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Final Evaluation of *Halal in the Family*

Measuring Effects on
Implicit and Explicit
Anti-Muslim Bias

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EXECUTIVE SUMMARY

Developed by comedian Aasif Mandvi (a former *Daily Show* correspondent), Moore + Associates, Sweet 180 Productions, and a coalition of advocacy organizations, *Halal in the Family* is a web series that presents a sitcom parody featuring a Muslim American family. Designed to combat bias and prejudice against Muslims and to expose a broad audience to the realities of being Muslim in America, the series includes four 4-minute episodes (“The Amazing Race,” “B’ully,” “Spies Like Us,” and “A Very Spooq’y Halloween Special”), each focusing on a different challenge faced by Muslim Americans and their communities.

To determine whether watching the episodes would actually affect the way viewers think and feel about Muslim Americans, Moore + Associates engaged a team of scientists through Perception Institute, coordinated by Professor Rachel Godsil, to conduct an evaluation of the efficacy of the series in reducing anti-Muslim bias, increasing viewers’ support for laws to prevent discrimination against Muslims, and impacting the way viewers perceive Muslims. Over 2,000 people across the U.S. were a part of this evaluation study, which compared the effects of each episode against those of a portion of a public service announcement (PSA) entitled *Truth over Fear: Countering Islamophobia*, which uses traditional education techniques to address discrimination against Muslim Americans, as well as those of a video clip from the family sitcom *Everybody Loves Raymond* used as a content-neutral control.

The study measured the effects of the episodes using a survey that included questions designed to gauge participants’ general reactions to a particular episode, their “implicit” biases (attitudes and stereotypes of which they are not consciously aware), their explicit attitudes and stereotypes regarding Muslim Americans, their support for legislation that would be helpful to Muslim Americans, and their “mental picture” of Muslim Americans. This study emphasizes the “implicit” reactions to the videos because research has shown implicit attitudes to be more predictive of behavior than explicitly reported attitudes.

KEY FINDINGS

The study found that the *Halal in the Family* episodes were effective in using parody and humor to increase positive implicit and explicit attitudes toward Muslim Americans. As we detail in the report, different episodes had differing levels of positive impact. General findings regarding implicit and explicit attitudes are summarized below.

Implicit Attitudes

- ◆ Across all age groups, participants who viewed *Halal in the Family* showed a reduction in implicit anti-Muslim bias.
- ◆ The reduction in implicit anti-Muslim bias among young people (18-34 years old) who watched *Halal in the Family* as compared with those who watched *Everybody Loves Raymond* met the most conservative standard of statistical significance.
- ◆ The *Halal in the Family* episodes reduced implicit anti-Muslim bias among self-identified Conservatives, Liberals, and Moderates alike, although the effect was strongest among Liberals.
- ◆ Among Liberals, those with less implicit anti-Muslim bias also demonstrated a more positive “mental picture” of a Muslim American.
- ◆ It is notable that the traditional PSA, *Truth over Fear*, also reduced implicit anti-Muslim bias. There was no significant difference between the effects of the PSA and the *Halal in the Family* episodes.

Explicit Attitudes

- ◆ Those who viewed the *Halal in the Family* episodes showed an increase in explicit positive attitudes toward Muslim Americans as compared with those who watched *Everybody Loves Raymond*.
- ◆ The increase in positive attitudes among those who viewed “Spies Like Us,” an episode about governmental surveillance of Muslim Americans, as compared to those who viewed *Everybody Loves Raymond*, met the most conservative standard of statistical significance.
- ◆ Liberals reported the most positive attitudes toward Muslim Americans generally, but the increase in positive attitudes was largest among Conservatives and Moderates.
- ◆ Compared to those who viewed *Everybody Loves Raymond*, viewers of each of the *Halal in the Family* episodes reported an increased interest in learning how to prevent legal discrimination against Muslim Americans. This increase met the most conservative level of statistical significance.
- ◆ Those who watched the *Halal in the Family* episodes showed more than double the level of interest in learning how to prevent legal discrimination against Muslim Americans as compared with those who watched *Everybody Loves Raymond*.

CONCLUSIONS

The most important take-away from this study is that the *Halal in the Family* episodes significantly reduced anti-Muslim bias and increased positive attitudes toward Muslim Americans. Participants who watched *Halal in the Family* also had a greater interest in learning how to prevent discrimination against Muslim Americans than did participants who viewed the traditional family sitcom *Everybody Loves Raymond*.

These findings have several important implications. First, it is likely that the positive portrayal of the Muslim American family led viewers to feel more positively toward Muslim Americans. Second, it seems that the viewers did not “exceptionalize”¹ the characters, but rather took the positive portrayal as reflective of Muslim Americans more broadly.

Finally, a comparison of the results of viewing the *Halal in the Family* episodes and *Everybody Loves Raymond* sitcom, suggests that it was the intentional content addressing discrimination against Muslim Americans, not the comedic nature of the series, that was linked to more positive attitudes. This study does not conclude that comedy is more effective than traditional political education techniques at shifting viewers’ attitudes with a single viewing experience. However, the data below showing viewer numbers and social media engagement indicate the potential for broad impact of comedy videos with anti-discrimination themes.

- ◆ *Halal in the Family* episodes were viewed 620,000 times between early April and mid-July 2015.
- ◆ *Halal in the Family* Facebook organic posts: 2,462,237 (paid reach was more than 17 million).
- ◆ *Halal in the Family* Facebook page has been “liked” or “followed” by almost 20,000 people.
- ◆ *Halal in the Family* was featured within at least 100 prominent media outlets, including television shows (e.g., *Late Night with David Letterman*, *Morning Joe*, *The Daily Show*, *MTV News*), radio programs (e.g., *All Things Considered*, *The Leonard Lopate Show*), newspapers and news agencies (e.g., *The New York Times*, *Wall Street Journal*, *USA Today*, *AP*, *Religion News Service*), magazines (e.g., *Esquire*, *Variety*), web video programs and channels (*The Young Turks*, *AJ+*, *the Huffington Post*), and others.
- ◆ *Truth over Fear* has been viewed 10,000 times in total on YouTube.

1 Exceptionalism is a psychological phenomenon in which people see positive attributes or actions of members of another racial or ethnic group as unique to the individual but not relevant to overall stereotypes about the group (Gaertner & Dovidio, 2009).

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INTRODUCTION

While most Americans outwardly express support for equal treatment on the basis of religion and ethnicity, research, national surveys, and anecdotal evidence suggest that anti-Muslim sentiment has increased markedly in the 21st century.² The increase in hostile or biased attitudes has also been accompanied by a troubling rise in hate crimes against those perceived as Muslim.³ In the United States – which is simultaneously extremely diverse and highly segregated by race, ethnicity, and class – popular culture plays a key role in determining how we define identity groups (Nelson, 2006). Historically, popular culture has tended to underrepresent, marginalize, and make caricatures of members of different racial and ethnic groups (Ramasubramanian, 2010), who tend to be depicted within several formulaic tropes rather than as fully developed, unique characters (Bogle, 2001; Baptista-Fernandez & Greenberg, 1980; Berg, 1990). These characters often align with stereotypic characterizations of racial or ethnic groups, and their repeated representation on screen further entrenches those stereotypes in the minds of the viewers (Ramasubramanian, 2010). In fact, negative depictions of people of color have been shown to induce feelings of hostility among white viewers and to influence policy preferences (Ramasubramanian, 2010).

Given the role that popular culture has played in creating and maintaining negative stereotypes about minority groups, researchers believe this power can also be used to achieve positive outcomes. Academic and research literature has suggested that popular culture may be effective in shaping positive perceptions of groups such as Muslim Americans but that targeted evaluations of these approaches are needed to understand precisely how to achieve these goals (Manne et al., 2015).

Popular culture advocacy has two features that differentiate it from more traditional forms of advocacy: it is dynamically expressive, and it is accessible.⁴ Research tells us that popular culture can serve serious functions by teaching us about characters, places, things, or situations that we may not otherwise experience (Manne et al., 2015). Popular culture has the potential to be particularly impactful because it is enjoyable for its audiences, it can use humor to engage and educate, and because

2 See, e.g., Kurzman, C. (2014 February 13), Anti-Muslim sentiment rising in the U.S: What is happening to religious tolerance?, *Islami Commentary*; and Cashin, S. (2010), To Be Muslim Or “Muslim-Looking,” in America: A Comparative Exploration of Racial and Religious Prejudice in the 21st Century, 2 *Duke Forum for Law & Social Change* 125-139.

3 Hate crimes against Muslims in US have skyrocketed during ‘war on terror.’ (2015 February 12) *Reuters*.

4 Liz Manne Strategies, #PopJustice: Social Justice and the Promise of Pop Culture Strategies (forthcoming, fall 2015).

media such as television and film are a major means by which we define our social reality (Doveling et al., 2014).

To address the need for targeted evaluations of popular culture advocacy approaches, the *Halal in the Family* team created an innovative study to examine the impact of using a sitcom to reduce negative attitudes toward Muslims. Developed by Aasif Mandvi (a former Daily Show correspondent), Moore + Associates, Sweet 180 Productions, and a coalition of advocacy organizations, *Halal in the Family* is a web series that presents a sitcom parody featuring a typical Muslim American family. Designed to combat bias and prejudice against Muslims and to expose a broad audience to the realities of being Muslim in America, the series includes four 4-minute episodes (“The Amazing Race,” “B’ully,” “Spies Like Us,” and “A Very Spooq’y Halloween Special”), each focusing on a different challenge faced by Muslim Americans and their communities. The themes included surveillance and spying in Muslim communities in “Spies Like Us, online bullying and hate networks in “B’ully,” the effects of media bias in “A Very Spooq’y Halloween Special,” and the use of anti-Muslim prejudice for political gain in “The Amazing Race.”

DETAILS OF THE STUDY

Moore + Associates engaged a team of researchers through Perception Institute⁵ to design a study to evaluate the efficacy of *Halal in the Family* in reducing anti-Muslim sentiments and increasing interest in preventing discrimination against Muslims. In preparation for the evaluation, Perception Institute conducted two pre-studies: the first was a small study of self-identified Muslim Americans which was designed to ensure that none of the videos would be considered offensive to the primary community of concern; the second was a study of a nationally representative sample to identify whether any of the videos increased rather than decreased bias (called the “do no harm” study). Both of the pre-studies supported the decision to go forward with the full evaluation, which was carried out in July 2015.⁶

Study Design

The full evaluation study involved a national sample of 2,344 people and took place entirely online.⁷ The participants were randomly divided into six groups. Four of the groups watched a single 4-minute *Halal in the Family* episodes, the fifth group watched a clip from a PSA entitled *Truth over Fear* that uses traditional education techniques to address discrimination against Muslim Americans, and the sixth group watched a clip from the sitcom *Everybody Loves Raymond*.

Survey Design

All participants then completed an online survey to assess their attitudes toward Muslim Americans. The survey included the following elements:

- ◆ **Measure of Implicit Bias:** Participants’ unconscious attitudes toward Muslim Americans were measured by the Implicit Association Test (IAT). The IAT, the most widely used tool to measure implicit attitudes towards groups, assesses whether people take different amounts of time when linking positive and negative words to particular groups of people. In this study, the IAT measured the strength of associations between Muslim names (e.g., Akbar, Salim, Habib, Sharif) and evaluation

5 The study design was generated by Professor Rachel Godsil, Research Director at Perception Institute; Dr. Emily Balcetis, Associate Professor of Psychology at New York University and Director of the Social Perception, Action, and Motivation Lab; Benjamin Gonzalez, faculty in Political Science at Highline College; Jerry Kang, Professor of Law and Vice Chancellor of Equity, Diversity, and Inclusion at UCLA; and Justin Levinson, Professor of Law at the University of Hawai’i at Manoa and Director of the Culture and Jury Project. Ingrid Paelvar Paulin, a fellow at the University of California at Berkeley, assisted with data analysis.

6 The results of the pre-studies are available by request. The second pre-study was done in conjunction with Project Implicit, which hosted the study, including the Implicit Association Test, on their website.

7 The full study was conducted at the NYU Social Perception, Action, and Motivation Lab.

words (e.g., wonderful, peace, nasty, horrible) to measure how easily a person relates Muslim names with the concept of good.

- ◆ **Measure of Explicit Bias:** Participants used a 5-point Likert scale to self-report their level of agreement/disagreement with statements reflecting positive and negative attitudes toward Muslim Americans, perceptions of similarity between Muslims and other Americans, and their level of interest in learning how to prevent discrimination against Muslim Americans.
- ◆ **Reverse Correlation Task:** In this task, participants were presented with a series of face pairs depicted as degraded images and were asked to indicate which face appeared to be “Muslim American.” Composite images drawn from participants’ selections were evaluated by a new sample of naïve participants on selected traits, allowing researchers to form an aggregate measure of these trait ratings to reflect the positivity of the mental representation generated. This innovative technique goes beyond attitudes, capturing the mental representation that characterizes how participants “see” Muslim Americans.
- ◆ **Reactions to the Videos:** Participants were also presented with questions about how engaging, interesting, informative, and manipulative they found the videos to be.

The inclusion of implicit attitudes is an innovative and important way to assess anti-Muslim sentiment. The team chose to include measures of implicit attitudes because:

- ◆ Measures of implicit attitudes address the concern that participants may provide answers they believe are socially acceptable rather than candid responses.
- ◆ Often, behaviors are automatic and a result of implicit attitudes rather than a reflection of conscious beliefs and values.
- ◆ Implicit attitudes tend to be more predictive of behavior than explicit attitudes (Greenwald et al., 2015).

FINDINGS

The researchers compared the survey results of the participants in the six viewing groups with the goal of assessing the impact of *Halal in the Family* in comparison to that of the traditional PSA (*Truth over Fear*) and to the content-neutral sitcom (*Everybody Loves Raymond*). Through this comparison, the researchers were able to conclude that the impact of the content related to Muslim Americans combined with humor and parody is linked with decreased implicit biases and increased explicit attitudes.

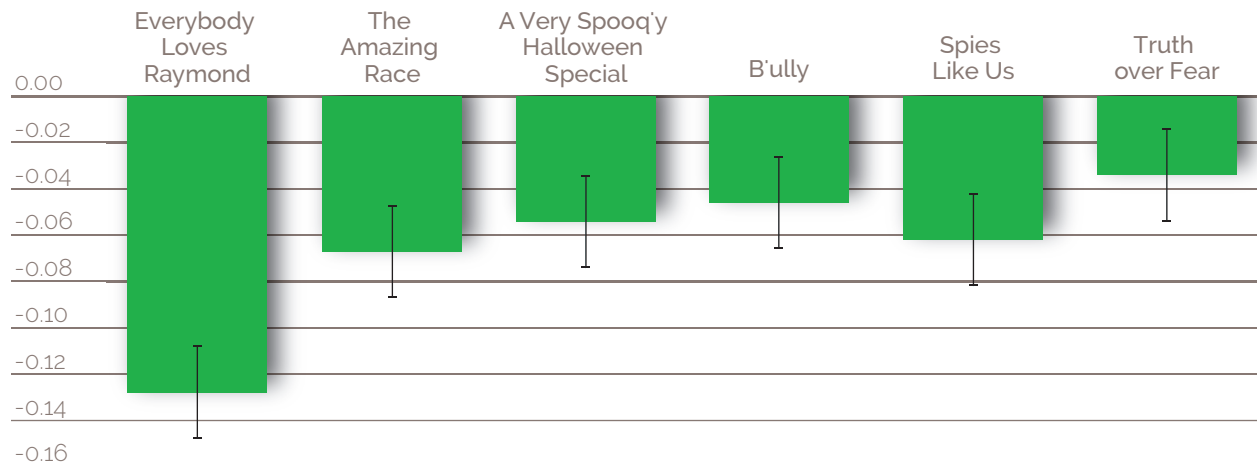
KEY FINDING: Participants who viewed the *Halal in the Family* episodes and the *Truth over Fear* PSA showed reduced implicit bias and increased positive explicit attitudes as compared to *Everybody Loves Raymond* viewers.

The details of findings are discussed below.

IMPLICIT ATTITUDES

Participants' level of anti-Muslim bias was characterized by their "IAT score" on the Implicit Association Test. The scores of viewers for each clip or episode are shown below; a more negative IAT score indicates more implicit anti-Muslim sentiment.

FIGURE 1. MEASURE OF IMPLICIT BIAS: IAT SCORES



Negative values reflect stronger anti-Muslim American associations. Errors bars reflect standard error.

Key Finding

Compared to *Everybody Loves Raymond*, all of the *Halal in the Family* episodes significantly reduced anti-Muslim bias.

- ◆ After watching the *Halal in the Family* episodes, participants of all age groups had less negative bias toward Muslims than those who watched *Everybody Loves Raymond*.
- ◆ Young people (18–34 years old) had the least anti-Muslim bias. Among young people, *Halal in the Family* significantly reduced anti-Muslim bias compared to *Everybody Loves Raymond*, using the most conservative standard of statistical significance.
- ◆ Each of the four *Halal in the Family* episodes reduced anti-Muslim bias. “A Very Spooq’y Halloween Special” and “B’ully” had the strongest effect, meeting the most conservative standards of statistical significance.
- ◆ Participants who identified themselves as politically Liberal had less anti-Muslim bias than those who identified as Moderate or Conservative.
- ◆ Participants who watched *Truth over Fear* also reported lower levels of negative bias than those who watched *Everybody Loves Raymond*.

Analysis

Using a simple effects t-test to adjust for the overall error in the model, the following differences are statistically significant

<i>Everybody Loves Raymond</i> vs. "The Amazing Race"	$t(2254) = 2.12, p = .034$
<i>Everybody Loves Raymond</i> vs. "A Very Spooq'y Halloween Special"	$t(2254) = 2.56, p = .01$
<i>Everybody Loves Raymond</i> vs. "B'ully"	$t(2254) = 2.83, p = .005$
<i>Everybody Loves Raymond</i> vs. "Spies Like Us"	$t(2254) = 2.28, p = .02$
<i>Everybody Loves Raymond</i> vs. <i>Truth over Fear</i>	$t(2254) = 3.27, p = .001$

Using appropriate but lenient criteria for establishing significance, we can conclude that watching the videos containing content addressing anti-Muslim discrimination decreased negative implicit bias toward Muslim Americans.

Using the most conservative correction for multiple tests (Bonferroni correction, setting the $\alpha = .01$), the following videos significantly decreased implicit anti-Muslim bias relative to the control condition (watching *Everybody Loves Raymond*):

- ◆ A Very Spooq'y Halloween Special
- ◆ B'ully
- ◆ *Truth over Fear*

Conclusion

Using the most conservative criteria for establishing significance, the PSA and two of the four episodes decreased negative implicit bias toward Muslim Americans relative to watching *Everybody Loves Raymond*.

Viewer's feelings about the videos were also related to their levels of implicit bias against Muslim Americans. For instance:

- ◆ Participants who felt the clip portrayed Muslims and non-Muslims in a fair way had less implicit anti-Muslim bias.
- ◆ Participants who found the clip engaging, interesting, and/or informative had less implicit anti-Muslim bias.
- ◆ Participants who found the clip manipulative had more negative implicit anti-Muslim bias.
- ◆ Participants who reported that they felt uncomfortable watching the clip had more negative implicit anti-Muslim bias.

EXPLICIT ATTITUDES

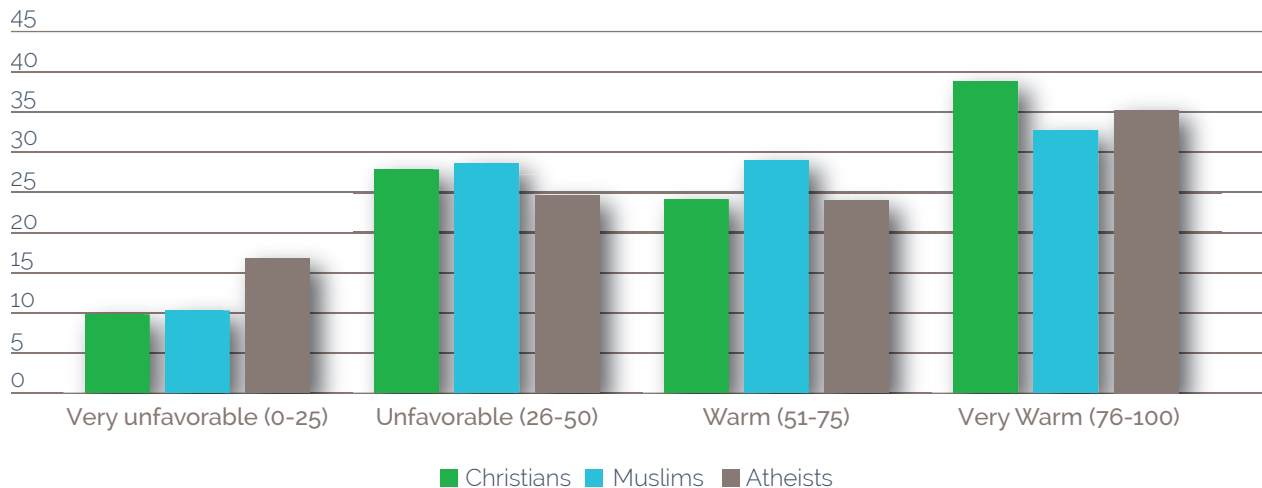
Attitudes toward and Stereotypes about Muslim Americans

Key Finding

Viewers who watched particular *Halal in the Family* episodes showed more positive explicit attitudes toward Muslim Americans, as compared to those who watched *Everybody Loves Raymond*.

Most Americans view themselves as religiously tolerant. Accordingly, it is not entirely surprising that, as the figure below illustrates, viewers' explicitly reported general attitudes toward Muslims do not differ markedly from attitudes toward Christians or atheists.

FIGURE 2. FEELING TOWARD DIFFERENT RELIGIOUS GROUPS



In this study, however, to assess explicit attitudes toward Muslim Americans more deeply, the study participants were asked to indicate their level of agreement with a series of statements (see Figure 3).

- ◆ Participants who watched the “A Very Spooq’y Halloween Special” or “Spies Like Us” episodes had more positive attitudes toward Muslim Americans, relative to those who watched *Everybody Loves Raymond*.
- ◆ Participants who identified themselves as Liberals in the study reported more positive explicit attitudes toward Muslims than those who identified themselves as Conservatives or Moderates.

FINAL EVALUATION OF HALAL IN THE FAMILY

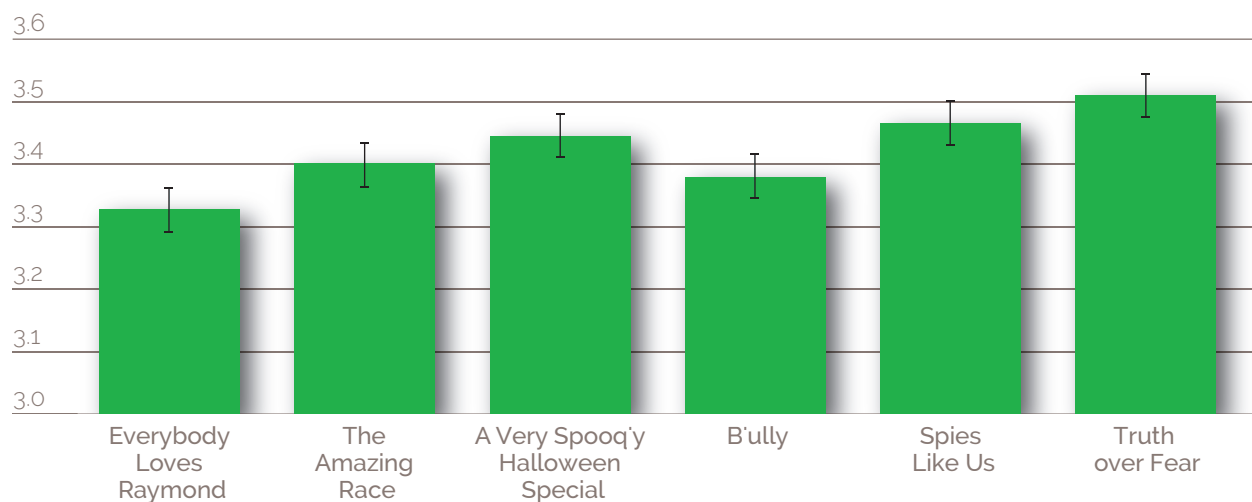
- ◆ Among Conservatives and Moderates, those who watched *Halal in the Family* episodes reported much more positive attitudes than those who watched *Everybody Loves Raymond*.
- ◆ Participants who watched *Truth over Fear* also had more positive explicit attitudes toward Muslims than those who watched *Everybody Loves Raymond*.

FIGURE 3. STATEMENTS RELATED TO EXPLICIT ATTITUDES

1. STRONGLY DISAGREE	2. SOMEWHAT DISAGREE	3. NEITHER AGREE NOR DISAGREE	4. SOMEWHAT AGREE	5. STRONGLY AGREE
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1. Muslims have different values than Americans.
2. The Islamic world is culturally backwards.
3. Islam and Christianity share the same universal ethical principles.
4. Muslims are dangerously fanatic.
5. I would be comfortable having a Muslim family move into my neighborhood.
6. I feel uncomfortable around Muslims.
7. It is wrong to lump together all Muslims.
8. Fundamentalist Islam does not represent all Muslims.
9. I would sign a petition supporting a program in schools addressing anti-Muslim bullying.

FIGURE 4. EXPLICIT ATTITUDES



Items that reflect negative sentiments were reverse-scored. Responses to all items were summed; higher scores indicate more positive attitudes. Error bars reflect standard error.

Analysis

Using a simple effects t-test to adjust for the overall error in the model, the following differences are statistically significant:

Everybody Loves Raymond vs. "A Very Spooq'y Halloween Special" ... $t(2337) = 2.22, p = .027$
Everybody Loves Raymond vs. "Spies Like Us" $t(2337) = 2.64, p = .0083$
Everybody Loves Raymond vs. *Truth over Fear* $t(2337) = 3.49, p = .0005$

The following showed no significant difference:

Everybody Loves Raymond vs. "The Amazing Race" $t(2337) = 1.40, p = n.s.$
Everybody Loves Raymond vs. "B'ully" $t(2337) = 1.00, p = n.s.$

Using the most conservative correction for multiple tests (Bonferroni correction, setting the $\alpha = .01$), the "Spies Like Us" episode and *Truth over Fear* PSA increased the positivity of explicit attitudes relative to *Everybody Loves Raymond*.

Conclusion

While all the *Halal in the Family* episodes improved positive explicit attitudes, the increase reached statistical significance only with the "Spies Like Us" episode and the *Truth over Fear* PSA.

Interest in Learning about How to Prevent Discrimination against Muslim Americans

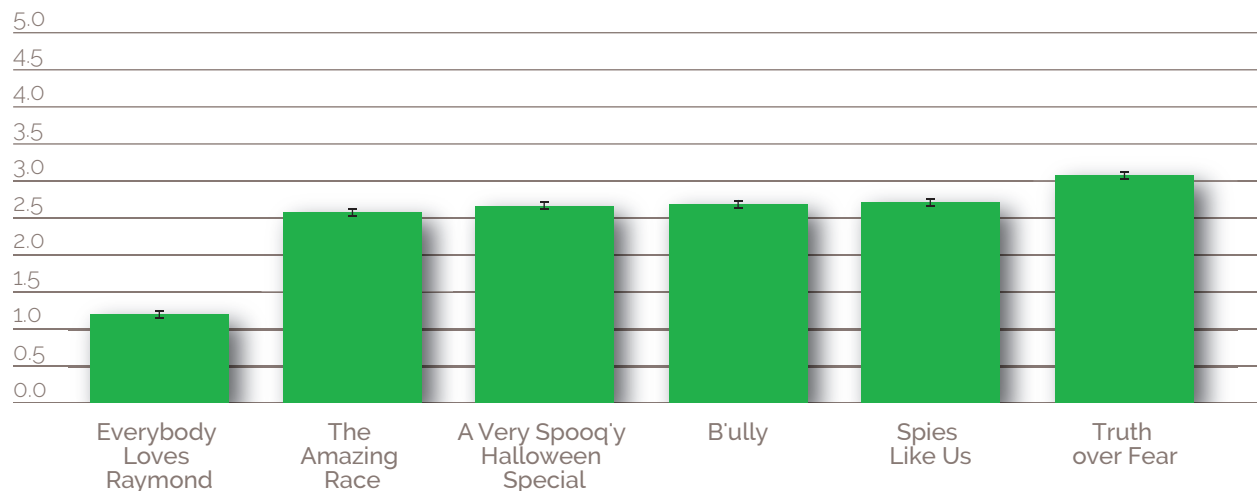
Key Finding

Compared to participants who watched *Everybody Loves Raymond*, those who watched *Halal in the Family* were more interested in learning how to prevent discrimination against Muslim Americans.

Using a 5-point scale, participants indicated how strongly they agreed with the statement “The video made me want to learn more about how to prevent discrimination against Muslim Americans.”

- ◆ Participants who watched any of the *Halal in the Family* episodes had more interest in learning about how to prevent discrimination against Muslim Americans than did those who watched *Everybody Loves Raymond*.
- ◆ These higher levels of interest were seen across all political ideologies.
- ◆ Overall, participants who watched the *Halal in the Family* episodes had more than twice the level of interest in learning how to prevent discrimination against Muslim Americans as compared with those who watched *Everybody Loves Raymond*.
- ◆ Participants who watched *Truth over Fear* also had more interest in learning how to prevent discrimination, compared to those who watched *Everybody Loves Raymond*.

FIGURE 5. INTEREST IN LEARNING HOW TO PREVENT DISCRIMINATION AGAINST MUSLIMS



1 = strongly disagree, 5 = strongly agree. Errors bars reflect standard error.

Analysis

Using a simple effects t-test to adjust for the overall error in the model, the following differences are statistically significant:

Everybody Loves Raymond vs. "The Amazing Race":..... $t(2336) = 22.27, p < .001$
Everybody Loves Raymond vs. "A Very Spooq'y Halloween Special" $t(2336) = 23.56, p < .001$
Everybody Loves Raymond vs. "B'ully":..... $t(2336) = 24.05, p < .001$
Everybody Loves Raymond vs. "Spies Like Us":..... $t(2336) = 24.38, p < .001$
Everybody Loves Raymond vs. *Truth over Fear*:..... $t(2336) = 30.35, p < .001$

Using the most conservative correction for multiple tests (Bonferroni correction, setting the $\alpha = .01$), all *Halal in the Family* episodes and *Truth over Fear* significantly increased interest in learning about how to prevent discrimination, relative to *Everybody Loves Raymond*.

Conclusion

The *Halal in the Family* episodes and *Truth over Fear* PSA increased participants' interest in learning how to prevent discrimination against Muslim Americans.

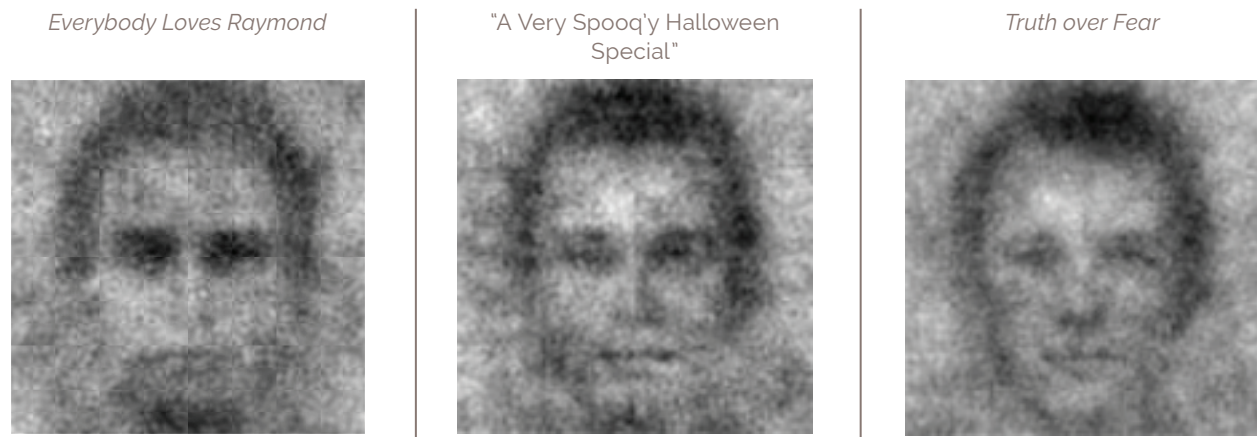
REVERSE CORRELATION TASK:

HOW PEOPLE SEE MUSLIM AMERICANS

As noted above, this technique assesses the ways participants literally “see” other people. In this task, participants were presented with a series of face pairs depicted as degraded images upon which visual noise was overlaid. Participants then indicated which face of the pair appeared to be “Muslim American.” After presenting many pairs, the researchers averaged together the images the participant selected through a program which generated a single composite image depicting the mental picture each participant holds of a Muslim American. These composite images, which vary widely across participants (see Figure 5, below), were evaluated by a new sample of naïve participants on many traits, including competence, warmth, trustworthiness, aggressiveness, and anger. The researchers then formed an aggregate measure of these trait ratings to reflect the positivity of the mental representation generated.

The examples of composite images from study participants in Figure 5 illustrate the relatively more positive representation of a Muslim American drawn after participants watched a *Halal in the Family* episode or the *Truth over Fear* PSA, as compared with those of participants who viewed *Everybody Loves Raymond*.

FIGURE 6. EXAMPLES OF COMPOSITE IMAGES



Key Finding

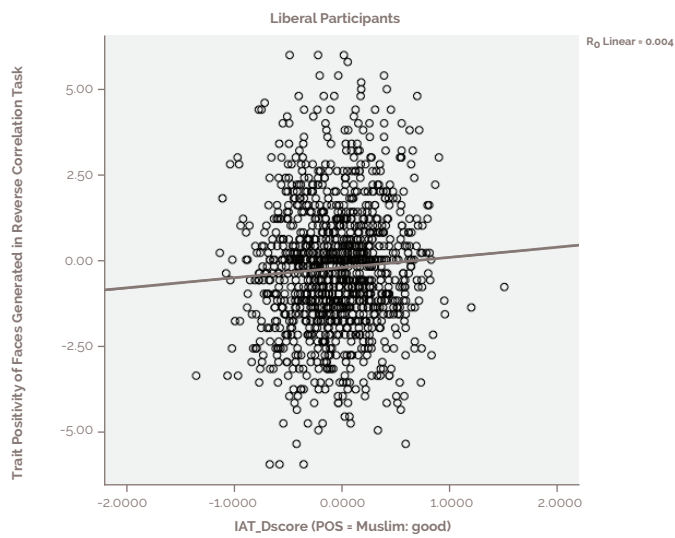
Among Liberal participants, those with less anti-Muslim bias quite literally saw Muslim Americans in more positive ways.

Analysis

The researchers compared the composite face images of all participants in the study and found that, among Liberal viewers, there was a clear relationship between IAT scores and the trait ratings of their composite image.

- ◆ The lower their IAT score (indicating less negative implicit bias), the more positively they mentally represented Muslim Americans.

FIGURE 7. RELATIONSHIP BETWEEN IAT SCORE AND REVERSE CORRELATION TASK RATINGS AMONG LIBERAL PARTICIPANTS



DISCUSSION

Research findings indicate that media portrayals of individual members of particular groups can lead to generalized attitude change toward that group (Manne et al., 2015). This evaluation study makes a significant contribution to the knowledge in the field of how attitudes are affected by media portrayals of Muslim Americans. The study drew from a national audience and measured the effects of video portrayals using an array of measures of both implicit and explicit attitudes, as well as newly developing techniques, such as the reverse correlation task.

The most important take-away from this study is that the *Halal in the Family* episodes significantly reduced anti-Muslim bias and increased positive attitudes toward Muslim Americans. Participants who watched *Halal in the Family* also had a greater interest in learning how to prevent discrimination against Muslim Americans, compared to participants who viewed the content-neutral family comedy *Everybody Loves Raymond*.

These findings have several important implications. First, it is likely that the positive portrayal of the Muslim American family led viewers to feel more positively toward Muslim Americans. Second, it seems that the viewers did not “exceptionalize” the characters – in other words, they did not see the positive attributes or actions of the characters as unique to the individual, as opposed to broadly relevant to stereotypes about Muslim Americans. Finally, by comparing the clips to another comedy, the study suggests that it was the intentional content addressing discrimination against Muslim Americans, not the comedic nature of the series, that was linked to more positive attitudes.

Of note, the traditional PSA, *Truth over Fear*, also reduced implicit anti-Muslim bias, and no significant difference was found when comparing this effect to that of *Halal in the Family*. Thus, the study cannot definitively conclude that popular culture in the form of comedy is more effective than traditional political education techniques at shifting viewers’ attitudes. However, the data obtained from sources outside of this study showing the broad reach of the series suggest that comedy may be more effective than traditional approaches in the long run because of its potential for broader reach and repeated viewings.

According to data obtained by Moore + Associates, the *Halal in the Family* episodes were viewed more than 620,000 times between early April and mid-July 2015. By contrast, *Truth over Fear* has been viewed 10,000 times in total on YouTube. *Halal in the Family* Facebook posts resulted in a total organic (non-paid) reach, including the videos themselves, of 2,462,237; paid reach was more than 17 million. The *Halal in the Family* Facebook page has been “liked” or “followed” by almost 20,000 people. During the campaign there were 129 posts, three of which generated almost 30,000

comments, likes, or shares. Finally, the series was featured within at least 100 prominent media outlets, including television shows (e.g., *Late Night with David Letterman*, *Morning Joe*, *The Daily Show*, *MTV News*), radio programs (e.g., *All Things Considered*, *The Leonard Lopate Show*), newspapers and news agencies (e.g., *The New York Times*, *Wall Street Journal*, *USA Today*, AP, Religion News Service), magazines (e.g., *Esquire*, *Variety*), web video programs and channels (*The Young Turks*, *AJ+*, the *Huffington Post*), and others.

Total media impressions (which measure potential audience across media) from this coverage was close to 600 million. The majority of these impressions were not from liberal media sources. Almost 400 million media impressions came from mainstream sources like *The David Letterman Show*, *USA Today*, and the *Christian Science Monitor*.

Even though viewers' explicit attitudes were more positive than we might expect, the study demonstrated significant anti-Muslim implicit bias across participants, highlighting the urgent need for interventions such as this to combat negative portrayals of and stereotypes about Muslim Americans in society. The *Halal in the Family* series and other similar efforts promise to be an effective method for shifting the public's perception of Muslim Americans.

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APPENDIX 1

ADDENDUM TO THE REPORT

The primary findings from the *Halal in the Family* evaluation were obtained using a statistical test called a t-test. This test compares the average (mean) scores between the six study groups and tells us if they are different enough to be statistically significant. We observed differences in the IAT scores and explicit attitudes scores across the groups, and the t-test demonstrated that these differences reached statistical significance. The t-tests clearly showed that the group who watched the *Halal in the Family* clips had more positive attitudes toward Muslim Americans than those who watched *Everybody Loves Raymond*, suggesting that the *Halal in the Family* clips impacted viewers' attitudes.

This appendix summarizes findings from additional statistical analyses to isolate the impact of the clips from other factors that have been found to affect people's attitudes (e.g., demographics like age or race). The analysis of findings in the main evaluation and in this appendix will be developed further for peer review.

SUMMARY OF FINDINGS

Three different explicit scales were examined to assess the impact of the *Halal in the Family* videos on 1) support for anti-discrimination laws, 2) positive attitudes towards Muslims, and 3) perceived similarity of Muslims to other Americans. We used logistic regression, an advanced statistical technique, to isolate the impact of key factors on participants' attitudes. Specifically, we looked at which variables (e.g., having watched a *Halal in the Family* episode, possessing certain demographic characteristics) led participants to score the highest on a 3-point scale ranked from 1 (low) to 3 (high). Unlike the t-test, the ordinal scale (ranging from 1 to 3, or low to high) used in the logistic regression models does not measure all changes in attitudes, but only those that reach a certain level of significance.

The logistic regression analyses show that two of the episodes had positive effects on explicit support for anti-discrimination laws, "A Very Spooq'y Halloween Special" and "Spies Like Us." Viewing either of these episodes (compared to either the control, the *Truth over Fear* PSA or the other Halal clips) increased the likelihood that participants would score a 3 (the highest category) in support for anti-discrimination laws. In terms of pro-Muslim attitudes, the Halal episodes neither increased nor decreased the likelihood of scoring a 3 on the Muslim attitude scale. The last scale examined was perceptions of Muslim similarity. Participants were asked four questions about the similarity of Muslims to other Americans and here, as with support for

anti-discrimination laws, we find that the three of the episodes had a positive effect. The “Spooq’y,” “Spies Like Us” and “Amazing Race” videos all increased the likelihood of scoring a 3 on the Muslim Similarity Scale, meaning that they made it more likely that participants would see Muslims as being very similar to other Americans.

DETAILS OF ADDITIONAL ANALYSES

Three generalized logistic regressions were run to assess both the impact of the videos and the effects of demographic variables on attitudes. The logistic regression allows us to include all of these variables at the same time, so we can see which ones have the biggest impact on attitudes.

Generalized logistic regressions allow us to examine the impact of the videos on an ordinal dependent variable with three levels while accounting for variables that violate the parallel lines assumption necessary for ordered logistic regression, which did occur with some of the independent variables. Two sets of coefficients are returned when using this form of regression, the first comparing the likelihood of scoring low versus the combined high and average categories and the second set comparing the combined low and average categories to the high category. This latter set of coefficients is what is examined in this report, so any statically significant effect either increases or decreases the likelihood of scoring in the highest category. For all three of the scales (support for pro-Muslim laws, pro-Muslim attitudes, and Muslim similarity) scores one standard deviation below the mean were assigned a one, those less than one standard deviation below or above were assigned a two, and those scores one standard deviation or more above the mean were assigned a three. Thus, 1=low Muslim positivity, 2=average Muslim positivity and 3=high Muslim positivity for the purposes of the models. Table 1 shows the mean and standard deviation for the three dependent variables and Table 2 the percentage of participants in each category.

TABLE 1. MEAN AND STANDARD DEVIATION FOR DEPENDENT VARIABLES

Dependent Variable	Range	Mean	Standard Deviation
Support for Anti-Discrim. Laws	1 to 5	3.7	.77
Pro-Muslim Attitudes	1 to 5	3.80	.80
Muslim Similarity	1 to 4	2.51	.71

TABLE 2. DISTRIBUTION OF PARTICIPANTS ACROSS THE THREE LEVELS OF THE DEPENDENT VARIABLE

Dependent Variable	Low	Average	High
Support for Anti-Discrim. Laws	13%	72%	15%
Pro-Muslim Attitudes	17%	68%	15%
Muslim Similarity	18%	65%	17%

FINAL EVALUATION OF HALAL IN THE FAMILY

The first model examines the impact of the various videos on strong support for anti-discrimination laws. The questions used to create the scale appear below in Table 3.

TABLE 3. SUPPORT FOR ANTI-DISCRIMINATION LAW SCALE, CODED FROM 1 (STRONG OPPOSITION) TO 5 (STRONG SUPPORT)

- Q1** A law that supports equal opportunities for employment for people of all religious groups including Muslim Americans.
- Q2** A law banning discrimination against members of all religious groups including Muslims when attempting to rent, buy, or lease housing.
- Q3** A law legalizing the adoption of children by members of all recognized religious groups including Muslims.
- Q4** An amendment to a law that already bans hate crimes; the amendment would include mention of specific religious groups including Muslims.

Table 4 shows the variables that were statistically significant in the model. A positive coefficient indicates that the variable in question increased the likelihood that a participant would score a 3, or the highest level of support for pro-Muslim laws, while a negative coefficient indicates that the variable in question decreases the likelihood of scoring a 3 versus either a 1 or 2. The size of the coefficient indicates the magnitude of the effect, with larger coefficients indicating a larger effect.

TABLE 4. STRONG SUPPORT FOR ANTI-DISCRIMINATION LAWS – SIGNIFICANT VARIABLES ONLY WITH COEFFICIENTS AND SIGNIFICANCE LEVELS

Independent variable (sig. only)	Coefficient
Spoop'y	0.373**
Spies.....	0.376**
Truth over Fear	0.460***
White.....	-0.280*
Conservative	-0.685***
Moderate	-0.432***
Income \$40-60K	-0.279**
Has a Black friend.....	0.351***
Has a Muslim friend	0.523***

p<.10=*, *p*<.05=**, *p*<.01=***

As Table 4 shows, we found positive effects for two of the *Halal in the Family* videos, “Spoop’y” and “Spies Like Us,” both of which were statistically significant at the *p*<.05 level. Both videos increased the likelihood of scoring in the high category of support for anti-discrimination laws. The *Truth over Fear* PSA had a similar but stronger effect than either of the *Halal in the Family* clips.

FINAL EVALUATION OF HALAL IN THE FAMILY

Having a Black or Muslim friend increased the likelihood that one would exhibit strong support for anti-discrimination laws. Identifying as white or ideologically as a Conservative or Moderate decreased the likelihood of strong support for anti-discrimination laws, as did being in the lowest income bracket (making \$40,000 to \$60,000 a year).

The second model looks at the effect of the videos on attitudes towards Muslims, scored from negative to positive. The questions used for the scale appear in Table 5, while Table 6 isolates the significant variables and their coefficients.

TABLE 5. PRO-MUSLIM ATTITUDE SCALE, CODED FROM 1 (VERY NEGATIVE) TO 5 (VERY POSITIVE)

- Q1** Muslims have different values than Americans.
- Q2** The Islamic world is culturally backwards.
- Q3** Islam and Christianity share the same universal ethical principals.
- Q4** Muslims are dangerously fanatic.
- Q5** I would be comfortable having a Muslim family move into my neighborhood.
- Q6** I feel uncomfortable around Muslims.
- Q7** It is wrong to lump together all Muslims.
- Q8** Fundamentalist Islam does not represent all Muslims.
- Q9** I would sign a petition supporting a program in schools addressing anti-Muslim bullying.

TABLE 6. STRONG PRO-MUSLIM ATTITUDES - SIGNIFICANT VARIABLES ONLY WITH COEFFICIENTS AND SIGNIFICANCE LEVELS

Independent variable (sig. only)	Coefficient
Truth over Fear	0.359**
18-34	0.387**
Female	0.440***
Conservative	-1.486***
Moderate	-0.367***
Christian.....	-0.374***
Income \$40-60K.....	-0.281**
Post-graduate degree.....	0.434**
Has a Muslim friend	0.585***

p < .10 = *, *p* < .05 = **, *p* < .01 = ***

In this model, none of the *Halal in the Family* clips had a significant effect on pro-Muslim attitudes, so they do not appear in Table 6. The *Truth over Fear* PSA increased the likelihood of expressing strong pro-Muslim attitudes at a significance level of $p < .05$. Demographically, being 18-34 years old, female, having a post-graduate degree, or having a Muslim friend all increased the likelihood that strong pro-Muslim attitudes would be expressed. The largest effect was having a Muslim friend. Identifying as a Conservative, Moderate or Christian all decreased the likelihood of having strong pro-Muslim attitudes, as did being in the lowest income bracket (\$40-60k). Being a self-identified Conservative had the largest effect of any variable in the model.

The last model looked at how similar the participants perceived Muslims to be compared to other Americans and whether the *Halal in the Family* clips had any effect on perceptions of similarity/dissimilarity. The questions used for the scale appear in Table 7.

TABLE 7. QUESTIONS FOR MUSLIM SIMILARITY SCALE, CODED FROM VERY DIFFERENT (1) TO VERY SIMILAR (4)

- Q1** How different or similar do you think Muslims living here are to other Americans like yourself in the values that they teach their children?
- Q2** How different or similar do you think Muslims living here are to other Americans like yourself in their religious beliefs and practices?
- Q3** How different or similar do you think Muslims living here are to other Americans like yourself in their sexual values or sexual practices?
- Q4** How different or similar do you think Muslims living here are to other Americans like yourself in the language that they speak?

The results of the logistic regression model are shown in Table 8 below:

TABLE 8. HIGH PERCEIVED SIMILARITY BETWEEN MUSLIMS AND OTHER AMERICANS - SIGNIFICANT VARIABLES ONLY AND ODDS RATIOS

Independent variable (sig. only)	Coefficient
Spoop'y	0.394**
Spies.....	0.504***
Amazing Race.....	0.268*
Truth over Fear	0.483***
Female	0.169*
Conservative	-0.630***
College graduate	0.264*
Post-graduate degree.....	0.575***
Has a Black friend	0.206**
Has a Muslim friend	0.554***

$p < .10^*$, $p < .05^{**}$, $p < .01^{***}$

FINAL EVALUATION OF HALAL IN THE FAMILY

As with support for pro-Muslim laws, we found significant effects for a number of the *Halal in the Family* clips. “Spooq’y,” “Spies Like Us” and “Amazing Race” all made it more likely that participants would score a 3 (in the highest category) for perceptions of Muslim similarity. “Spies Like Us” had an even stronger effect than the *Truth over Fear* PSA on participants’ perceptions of Muslims.

As with the first two models, being female, having a post-graduate degree, or having a Black or Muslim friend all made it more likely that the participants would see Muslims as very similar to other Americans. Having a college degree had the same effect, though in terms of significance this barely met the $p < .10$ threshold normally used as a cut off in political science. Once again, identifying ideologically as a Conservative decreased the likelihood of strong perceived similarities between Muslims and other Americans.

SUMMARY

- ◆ “Spooq’y” and “Spies Like Us” both had a statistically significant positive effect on strong (1 standard deviation above the mean) support for anti-discrimination laws.
- ◆ When isolated from other factors, the *Halal in the Family* videos did not increase or decrease explicit pro-Muslim attitudes.
- ◆ “Spooq’y,” “Spies Like Us” and “Amazing Race” all had a statistically significant positive effect on perceptions of Muslim similarity, with “Spies Like Us” having the largest effect of any of the videos, including *Truth over Fear*.
- ◆ Demographically, being female and having a higher education (post-graduate degree) increased positivity toward Muslims in the form of more positive attitudes and a stronger perception that Muslims are not different than other Americans.
- ◆ Having a Black or Muslim friend also had strong positive effects across all three models.
- ◆ Identifying as a Conservative or Moderate ideologically tended to decrease the likelihood of strong support for anti-discrimination laws, highly positive attitudes toward Muslims, or a strong belief that Muslims do not differ significantly from other Americans.

CONCLUSION

The *Halal in the Family* episodes “Spooq’y” and “Spies Like Us” increased the odds of someone being in the highest category of support for anti-discrimination laws, as well as perceptions of Muslim similarity. The “Amazing Race” episode also had a significant effect on perceptions of Muslim similarity. These findings suggest that the videos are having their intended impact as measured by support for anti-discrimination laws, attitudes toward Muslims, and perceptions of similarities between Muslim and others.

**Science is nothing
but perception.**

~Plato



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