believing in the Bible and attitudes toward homosexuals, Bassett et al. (2005) designed an intervention to reduce the negative attitudes religious persons hold toward homosexuals. Participants were shown the negative effects of discrimination on an individual homosexual and asked to read and respond to passages from the Bible about Jesus' message of acceptance. After this intervention, the participants who were originally uniformly rejecting of homosexuality reported having more positive attitudes to homosexuals and homosexuality (Bassett et al., 2005). While there are substantial limitations to this study, it is valuable for its creative approach of using the Bible to reduce these religious-based negative attitudes. This study is effective because it uses participants' strong identification with a religion to promote acceptance rather than discrimination.

When reviewing the design of Bassett et al.'s (2005) experiment, it appeared that the intervention mainly relied on the manipulation of cognitive dissonance. Cognitive

dissonance is a term used to describe the negative emotional state that occurs as a result of holding two conflicting beliefs or while holding a belief and acting in a way which conflicts with that belief. When this state of dissonance occurs, people change their beliefs to reduce the conflict. It is important to note, however, that the dissonance and the consequent attitude change all occurs outside of the person's awareness. The implicit nature of this phenomenon makes it all the more powerful and believable to the person that is affected. They cannot follow the process that occurs in their head, so there is no way to intervene.

In his book, *When Prophecy Fails*, Festinger (1956) describes a group of cult members who believed that the world would end on a certain day. When the world did not end, they experienced a mental conflict between devoting their life to a cult that said the world would end and the failed prophecy of that cult. The state of the cult members as they realized that the prophecy was not going to be fulfilled is cognitive dissonance. In order to reduce the dissonance between giving up so much for a group with false teachings, the cult members found ways to rationalize the failed prophecy and became more invested in the cult. Rather than admit that they had been duped, it was emotionally easier to create justifications for the erroneous prediction of the cult leaders.

Although cognitive dissonance may have resulted in a negative change for the members of the cult described in *When Prophecy Fails*, the power of this cognitive state has been harnessed and used to make people more accepting of different social groups. Eisenstadt and Leippe (2005) had participants write about raising tuitions in order to provide more scholarships for disadvantaged students. After agreeing to write an essay that had potential personal relevance to them, the students changed their attitudes to

match what they were asked to write in the essay. The dissonance in this situation involves the opposing thoughts that a) I am arguing for changes in this tuition even though b) they could negatively affect me. In order to reduce the dissonance, participants began to believe that there must be a good reason for supporting the tuition increase. The reason that they came up with, that they should be more supportive of disadvantaged groups of people, resulted in more positive attitudes toward these groups in post tests after the experiment.

The current study attempts to create dissonance between participants' negative attitudes toward homosexuals and their strong belief in a religion that promotes tolerance. Participants will be exposed to a short-term intervention in which they will read and write about a lesson from that Bible describing how Jesus condemned discrimination and promoted acceptance. If dissonance occurs between their belief in these parts of the Bible and their negative attitudes toward homosexuals, hopefully the participants will change their attitudes to be more consistent with their religious beliefs. Unlike the Bassett et al. (2003) intervention, this intervention will be less explicit about its goals and the participants will not be aware of the dissonance as it occurs.

In the current study, two interventions to reduce negative attitudes towards homosexuals are tested on participants with varying levels of religious fundamentalism. The first hypothesis of this study is that participants who score high on religious fundamentalism will have negative explicit and implicit attitudes toward homosexuals. The connection between religious beliefs and negative attitudes must be reestablished in order to test the effectiveness of the various interventions. The second hypothesis is that implicit attitudes toward homosexuals will be associated with explicit attitudes and

behavioral intentions, regardless of religious fundamentalism. In order to show that a short-term contact approach will have only limited effects on the attitudes of people with a strong belief in the Bible, one of the groups of participants in this study will be exposed to a modified version of Dasgupta and Rivera's (2008) intervention. I predict that the admired outgroup member intervention will not change the implicit negative attitudes or behaviors of people who score high on religious fundamentalism but will increase the positive attitudes of people who score low on religious fundamentalism. To test whether a short-term intervention that utilizes the potential cognitive dissonance between religious beliefs and negative attitudes toward homosexuals, another group of participants will be exposed to an intervention in which they read a lesson from the Bible that promotes acceptance. Having people who score high on religious fundamentalism write about passages in the Bible that promote acceptance will temporarily reduce their negative implicit and explicit attitudes and make their behavior more positive toward homosexuals.

Method

Participants

The participants in this study were 45 University of Richmond students. Sixteen of the participants were males and 29 were females. The ages of the participants ranged from 18 to 50. Thirty-two of the participants identified as Christian. Of these, 19 were nondenominational, 7 were Catholic, 3 were Baptist, and the rest were either Jehovah's Witness (1), Methodist(1), Protestant (1), or Eastern Orthodox (1). The other participants identified as Atheists (6), Agnostics (5), Undecided (2).

Recruitment

The participants were recruited through an advertisement that went out to all of the students on campus. Students were asked to complete an online survey with the chance of being asked to participate in an experiment. Emails were also sent to the leaders of different student groups to send to their members (see Appendix I for the message that appeared in these emails). The student groups that received emails were Intersarsity, FCA, Multicultural Student Union, and Umoja. Students were informed that they would be entered into a raffle for a \$50 gift-certificate if they completed the survey. After the campus-wide advertisement 120 people completed the online survey. An additional 49 people completed the survey after the emails were sent to the student groups. After looking at the results of the surveys, invitations to participate in the next stage of the experiment were sent to students who scored on the high and low ends of the religious fundamentalism scale. Forty-five of the people who received this email ended up completing the experiment in the lab. All of the participants who came into the lab received ten dollars for participating.

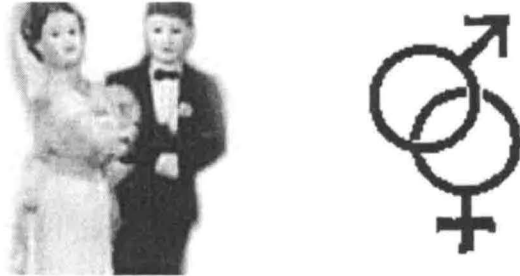
Measures

Religious Fundamentalism. To measure participants' levels of religious fundamentalism we included questions from Altemeyer and Hunsberger's (1992) religious fundamentalism scale in an online survey (Appendix A). The fundamentalism scale included statements related to the participants' belief in the Bible as the word of God and as a source of absolute truth (e. g., one item asked participants how much they agreed with this statement, "God has given mankind a complete, unfailing guide to happiness and salvation, which must be totally followed."). Participants responded to

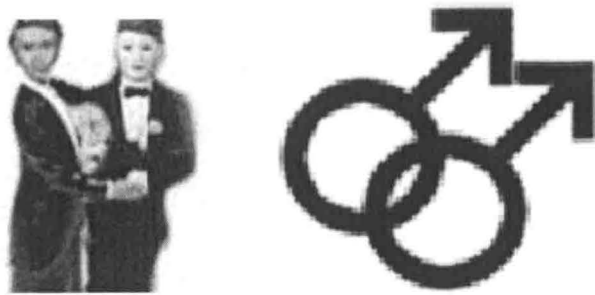
these statements using a 7-point Likert scale with -3 signifying that they completely disagreed with the statement and 3 signifying that they completely agreed with the statement. People with high scores on this scale believe that their religion is the only religion with access to the truth. Low scores on this survey can mean that the participants do not believe in any religion or that they are open to the possibility that their religion is fallible.

Implicit Attitudes toward Homosexuals. One of the dependent measures in this study was the implicit attitudes of the participants toward homosexuals. To measure this we used a modified version of the Implicit Association Test (IAT) for homosexuals developed by Greenwald, McGhee, and Schwartz (1998). This test measures how quickly participants are able to pair different words and stimuli together and how many errors they make while completing this task. In this version of the IAT, there were two groups of words, “good” words and “bad” words, and two groups of stimuli, symbols related to homosexuality and symbols related to heterosexuality (see below this section for images of the stimuli used). The participants ran through a series of trials where the pairing of the groups is switched between trials. In one trial, participants are instructed to hit one key on the computer if they see either a “good” word or a symbol related to homosexuality and hit another key if they see a “bad” word or a symbol related to heterosexuality. In the next trial, the pairing is switched so that one key is for “bad” words and homosexuality and the other key is for “good” words and heterosexuality. The average latency for the different trials is computed and used to compute IAT D. The IAT score is found by calculating the standardized difference between the trials when “good” words are paired with homosexual images and when “good” words are paired with

heterosexual images (Greenwald, Nosek, & Banaji, 2003). For participants with a positive IAT D score, the association of heterosexual images and “good” words is easier to make than the association of homosexual images and “good” words.



Figures 1 and 2: Images used to represent heterosexuals in the IAT



Figures 3 and 4: Images used to represent homosexual men in the IAT



Figures 5 and 6: Images used to represent homosexual women in the IAT

Explicit Attitudes. While it is interesting to explore biases that people are not aware they have, it is also important to examine the attitudes that people knowingly hold

towards homosexuals. Towards this end, Herek's (1988) *Attitudes Toward Gay and Lesbian – Short Form* (ATLG) scale (see Appendix B) was given to participants after they completed the IAT. For this measure, participants were asked to use another 7-point Likert scale (-3 – completely disagree, 3 – completely agree) to rate how much they agreed with statements about homosexuality (e.g., “I think male homosexuals are disgusting.”). Participants that scored high on this survey had explicit negative attitudes toward homosexuals. These participants were aware of their bias and responded accordingly to the statements.

Behavioral Intention. The final survey included in this experiment measured the participants' willingness to encourage or engage in behaviors that either support homosexuals or discriminate against them (see Appendix C). These questions were created for this experiment and have not yet been tested. The questions included in the survey relate to behaviors that affect university students (e.g., “I would sign up for a class taught by a gay professor.”). The purpose of this survey was to explore the relationship between a person's attitudes, both implicit and explicit, and his/her behaviors. It is one thing to have negative thoughts about a group of people. It is another thing entirely to be willing to discriminate against them. Low scores on this survey suggest that participants will act in ways that have a negative impact on homosexuals.

Interventions

Flower Group (Control). Participants in this condition were not exposed to any intervention. The task they completed was designed so that it would not affect their attitudes towards homosexuals. They were given three pictures of different flowers and asked to describe them for someone who cannot see (see Appendix D for the instructions

given to participants). The participants were given three minutes to look at the flowers and seven minutes to write about them. This task was modeled after the control task used in Dasgupta and Rivera's (2008) study. In that study, flowers were used because "they were positive in valence (like the gay exemplars) but semantically unrelated to sexual orientation" (Dasgupta and Rivera, 2008, 115-116). Flowers served the same purpose in the current study. All of the tasks involved thinking and writing about things that are positive and it was important that the control task did not relate to sexual orientation in any way.

Positive Exemplar Group. Participants in this condition were asked to read and write about someone who overcame adversity. While the participants were told that the people they wrote about were randomly selected, they were actually all famous homosexuals. This task is also modeled after a task that is used in the Dasgupta and Rivera (2008) study. However, in their study, participants were asked to read a list of descriptions of famous homosexuals and asked to memorize as much as they could about that list. In order for this intervention to match the control task and the third intervention, participants in this study were only given one homosexual to read about and then asked to write a speech about him/her (see Appendix E for the instructions). The five homosexuals that the participants could have written about were Billy Jean King, James Baldwin, Alan Turing, Ellen DeGeneres, and Mark Bingham (see Appendix F for the biographies used in this condition). The three reasons that these people were used in this study as positive homosexual exemplars were that they had faced adversity as a result of their sexual orientation, had success in their careers, and challenged the stereotypes of homosexuals. Because participants were told to write a speech in honor of an award the

person was receiving, the task maintained the positive valence of the other two conditions. Again, participants were given three minutes to read the biographies and seven minutes to write about them.

Bible Lesson Group. In this condition, participants were asked to read about a lesson from the Bible and asked to explain the meaning of that lesson to someone who is not Christian (see Appendix G for participants' instructions). The Bible lesson that was used was about acceptance (see Appendix H for the description of this lesson). The choice to use a Bible lesson rather than actual scripture verses was made to make sure that the message of the lesson was clear. Because a passage from the Bible may be interpreted in different ways, a description of a generally accepted lesson from the Bible is less ambiguous and misinterpretation is less likely. The topic of this lesson was chosen in order to create the most dissonance between the participants' belief in the teachings of the Bible and their attitudes toward homosexuals. If someone accepts that Jesus preached the acceptance of everyone, it should be hard for him/her to follow Jesus and discriminate against homosexuals.

Procedure

Upon their arrival in the lab, participants were led into one of three rooms. Each of the rooms had a chair and a table with a laptop computer on it. The experimenter gave the participants a ten-dollar bill for participating and asked them to sign a receipt. The participants were also given a consent form (see Appendix J) to read and sign. While the participants were looking over the consent form, the experimenter read a brief description of the cover story for the study (see Appendix K). In order for the interventions to work, participants could not know the true nature of the study. To mask the purpose of the

study, participants were told that it was about how people describe different things around them and how their descriptions relate to their perceptions and judgments of the world. After the consent form was signed, the participants were given the instructions to their first task. Prior to entering the lab, the participants had been randomly assigned to one of the three conditions and were read the appropriate instructions for that condition. For participants in the second condition, the biography that they received was based on the order that they arrived in the lab (i.e. the first person to be exposed to the positive exemplar intervention was given the first biography). After going through the instructions for the task, the participants were left for three minutes with whatever stimuli they would be writing about. At the end of this three-minute period, writing materials were handed out and the participants were told that they had seven minutes to write.

When the seven minutes ended, the experimenter collected the writing materials and read a description of the next part of the experiment in the context of the cover story (see Appendix K). Participants were told that the experiment was designed to see if there was a connection between the way people write and describe the world and the way they view the world. They were told that they would be exposed to a computer program that examines how they view different groups of people. Because it was imperative that the participants did not know that the experiment was about attitudes toward homosexuals, they were told that the group they would be exposed to in the computer program would be randomly assigned by picking one of the possible groups out of a hat. However, all of the pieces of paper in the hat had the word “homosexuals” written on them. Once they “picked” the group that would be used, the experimenter ran the IAT on the computer for the participants to complete. The participants were told to knock on the door of the room

when the computer program was over so that they could move on to the last stage of the experiment.

After completing the IAT, the participants were given the explicit attitudes survey. As the experimenter gave them this survey, he/she noted that the purpose of this survey was to supplement the findings of the computer program (see Appendix K for the script that was used). Once this survey was completed, the participants were told that this experiment was inspired by diversity-related incidents on campus and that the Housing Office had asked to include some questions about student life (see Appendix K for this script). The participants were then given the behavioral intention survey. After this was finished, the participants were given a debriefing statement (see Appendix L) and asked not to talk about the real nature of the study with anyone until the experiment stopped running. The experimenter also asked them if they had any questions and thanked them for their time.

Results

Cronbach's alphas were calculated to test the reliability of the measures used in this study. Both the Fundamentalism scale ($\alpha = .958$) and Herek's Attitudes Toward Gays and Lesbians (ATLG) scale ($\alpha = .966$) were reliable. The current study confirms past findings on the reliability of these scales. The Cronbach's alpha of the behavioral intention survey that was created for this study was less reliable ($\alpha = .669$).

Descriptive statistics for skewness and kurtosis were run on all measures and they indicated that the data do not violate the assumptions of the normal distribution. One outlier was removed from the IAT error rate data. The errors this participant made on the IAT exceeded more than three standard deviations from the mean.

Test of Hypotheses

Hypothesis 1. One-tailed correlational analyses were conducted to test the first hypothesis that participants who score high on religious fundamentalism will have negative explicit and implicit attitudes towards homosexuals and have negative behavioral intentions. As can be seen in Table 1, the correlation between participants' scores on the fundamentalism scale and their scores on Herek's ATGL scale was significant ($r = .599, p = .000$). Participants' attitudes toward homosexuals became more negative as their religious fundamentalism scores increased. There was also a significant correlation between fundamentalism scores and behavioral intentions ($r = .414, p < .05$). People who scored high on the religious fundamentalism scale were less willing to act in a positive way towards homosexuals. Finally, scores on religious fundamentalism did not significantly predict implicit attitudes (IAT D) or IAT error rates.

Table 1: Correlation scores between sex, religious fundamentalism, Herek's ATGL, behavioral intention measures, and IAT results

	Sex	Rel. Fund.	ATGL Scale	Beh. Intent.	Implicit Att.
Sex	-				
Rel. Fund.	-0.072	-			
ATGL	0.286 ^a	0.599 ^a	-		
Beh. Intent	0.181	0.414 ^a	0.765 ^a	-	
Implicit Att.	-0.208	0.071	-0.213 ^b	-0.213 ^b	-
IAT Errors	-0.040	0.084	0.176	0.233	-0.017

^a. Correlation is significant, ^b. Correlation is marginal

Hypothesis 2. The second hypothesis that implicit attitudes towards homosexuals will be associated with explicit attitudes and behavioral intentions and that explicit attitudes and behavioral intentions will be related, was also tested with one-tailed correlational analyses. As predicted, implicit associations (IAT D) was marginally associated with explicit attitudes ($r = .213, p = .080$) and behavioral intentions ($r = -.213, p = .062$) such that more negative implicit attitudes predict negative explicit attitudes and willingness to engage in discriminatory behaviors. In addition, participants' scores on the ATGL scale and their scores on the behavioral intention measure were significantly and positively correlated ($r = .765, p = .000$) such that more negative explicit attitudes predict less intentions to engage in positive behaviors.

Hypotheses 3 and 4: The final two hypotheses explored the effects of the interventions on reducing negative attitudes and the interaction between intervention condition and level of religious fundamentalism on reducing negative attitudes. Hypothesis 3 predicted that the positive exemplar condition would have a greater impact on people with low religious fundamentalism scores than people with high scores. The fourth hypothesis claimed that the effect of reading a Bible lessons about acceptance would be stronger on religious fundamentalists. To test the final two hypotheses concerning the impact of the interventions and fundamentalism on the self-report and implicit outcome measures, 3 (Condition) x 2 (Fundamentalism [median split]) multivariate analyses of variance were conducted. A median split refers to the process of splitting the participants into two groups and using the median score on a scale as the cutoff between groups. Any participant who scored below the median score on the religious fundamentalism scale was in the low group and any participant who scored

above the median was in the high group. The first ANOVA was conducted on the two self-report variables: the ATLG and behavioral intentions. The ANOVA revealed a significant main effect of fundamentalism on both the ATLG and behavioral intentions. People who scored higher on a scale of religious fundamentalism had more negative explicit attitudes ($M = -.214$) than people who scored low on a scale of religious fundamentalism ($M = -1.11$, $F(1, 44) = 19.491$, $p = .000$). Similarly, religious fundamentalists ($M = -1.144$) had more negative behavioral intentions than people who scored low on religious fundamentalism ($M = -1.7464$, $F(1, 44) = 4.698$, $p = .036$). There was no main effect for intervention on either the participants' ATLG scores ($p = .950$) or behavioral intentions ($p = .882$). Finally, there was no significant interaction between fundamentalism and intervention.

Another two-way multivariate ANOVA was run to test the effect of the interventions and fundamentalism on IAT outcomes. These outcomes include both the IAT D score as well as errors made on the IAT. The mean IAT D score was .413 for all of the participants and the standard deviation was .449. There was a main effect of fundamentalism on error rates, participants who had high levels of religious fundamentalism ($M = 7.670$) had higher rates of errors when completing the IAT than people with low levels of religious fundamentalism ($M = 5.007$, $p < .05$). There was no main effect of fundamentalism on IAT D scores. Again, there was no main effect of condition on IAT D, but there was a main effect on error rate (see Figure 7 below). Participants in the positive exemplar condition ($M = 4.053$) made fewer errors than participants in the flower condition ($M = 8.125$) and the Bible lesson condition ($M = 8.426$, $F(1, 43) = 3.842$, $p = .029$). Post hoc tests were conducted to further analyze this

effect and they reveal that participants in the exemplar condition made significantly fewer errors than those in the bible condition ($p = .005$) and marginally less than those in the flower condition ($p = .060$). Finally, there were no significant interactions between fundamentalism and intervention.

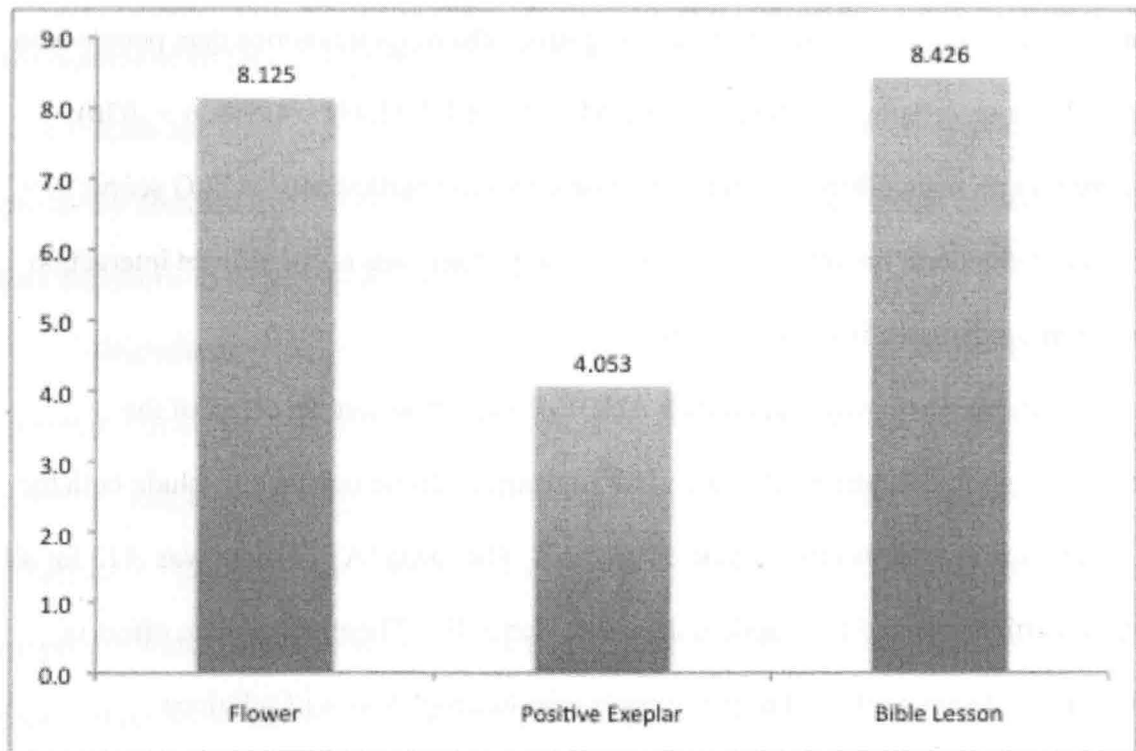


Figure 7: IAT Error Rates by Intervention Condition

Additional analyses. Although there were no predictions made about participant sex, to test for the possibility that sex had an impact on these results the ANOVAs listed above were conducted again with participant sex included as a third factor. The first analysis revealed a main effect of sex on ATGL such that men ($M = -.519$) had more

negative attitudes than women ($M = -1.441, p < .05$). There was no impact of sex on behavioral intentions nor did sex interact with the other independent variables on either self-report outcome. The IAT analysis revealed no main effects or interactive effects of participant sex.

Discussion

As expected, religious fundamentalism was highly correlated with explicit attitudes and behavioral intentions towards homosexuals. The findings support the hypothesis that participants who score high on religious fundamentalism will have more negative explicit attitudes toward homosexuals and that they will be more willing to engage in discriminatory behaviors. The connection between religious fundamentalism and negative explicit attitudes is consistent with previous research (Altemeyer, 2003; Rowatt et al., 2006). While religion itself does not always lead to prejudice, Altemeyer and Hunsberger (1992) have shown that a fundamental belief in religion is associated with prejudice. People who believe that their religion is infallible and the only source of truth in the world are more likely to have negative attitudes about homosexuals and homosexuality.

The current study is unique in that it was able to uncover a correlation between religious beliefs and behavioral intentions. Because some people could argue that a person's religious beliefs may keep them from acting on his/her negative attitudes, it is important that we were able to establish that people with a fundamental belief in their religion supported behaviors that had negative effects on homosexuals. On the measure that tested for behavioral intentions, participants were asked whether or not homosexual students and heterosexual students should room together and if they would be angry if

one of their friends “came out” as a homosexual. Although we cannot determine whether or not participants would go out of their way to harm homosexuals, agreeing that homosexuals should not room with heterosexuals or agreeing that they would be angry if one of their friends was gay suggests that the participants will likely discriminate against homosexuals in the future.

Contrary to the original hypothesis, there was no connection between religious fundamentalism and negative implicit attitudes. Given the correlation between religious fundamentalism and negative explicit beliefs and the correlation we uncovered between explicit and implicit beliefs, this finding is not only surprising but inconsistent with past research (Rowatt et al., 2006). One possible explanation for this finding is that people who scored high on a scale of religious fundamentalism have similar implicit attitudes toward homosexuals as people with low scores, but people with low fundamentalism work to make their explicit attitudes more positive. Religious fundamentalists have no more of an automatic bias towards homosexuals, but when they think about their religious beliefs they change their explicit attitudes. This would imply that their belief in their religion is the reason why they have more negative attitudes toward homosexuals. However, as previously mentioned, these results are surprising and inconsistent with past results. It is possible that the lack of a significant relationship is due to limitations in the design and execution of the experiment. These limitations will be discussed later.

The second hypothesis, that implicit attitudes toward homosexuals are related to explicit attitudes and behavioral intentions toward that group, was also supported by our results. Although the findings related to this hypothesis were only marginally significant, they do suggest that people with an implicit bias against homosexuals also have more

negative explicit attitudes and negative behavioral intentions. There are a couple possible reasons why these effects were only marginally significant that will be mentioned below when the limitations of the study are discussed. We predict that these effect will become significant with a larger sample size. Because these results only show a correlation between the variables, we cannot tell whether the participants' negative explicit attitudes are a result of their implicit bias, their implicit bias is a result of their explicit attitudes, or if both are shaped by a third variable. Likewise, there is no evidence to show that the participants have negative behavioral intentions because of their attitudes or if they formed their attitudes to justify their behaviors. The data does tell us that if someone has a bias against homosexuals that they are not aware of, we can predict that they would support discriminatory actions. This, however, is not too surprising given that their explicit attitudes, the attitudes that they are aware of, match their implicit attitudes and their behavior intentions.

Unfortunately, the main hypotheses of this study were not supported. The interventions did not have the effects that were predicted. The intervention that a participant was exposed to had no effect on their explicit attitudes toward homosexuals or their behavioral intentions. The positive exemplar intervention did not have more of an effect on the attitudes or behavioral intentions of people who scored low on religious fundamentalism more than on the attitudes and behaviors of people who scored high. In fact, this intervention had no significant effect on any of the participants' explicit attitudes. The one effect of the conditions that we saw was that people exposed to the positive exemplar, regardless of their level of religious fundamentalism, made fewer errors in the IAT. Although IAT error rates are not traditionally analyzed, Nosek and

Hansen (in press) have used the amount of errors made in an IAT to support their theory on the benefits of personalizing the IAT when evaluating target concepts. But these findings do suggest that the intervention had a mild effect on participants consistent with the effect found in the Dasgupta and Rivera study (2008) that participants who read about famous homosexuals had more positive implicit attitudes. We did not find any evidence that the Bible lesson intervention did anything to change the implicit or explicit attitudes or behavioral intentions of any of the participants. If religious fundamentalism is controlled, participants across all the interventions had similar attitudes toward homosexuals at the end of the experiment.

There were a fair amount of limitations to this study. For the 6-cell design we used for assigning people from the two groups of participants (high and low fundamentalism) to three conditions, 45 is no an ideal number of participants to use. We may have had more significant effects with a larger sample size. Also, within our two groups, low fundamentalists and high fundamentalists, there was too much variability in their attitudes toward homosexuals. For instance, a few of the people in the high fundamentalism group had previously gone through diversity training and had much more positive attitudes prior to the experiment than most of the other people with high fundamentalism. For these reasons, a between-subjects design might not have been the best choice. We would probably have more desirable results if we had done pre- and post-tests before and after the interventions to measure the changes in attitudes for each individual.

During the first week of running participants in the lab, homosexuality had become a topic of discussion in the school's newspaper. This could have affected the

participants' attitudes and unfortunately exposure to the paper could not be controlled. Additionally, I had been interviewed about homosexuality on campus and this interview was available to all students. If participants recognized my name from the paper when I introduced myself in the lab, they may have responded differently to the interventions than participants who did not know who I was.

In addition to these limitations, there are a few other reasons why we did not find the desired effects from the different interventions. For the positive exemplar condition, the sexual orientation of the exemplars was not the focus of their biographies. This part of their identity could have been overlooked. In the Dasgupta and Rivera (2008) study that used positive outgroup members to increase attitudes toward homosexuals, the participants knew that they were being exposed to famous homosexuals. Also, for participants who had low religious fundamentalism scores, there may have been a ceiling effect on their attitudes toward homosexuals. In other words, their attitudes toward homosexuals may have been too positive before the intervention to notice any change. There is a good chance that these participants already knew homosexuals and have had previous experience reversing their stereotypes.

The positive exemplar condition was not able to make the attitudes of religious fundamentalists more positive towards homosexuals. This was expected because being exposed to positive examples of homosexuals does not address the issue of "the sin of homosexuality". If the religious fundamentalists' negative attitudes are a result of their religious beliefs, an intervention to change their attitudes should address their beliefs. Also, people with a religious opposition to homosexuality will try to dissociate their attitudes toward individual people from their attitudes of the actions of those people. A

religious fundamentalist may think that James Baldwin was an excellent author and someone to be admired while maintaining his homosexuality is sinful. Therefore, when homosexuality is presented abstractly, separated from actual people, it is very easy to have negative attitudes about it and the hypothetical men and women who engage in homosexual acts.

Although we did not expect the participants who scored high on religious fundamentalism to be affected by the positive exemplar intervention, we did expect their implicit and explicit attitudes and behaviors toward homosexuals to be changed by the Bible lesson intervention. Unfortunately, this was not the case. Thinking and writing about the importance of acceptance in the Bible did not make the participants more positive toward homosexuals. Again, our inability to find an effect could be due to the general limitations of the study. However, it is also likely that this intervention simply would not be effective.

The Bible lesson intervention relies on the cognitive dissonance between having negative attitudes toward homosexuals and believing in a Bible that promotes acceptance. It may be that these religious fundamentalists reduced the dissonance by doing something other than making their attitudes less negative or that there was simply not that much dissonance created by our task. It is highly probable that these participants have been confronted with the apparent contradiction between their religious beliefs and their attitudes in the past. In response, their church or family could have taught them how to dissociate the person from the sin and to “Love the sinner, hate the sin”. Thinking like this allows them to “love” and “accept” homosexuals as people, while maintaining negative attitudes toward the homosexual lifestyle.

Another reason why the Bible lesson intervention might not have affected the attitudes of religious fundamentalists is that there could be some other variable that determines their negative attitudes. While fundamentalists may claim that their negative attitudes are a result of their religious beliefs, it is possible that they are just using their beliefs as a justification for their prejudices. Fulton and colleagues (1999) found that fundamentalism was highly correlated with negative attitudes toward homosexuals and that these negative attitudes were in excess of what the researchers felt the Bible required of strict believers. They found that fundamentalists agreed with statements against homosexuals both when the statements were morally consistent with the Bible and when they were not. Also, their attitudes toward homosexuals were more negative than their attitudes toward other types of “sinners” (Fulton et al., 1999). This research supports the theory that religious fundamentalists’ negative attitudes toward homosexuals are not entirely based in their religion.

Because the negative attitudes of fundamentalists are not entirely based on religious beliefs, one cannot simply look to the Bible to explain them or reduce them. To understand the correlation between fundamentalism and negative attitudes toward homosexuals, we must move beyond thinking about this problem at the individual level. It will be helpful to consider how being a member of a religious *group* affects these people. A religion is one type of group and people in groups are affected by certain processes that contribute to discrimination. Altemeyer (2003) argues that people indoctrinated into a religion have a strong ingroup identity and this affects how they view people outside of their religion. Altemeyer (2003) found that religious fundamentalism correlated highly with religious ethnocentrism, a personality trait where people think of

their religion as the “ingroup”. This religious ethnocentrism mediated the relationship between fundamentalism and negative attitudes toward homosexuals (Altemeyer, 2003). Additionally, people who scored high on religious fundamentalism reported that they had been “encouraged to identify with the family religion” (Altemeyer, 2003, pg. 26). For religious fundamentalists, there is a strong sense of “us” and “them” and this division results in negative attitudes towards people who are not a part of the group.

Building off of the idea that a religion is a type of group, social dominance theory (Siddanius & Pratto, 1999) provides an explanation for prejudice based on an individual’s desire to justify his/her group’s power and the group’s attitudes toward other groups. Social dominance theory assumes that certain groups in society have more power than others. In order to reduce the guilt that comes with this power, as well as to provide an explanation to others why the power should not be evenly distributed, people within the group create legitimizing myths. These myths are false beliefs about society that justify unequal power distribution. Typically the legitimizing myths use essentialist ideas about the groups without power that tend to promote stereotypes and prejudice. For instance, White people may promote the legitimizing myth that all African Americans are lazy in order to justify their White privilege. In past studies, social dominance orientation has been used to predict racial prejudice and negative attitudes toward homosexuals (Sibley et al., 2006). The connection between negative attitudes toward homosexuals and social dominance theory has also been explored in a study by Poteat et al. (2007). In their study of adolescents, Poteat et al. (2007) found that different peer groups had different attitudes toward homosexuals and that the group a person belongs to could be used to predict his/her attitudes.

If social dominance does play a role in religious anti-homosexual attitudes, certain interventions could probably be used to reduce these attitudes. A lot of the success of Allport's (1954) contact approach to reducing prejudice lies in its ability to humanize the stereotyped group in the eyes of the prejudice group. Upon getting to know a person of the other group, one realizes that the beliefs he/she had about that group are false. Lance (1987) found that contact successfully reduced homophobia in college students. Also, as seen in Sherif's (1961) Robber's Cave experiment, working together on a common task has also helped to blur the lines between groups and reduce the animosity between them. In this study, a common goal removed the ingroup/outgroup dichotomy.

The difference between these types of contact and the short-term exposure intervention used in this study is that the contact is prolonged and participants have a chance to interact with the outgroup members. People with negative attitudes and prejudices need the chance to test their prejudices. If some of the religious fundamentalists' prejudices were not addressed in the brief biographies we gave them to read, they would be left unchanged. Also, if the negative attitudes are the result of discomfort with outgroup members, reading about homosexuals will not necessarily make a person more comfortable interacting with them.

Even if it is prolonged, normal contact may not be effective for reducing the negative attitudes of religious fundamentalists toward homosexuals. The legitimizing myths of fundamentalists are built on the idea that homosexuality is a sin. As I mentioned in the introduction, contact alone could not reverse this belief. Also, because the ingroup/outgroup distinction is based on religious beliefs, a common task that does not change its participants' religious views would not be able to remove the underlying

barrier between groups. In order to reduce the negative attitudes that fundamentalists have toward homosexuals that are based on legitimizing myths, one must understand the myths and create a scenario where these myths are refuted.

If the negative attitudes are based on the belief that homosexuals are sinners and sinners are evil, one intervention that could be researched in the future would be to have fundamentalists think of their own sins and realize that sinning does not make a person evil. Similarly, contact with *religious* homosexuals may also serve to work against these legitimizing myths. A homosexual who believes in the same religion would be a part of the ingroup of religious persons and thus avoid outgroup prejudices. Hopefully this “ingroup homosexual” would prove that not all homosexuals are “evil sinners”.

The findings of the current study suggest that the negative attitudes of religious fundamentalists towards homosexuals do not come from the Bible alone. There is something else that makes these people prejudiced against homosexuals and the Bible is used to justify their negative attitudes. In the future, research should be done to figure out the source of this prejudice. Once uncovered, interventions should be designed to target this source. In the meantime, I would encourage the development of interventions that make the contradiction between believing in the Bible and discriminating against homosexuals more apparent. Describing, in some detail, the negative effect that discrimination has on homosexuals and articulating the role that religious persons play in this discrimination may be able reach a religious fundamentalist and make their attitudes more positive.

References

- Allport, G. (1954). *The Nature of Prejudice*. Oxford, England: Addison-Wesley.
- Altemeyer, B. (2003). Why do religious fundamentalists tend to be prejudiced? *The International Journal for the Psychology of Religion, 13*, 17-28.
- Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *The International Journal for the psychology of Religion, 113-133*.
- Bassett, R. L., van Nikkelen-Kuyper, M., Johnson, D., Miller, A., Carter, A., & Grimm, J. P. (2005). Being a good neighbor: Can students come to value homosexual persons? *Journal of Psychology and Theology, 33*, 17-26.
- Cochran, S. D. (2001). Emerging issues in research on lesbians' and gay men's mental Health: Does sexual orientation really matter? *American Psychologist, 56*, 931-947
- de Graaf, R., Sandfort, T. G. M.; ten Have, M. (2006). Suicidality and sexual orientation: Differences between men and women in a general population-based sample from the Netherlands. *Archives of Sexual Behavior, 35*, 253-262.
- Dasgupta, N., & Rivera, L. M. (2008) When social context matters: The influence of long-term contact and short-term exposure to admired outgroup members on implicit attitudes and behavioral intentions. *Social Cognition, 26*, 112-123.
- Elsenstadt, D., & Leippe, M. R. (2005). Dissonance and important: Attitude change effects of personal relevance and race of the beneficiary of a counterattitudinal advocacy. *Journal of Social Psychology, 145*, 447-467.
- Festinger, L. (1956). *When Prophecy Fails*. Harper-Torchbooks.

- Fulton, A. S., Gorsuch, R. L., & Maynard, E. A. (1999). Religious orientation, antihomosexual sentiment, and Fundamentalism among Christians. *Journal for the Scientific Study of Religion, 38*(1), 14-22.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. J. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*, 504-528.
- Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the implicit association test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197-216.
- Herek, G. M. (1988). Heterosexuals' attitudes toward lesbians and gay men: Correlates and gender differences. *Journal of Sex Research, 13*, 56-65.
- Lance, L. M. (1987). The effects of interaction with gay persons on attitudes toward homosexuality. *Human Relations, 40*, 329-336.
- Pearson, J., Muller, C., & Wilkinson, L. (2007). Adolescent same-sex attraction and academic outcomes: The role of school attachment and engagement. *Social Problems, 55*, 523-542.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751-783.
- Poteat, V. P., Espelage, D. L., & Green, H. D. (2007). The socialization of dominance: Peer group contextual effects on homophobic and dominance attitudes. *Journal of Personality and Social Psychology, 92*(6), 1040-1050.
- Russell, S. T., & Joyner, K. (2001). Adolescent sexual orientation and suicide risk: Evidence from a natural study. *American Journal of Public Health, 91*, 1276-1281.

- Rowatt, W. C., Tsang, J., Kelly, J., LaMartina, B., McCullers, M., & McKinley, A. (2006). Associations between religious personality dimensions and implicit homosexual prejudice. *Journal for the Scientific Study of Religion, 45*, 397-406.
- Sandfort, T. G. M., de Graaf, R., & Bijl, R. V. (2003). Same-sex sexuality and quality of life: Findings from the Netherlands Mental Health survey and incidence study. *Archives of Sexual Behavior, 32*, 15-22.
- Sibley, C. G., Robertson, A., & Wilson, M. S. (2006). Social dominance orientation and right-wing authoritarianism: Additive and interactive effects. *Political Psychology, 27*(5), 755-768.
- Sidanius, J., & Pratto, F. (1999). *Social Dominance*. Cambridge, England: Cambridge University Press.
- Sherif, M., Harvey, O.J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Study of positive and negative intergroup attitudes between experimentally produced groups: Robbers Cave study*. University of Oklahoma.
- Tsang, J. & Rowatt, W. C. (2007). The relationship between religious orientation, right-wing authoritarianism, and implicit sexual prejudice. *International Journal for the Psychology of Religion, 17*, 99-120.
- Vonofakou, C., Hewstone, M., & Voci, A. (2007). Contact with out-group friends as a predictor of meta-attitudinal strength and accessibility of attitudes toward gay men. *Journal of Personality and Social Psychology, 92*, 804-820.
- Wilkinson, W. W. (2004). Religiosity, authoritarianism, and homophobia: A multidimensional approach. *The International Journal for the Psychology of Religion, 14*, 55-67.

Appendix A

Survey

Participant Number: (_ _ _ _) Please keep track of this number!
 (Father Mother You Day)

(Month of Father's Birthday (2-digit, for example, March is 03 and December is 12),
 Month of Mother's Birthday, Month of your birthday, and day of your birthday *If you
 don't know your parents' birthdays, use "99" instead)

Age:

Sex:

Religion:

Answer the following questions about your religion on a 1 to 5 scale (1 – Completely Disagree, 5- Completely Agree)

1. God has given mankind a complete, unfailing guide to happiness and salvation, which must be totally followed.
2. All of the religions in the world has flaws and wrong teachings.
3. Of all the people on this earth, one group has a special relationship with God because it believes the most in his revealed truths and tries the hardest to follow his laws.
4. The long-established traditions in religion show the best way to honour and served God, and should never be compromised.
5. Religion must admit all its past failings, and adapt to modern life if it is to benefit humanity.
6. When you get right down to it, there are only two kinds of people in the world: the Righteous, who will be rewarded by God; and the rest, who will not.
7. Different religions and philosophies have different versions of the truth, and may be equally right in their own way.
8. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God.
9. It is more important to be a good person than to believe in God and the right religion.
10. No one religion is especially close to God, nor does God favor any particular group of believers.
11. God will punish most severely those who abandon his true religion.
12. No single book of religious writings contains all the important truths about life.
13. It is silly to think people can be divided into "the Good" and "the Evil." Everyone does some good, and some bad things.
14. God's true followers must remember that he requires them to constantly fight Satan and Satan's allies on this earth.
15. Parents should encourage their children to study all religions without bias, then make up their own minds about what to believe.
16. There is a religion on this earth that teaches, without error, God's truth.
17. "Satan" is just the name people give to their own bad impulses. There really is no such thing as a diabolical "Prince of Darkness" who tempts us.
18. Whenever science and sacred scripture conflict, science must be wrong.
19. There is no body of teachings, or set of scriptures, which is completely without error.
20. To lead the best, most meaningful life, one must belong to the one, true religion.

Answer the following questions about your personality with the same 1-5 scale.

I see myself as...

21. Extraverted, enthusiastic.
22. Critical, quarrelsome.
23. Dependable, self-disciplined.
24. Anxious, easily upset.
25. Open to new experiences, complex.
26. Reserved, quiet.
27. Sympathetic, warm.
28. Disorganized, careless.
29. Calm, emotionally stable.
30. Conventional, uncreative.

We would also like to know if you would be interested in participating in a follow-up study. For agreeing to participate and showing up to the lab, you will receive \$10. You don't actually have to finish the study to get this money, all you have to do is show up! If you are interested please provide your name and email address in the space provide so that we can contact you. Your name will not be used to identify you with your responses and after we contact you about participating your name will be removed from any data. Individuals with varying scores on the premeasures of attitudes will be contacted via email and asked if they would like to participate in the second phase of the study. People who have both Christian and non-Christian beliefs will be asked to participate in the second phase of the study. People who scored high and low in the premeasures will be evenly distributed among the groups.

Appendix B

Survey for Sexual Minority Group

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-3	-2	-1	0	1	2	3

- _____ 1. Lesbians just can't fit into our society.
- _____ 2. A woman's homosexuality should not be a cause for job discriminations in any situation.
- _____ 3. Female homosexuality is detrimental to society because it breaks down the natural divisions between the sexes.
- _____ 4. State laws regulating private, consenting lesbian behavior should be loosened.
- _____ 5. Female homosexuality is a sin.
- _____ 6. The growing number of lesbians indicates a decline in American morals.
- _____ 7. Female homosexuality in itself is no problem, but what society makes of it can be a problem.
- _____ 8. Female homosexuality is a threat to many of our basic social institutions.
- _____ 9. Female homosexuality is an inferior form of sexuality.
- _____ 10. Lesbians are sick.
- _____ 11. Male homosexual couples should be allowed to adopt children the same as heterosexual couples.
- _____ 12. I think male homosexuals are disgusting.
- _____ 13. Male homosexuals should not be allowed to teach school.
- _____ 14. Male homosexuality is a perversion.
- _____ 15. Just as in other species, male homosexuality is a natural expression of sexuality in human men.
- _____ 16. If a man has homosexual feelings, he should do everything he can to overcome them.
- _____ 17. I would not be too upset if I learned that my son (*brother, roommate*) were a homosexual.
- _____ 18. Homosexual behavior between two men is just plain wrong.
- _____ 19. The idea of male homosexual marriages seems ridiculous to me.
- _____ 20. Male homosexuality is merely a different kind of lifestyle that should not be condemned.

Appendix C

Housing Office Survey

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-3	-2	-1	0	1	2	3

_____ 1. If the housing office asked my advice about pairing people together to be roommates, I would be willing to say that homosexuals and heterosexuals should room together.

Comments:

_____ 2. I would you be angry if my roommate told me he/she was gay.

Comments:

_____ 3. I would invite a person I knew to be gay to be a member of any of the organizations that I am a part of.

Comments:

_____ 4. If my roommate told me that he/she was not straight, I would congratulate him/her.

Comments:

_____ 5. I would drop out of a course if I found out one of my professors was a homosexual.

Comments:

_____ 6. I would sign up for a class taught by a gay professor.

Comments:

Appendix D

We are interested in different types of communication, particularly how people communicate about information they gather from one sense, like vision, to a person who is not able to use that sense. In this task we ask that you write a brief description of the following three flowers for someone who is blind. We ask that you spend three minutes looking at these flowers and then seven minutes writing about the three flowers. We will time you and give you the different pictures or writing material when the time comes.

Appendix E

We are interested in different types of communication, particularly how people describe other people in different settings (i.e. when introducing a friend, talking about a parent, etc). We would like you to imagine that you have been asked to present an award for overcoming adversity and challenging stereotypes . We will provide you with a biography of a randomly selected recipient and we ask that you write a brief speech that describes the person's life, the obstacles they have had to overcome and their achievements. You will have 3 minutes to read the biography and 7 minutes to write the speech. We will keep track of time and give you the biographies and writing materials at the appropriate times.

Appendix F

Billy Jean King

“I think self-awareness is probably the most important thing towards being a champion.”

Life Magazine named Billie Jean King one of the “100 Most Important Americans of the 20th Century.” A tennis champion and an outspoken advocate for gender equality in sports, King has become an icon and legend for her contributions to the advancement of women’s sports.

Despite her mother’s attempts to steer her towards more feminine pursuits, King demonstrated exceptional aptitude in sports at a young age. She purchased her first tennis racket at the age of 12. She recalls thinking during her first tennis lesson, “I knew I’d found what I wanted to do for the rest of my life.”

In 1961, at age 17, King won her first grand slam title at Wimbledon in the women’s doubles tournament. She became known for her aggressive style and personality. In 1966, she won her first of 12 Grand Slam singles titles.

King struggled to come to terms with her sexuality. Pressured by the threat of losing her career, King remained in the closet until 1981 when it was uncovered that King was having an affair with a woman. King lost almost all of her commercial sponsors. King publicly came out in 1988. Since then, she has helped further the visibility and inclusion of the GLBT community. She currently serves on the Board of the Elton John AIDS Foundation and National AIDS Fund.

An outspoken advocate against sexism in sports, King hoped “to use sports for social change.” She campaigned for equal prize awards for male and female tennis players after receiving \$15,000 less in prize money than her male counterpart in the 1972 U.S. Open. King threatened to boycott the 1973 tournament. The following year, the U.S. Open became the first major tournament to award equal prize money to male and female champions.

In 1973, King became the first woman to defeat a former male Wimbledon Champion in “The Battle of the Sexes.” The Women’s Tennis Association named King its first president that same year. In 1974, King co-founded WomenSports Magazine and began the Women’s Sports Foundation.

James Baldwin

“I love America more than any other country in the world and, exactly for this reason, I insist on the right to criticize her perpetually.”

It is often the outsider who divines truth most clearly. James Baldwin, to whom many doors were closed by virtue of his poverty, his race, and his sexuality, was a prophet and truth-teller whose writing searingly delineates the soul and image of 20th century America.

In 1953, the publication of *Go Tell it on the Mountain* heralded the debut of a major literary voice. James Baldwin’s semi-autobiographical novel depicts much of the writer’s painful early life. Like Baldwin, John Grimes—the novel’s bright, sensitive protagonist—battles poverty and suffers at the hands of a brutal stepfather in Harlem. Like Baldwin, John Grimes becomes a precocious storefront preacher at the age of 14. As a gay African-American, Baldwin struggled with his identity in a racist and homophobic society. His disgust with the racial climate in the post-World War II United States impelled him to move to Europe, where he wrote *Go Tell it on the Mountain* (1953) and his other early major works: the essay collection *Notes of a Native Son* (1955) and the play *The Amen Corner* (1955). His second novel, *Giovanni’s Room* (1956), deals explicitly with homosexuality. It was published at a time when few other writers dared to publish gay-themed works.

After Baldwin returned to the United States in 1957, his writings increasingly reflected his engagement in the struggle for African-American civil rights. He explored black-white relations in a book of essays, *Nobody Knows My Name* (1961), and in his novel *Another Country* (1962). In *The Fire Next Time* (1963), Baldwin declared that blacks and whites must find ways to come to terms with the past and make a future together or face destruction. His incorporation of gay themes evoked savage criticism from the black community.

Following the assassinations of Medgar Evers, Martin Luther King, Jr., and Malcolm X in the late 1960’s, Baldwin became increasingly pessimistic about the possibility of a positive relationship between the races. He returned to Europe and lived out his remaining years in the South of France, where he died in 1987.

Baldwin received many awards during his lifetime, including France’s highest civilian award, Commander of the Legion of Honor, presented by President François Mitterrand in 1986.

Alan Turing

Alan Turing was by nature skeptical and indifferent to conventional values. While often at odds with authority, he made remarkable connections between apparently unrelated areas of inquiry, including treating symbolic logic as a new area of applied mathematics. As a fellow at King's College, Cambridge, Turing wrote "On Computable Numbers," his landmark paper published in 1936, which is considered the founding work of modern computer science. After completing doctoral work at Princeton University, Turing returned to Britain in 1938 shortly before the outbreak of the Second World War. Turing's potential ability as a code breaker had been identified and he had been introduced to the secret operations at the Government Codes and Ciphers School in London. On September 4, 1939, the day after Britain declared war on Germany, Turing reported to work at Bletchley Park, Britain's code breaking center.

At the conclusion of the war, Turing's ambition was to create a computer, but the classified status of his wartime work prevented him from realizing that dream. His contention that the computer could rival the computing power of the human brain correctly anticipated the field of Artificial Intelligence. In the postwar years, Turing competed as a distance runner, reaching near-Olympic times in the marathon. Asked why he engaged in such demanding training, Turing replied, "I have such a stressful job that the only way I can get it out of my mind is by running hard."

Alan Turing lived at a time when homosexuality was regarded as a mental illness and homosexual acts were illegal. Despite his critical wartime role, when his relationship with a Manchester man became public, he was charged with "gross indecency" and forced to accept hormone treatment with estrogen. He also lost his security clearance and was no longer able to work as a cryptographer.

Ellen DeGeneres

“For me, it’s that I contributed . . . that I’m on this planet doing some good and making people happy. That’s to me the most important thing, that my hour of television is positive and upbeat and an antidote for all the negative stuff going on in life.”

In April 1997, Ellen DeGeneres, the star of her own popular sitcom, “Ellen,” took a step that was a turning point in her personal life and her career: she outed herself and her character on primetime television. Her coming out led to a storm of media attention, including her photo on the cover of *Time Magazine* with the tag, “Yep, I’m gay.” There was also criticism that the show was now “too gay.” For a time after her public declaration, her career suffered from backlash.

DeGeneres returned to the national spotlight when she was chosen to host the Emmy Awards only a few weeks after the September 11 attacks in 2001. At the ceremony she quipped, “We’re told to go on living our lives as usual, because to do otherwise is to let the terrorists win, and really, what would upset the Taliban more than a gay woman wearing a suit in front of a room full of Jews?” She was praised for her poise and decorum in emceeding the awards show.

Ellen DeGeneres attended the University of New Orleans and worked at a variety of jobs before she entered stand-up comedy. Her selection by cable channel Showtime as The Funniest Person in America led to opportunities to appear on television. During her first appearance on The Tonight Show, DeGeneres was the first female comedian ever invited to sit on the sofa and visit with Johnny Carson. She has been labeled a “female Seinfeld” for her quirky observational humor.

In 2003 she launched her daytime television talk show, *The Ellen DeGeneres Show*. It won 15 Emmy Awards and is the first talk show to win the Emmy for Outstanding Talk Show for its first three seasons.

In 2005 DeGeneres was again selected to host the Emmy Awards, this time just three weeks after Hurricane Katrina. She joked, “You know me, any excuse to put on a dress.”

Mark Bingham

“We have the chance to be role models for other gay folks who wanted to play sports but never felt good enough or strong enough.”

Mark Bingham, a homosexual, was a shining light on one of the darkest days in American history. On September 11, 2001, passengers aboard United Flight 93 stormed the terrorists who had hijacked their plane. The 9/11 Commission concluded this heroism diverted the plane from its intended target, which was either the White House or the Capitol in Washington, and caused it to crash in an empty field near Shanksville, Pennsylvania.

Bingham hated losing and never backed down. He once protected his boyfriend from an attack by wrestling a gun from the mugger’s hand.

Bingham led the counterattack. He prevented the destruction of a national monument and saved lives. Standing 6-foot-4 and weighing 220 pounds, Bingham was a star athlete, a savvy entrepreneur, a fearless competitor and a man devoted to his family and friends. Bingham was the CEO of The Bingham Group, a successful public relations firm with offices in San Francisco and New York.

Bingham grew up in California, the son of Alice Hoglan, a single mom who struggled to make ends meet. He graduated from the University of California, Berkeley, where he helped the rugby team earn national championships in 1991 and 1993. He played on the San Francisco Fog, the city’s first gay rugby team.

About 20 minutes before Flight 93 went down, Bingham called his mother. “This is Mark Bingham,” were his first words. She immediately sensed something was wrong. “I love you” were the last words she heard from her son. Alice knew if there was any way to turn tragedy into triumph, Mark would lead the charge.

The Advocate named Bingham its 2001 Person of the Year. He was posthumously awarded the Arthur Ashe Courage Award in 2002. The Mark Kendall Bingham Memorial Tournament, an international rugby competition predominantly for gay and bisexual men, was established in his memory.

Appendix G

We are interested in different types of communication, particularly how people from one religion describe their beliefs to someone from a different religion. Please read the following description of a lesson from the Bible and write a brief description of the message of that passage to someone who is not Christian. While we understand that you may not believe in the Bible, we ask that you write these descriptions as though you did. We ask that you spend three minutes reading the passage and seven minutes writing a brief explanation. We will keep track of time and give you the writing materials at the appropriate time.

Appendix H

"Jesus believed in welcoming the outsider and breaking established boundaries. His famous parable of the Good Samaritan teaches that true neighborly behavior is not based on race or nationality but on reaching out to those in need, whoever they are. He also warned against people who thought they were without sin and had the right to judge others.

Likewise, prominent leaders in the early church such as the Apostle Paul strove to ensure that all, Jews and Gentiles, rich and poor, would be welcome together in following Jesus Christ. His apostolic letters were aimed at unifying communities divided by class, education, and traditions. Paul believed that Christianity must welcome and include everyone."

Appendix I

“Want a chance to win \$50? All you have to do is fill out a very short online survey to be entered into a raffle for \$50. If that’s not enough, we will also be asking a large group of the people who complete the survey to take part in a follow-up study. If you get selected for this study, you will get \$10 just for showing up to the lab!

In an effort to get representative data, we are trying to include participants from different student organizations, not just psychology students. We really hope that you take the time to consider helping us out with this. Also, just so you are aware, some of the material on the survey or in the lab will be about sensitive topics such as religion, race, sexuality, etc., etc.

So if you want to make some quick cash, click on the link below to complete the survey. Thanks for your time and we really appreciate your help.”

Appendix J

RESEARCH SUBJECT INFORMATION AND CONSENT FORM

TITLE: A study of attitudes towards and knowledge about social groups, the environment, and religion

PURPOSE OF THE STUDY

The purpose of this study is to examine the relationship between a person's communication style and his/her knowledge of social groups, the environment, and religion on their attitudes.

DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

If you decide to be in this research study, you will be given a set of surveys to fill out that include questions about your religious background. You will also be asked to write briefly about flowers, famous popular figures in society, or passages from the Bible. Following these tasks you will be given a few more surveys to complete about your attitudes toward certain aspects of the world. Some of these surveys deal with sensitive topics such as race, religion, sexuality, etc.

PRINCIPAL INVESTIGATOR

The principal investigator for this study is John Frank.

BENEFITS

The study is likely to yield generalizable knowledge to further society's understanding of the processes under study and to better the lives of people whom are discriminated against in society.

RISKS AND DISCOMFORTS

This project will take about 30-40 minutes of your time to complete as you perform the tasks and respond to the surveys. Some of the questions you will be asked deal with sensitive topics such as race, religion, sexuality etc. and this may cause discomfort. If at any time you feel upset or uncomfortable, then you should stop answering the survey. You are free to discontinue participation at any time and you will still get paid for your participation.

COUNSELING OPTIONS

If you experience any negative emotions or psychological distress as a result of participating in this interview you can seek assistance from the University of Richmond's Counseling and Psychological Services (E-mail: CAPS@richmond.edu or phone: (804) 289-8119).

ALTERNATIVES

This is not a treatment study, so there is no need to seek alternative treatments.

AGE REQUIREMENT

This study is intended for adults 18 years of age and older.

CONFIDENTIALITY

We will not tell anyone the answers you give us. Your responses will not be associated with you by name, at any time, and the data you provide will be kept secure. What we find from this study may be presented at meetings or published in papers, but your name will not ever be used in these presentations or papers.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study. You will receive compensation for participating regardless of whether or not you complete the study.

QUESTIONS

In the future, you may have questions about your participation in this study. If you have any questions, contact:

Primary Investigator -John Frank – john.frank@richmond.edu

Faculty Advisor - Dr. Crystal Hoyt – choyt@richmond.edu

If you have any questions concerning your rights as a research subject, you may contact Dr. R. Kirk Jonas, the Chair of the University of Richmond's Institutional Review Board for the Protection of Research Participants, at 001-804-484-1565 or at rjonas@richmond.edu.

CONSENT

The study has been described to me and I understand that my participation is voluntary and that I am free to withdraw my consent and discontinue my participation in the project at any time without penalty.

I understand that this study is intended for adults aged 18 and older and by participating in this experiment I attest that I am 18 years old or older.

I have read and understand the above information and I consent to participate in this study by signing below.

Signature and Date

Witness (experimenter)

Appendix K

Description of Study (Cover Story):

“As you may already know, this study is looking at communication styles and how they relate to our view of the world. Today you will be given a task that asks you to communicate some information to someone else. This will help us understand the different techniques you use to communicate with someone else while writing. We will also ask you to perform an online activity that examines how you organize information about the world. Finally you will be asked to answer some quick questions about different aspects of the world around you. Thanks again for your participation and if you have any questions, please let us know.”

Intro to IAT:

“The second part of this study involves looking at how people see the world around them. We are interested in whether or not there is a relationship between the way people communicate and the way they perceive others. We ask you now that you complete this online task. Part of the task will have you associate good and bad words to the right or left of your keyboard. Additionally, you will also have to associate different groups of people to one side or the other. The social group that is used in your task will be randomly assigned. The possible groups that you could be exposed to are men, women, sports teams, different ethnic groups, the elderly, people from Different religions, homosexuals, famous musicians, and actors and actresses.”

Intro to first survey:

“While the computer program is able to judge reaction times, there are some questions it cannot answer. For those questions we have a survey we would like you to fill out. These questions are related to the group that you were exposed to in the computer program.”

Intro to housing survey:

“So you know, this study was inspired by recent diversity related incidents on campus. The housing office has asked us to include some questions in our surveys.”

Appendix L

“The purpose of this study was not really to look at communication styles. The task you completed was designed to change your attitudes toward homosexuals, unless you were in the flower group, the control. One group of participants wrote and thought about famous homosexuals. One theory about negative attitudes toward homosexuals claims that thinking about counterstereotypic, positive examples of homosexuals will reduce your stereotypes of that group and make your thoughts of homosexuals more positive. The other group of participants were asked to respond to Bible passages that we about acceptance and tolerance. The theory behind this intervention is that if people who believe in the Bible act in away that is different from what the Bible is saying they should do, then they will change their behaviors. The passages promoted acceptance, so we think that people who had intolerant attitudes in the past, will make their attitudes towards homosexuals more accepting. The computer task and follow-up questions were meant to test your attitudes and compare them to the control group.”