Appendix I: Methodology

METHODOLOGY

SSRS conducted a survey of Muslims and Jews for the Institute *for* Social Policy *and* Understanding from January 8 to January 24, 2018. The study investigated the opinions of Muslims and Jews regarding the government, the most important issues facing the country, faith customs and religious, race, and/or gender discrimination.

For the survey, SSRS interviewed 802 Muslim and 478 Jewish respondents, interviewing a total of 1,280 respondents. This report details the methodological components of the study: sample design, questionnaire design, programming, field operations, data processing, and weighting. The majority of all interviews (and all Jewish interviews) were completed by phone. Web panels were used to complete 350 interviews with Muslim respondents.

Sample Design

The sampling procedures were designed to efficiently reach the two low-incidence target populations of interest. These are listed below:

1) SSRS pulled a sample prescreened as Muslim households from the last five years of its weekly national omnibus survey of 1,000 randomly selected respondents to re-contact for this study.
2) SSRS pulled a sample prescreened as Jewish households from the last two years of its weekly national omnibus survey to re-contact for this study.
3) SSRS purchased a listed sample in both landline and cell phone frames from Experian, a sample provider with specific characteristics flagged for each piece of sample. Experian provided a sample with flags for Muslim households.
4) Finally, in an effort to supplement the number of Muslim interviews completed in the given time frame and with the amount of available prescreened sample, SSRS employed a web panel and completed the final 350 Muslim interviews via an online survey with a sample from a non-probability panel.

In total, 564 interviews were completed via cell phones, 366 via landline, and 350 via web survey. Table 1 summarizes the total number of interviews by sample type, religious affiliation, and frame.

Table One

	Muslims	Jews	Total
Landline Prescreened Muslim	52	2	54
Cell Prescreened Muslim	282	8	290
Landline Prescreened Jewish	0	227	227
Cell Prescreened Jewish	4	228	232
Experian Landline	77	8	85
Experian Cell	37	5	42
Web Panel	350	0	350
TOTAL	**802**	**478**	**1,280**

Questionnaire Design

The questionnaire was developed by the Institute *for* Social Policy *and* Understanding in consultation with the SSRS project team. Prior to the field period, SSRS programmed the study into CfMC 8.6 Computer Assisted Telephone Interviewing (CATI) software. Extensive checking of the program was conducted to ensure that skip patterns and sample splits followed the design of the questionnaire. SSRS project directors checked randomly generated data as an additional confirmation of program accuracy.

Field Procedures

Pretesting

Two nights of pretesting for the 2018 American Muslim Poll took place on January 2 and January 3, 2018. A total of four interviews were collected, all with Muslim respondents. Overall, the questionnaire flowed smoothly, and respondents provided thoughtful and reasonable responses to the questions. As a result of the pretest, SSRS recommended a few changes to the instrument that were approved and implemented prior to launch on January 8. ISPU also made changes due to the overall length of the survey and deleted some statements from multiple questions. They were the following:

1) SSRS requested changing the introduction by first changing the word "survey" to "study" as we were getting hang-ups once respondents heard the word "survey." SSRS also suggested shortening the introduction and

providing an "IF NEEDED" statement for the respondents if they wanted more information on the client sponsoring the survey, as SSRS staff were getting hang-ups in the introduction due to the length.

2) In QHH1 respondents seemed to be leery in response to the text, "Please be sure to include yourself and all the adults who live with you." We changed the text to, "Please be sure to include yourself."

3) Q7 was asked two waves ago with the text "the military," and SSRS inserted it into the program to match what was done previously. We needed to update in the questionnaire to match because it said, "a military," which matched the Google document. SSRS suggested leaving as is in the program to match two years ago.

4) Q11, Q11B, Q11C, SSRS bolded the words "religion," "race," and "gender" in each of these questions since they all sound similar to one another.

5) Q13: SSRS also recommended bolding the words "Aside from" so, again, the interviewer pays closer attention to these words and so the respondent understands that the questions is not about weddings and funerals. There seemed to be occasional confusion here.

6) Q14: SSRS recommended putting pronunciation text into the program for the following words, "hijab," "kippah," and "yarmulke" so the interviewers had no question as to how to pronounce them.

7) Some of the wording is very sophisticated and could be difficult for some respondents to understand. For example, in Q17a, use of "asset in my life," in Q19d, "political rhetoric," and in Q20e, "safeguarding." In Q17a, the wording was updated to read, "I see my faith identity as a source of happiness in my life." In Q19d, the wording was updated to read, "The negative things politicians say regarding Muslims is harmful to our country." In Q20e, SSRS updated wording to say "protecting" instead of "safeguarding."

8) Q16-Q19, SSRS suggested including something that indicated that each question had a new set of statements, such as " Now the next set of statements," "For this next set of statements," and "Again, please indicate…". Q17 was changed to "Now the next set of statements…" Q18 was changed to, "Again, please…". Q19 was changed to "Now, for another set of statements…"

9) Q16, Q18, Q19: SSRS suggested shortening the lists of items within questions (not the scales) or having a random set go to each respondent and so asking fewer of each person. In Q16, SSRS removed statement c,

which read, "I am embarrassed to be associated with my faith community." In Q18, SSRS removed statements f and h, which read, "Most Muslims living in the United States Are committed to social justice" and "Most Muslims living in the United States share my values." In Q19, SSRS removed statement c, which read, "The football players in the NFL who 'take a knee' during the National Anthem should be benched, fined or thrown out of the league." In Q20 we removed statement d, which read, "Allowing Syrian refugees into the US."

10) Q18: SSRS added "Most Muslims living in the United States" to the beginning of each statement in the list so that the interviewers were sure to read this every time.

11) Q3 and Q21 were also removed to shorten the survey. They read, "Q.3 In the past 12 months, have you worked with other people from your neighborhood to fix a problem or improve a condition in your community or elsewhere?" "Q21. Now I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one – a great deal, quite a lot, some or very little?"

Survey Administration

The field period for this study was January 8 to January 24, 2018. Using the CATI system, 930 interviews were completed. The remainder were completed via web survey. Both CATI and web programs ensured that questions followed logical skip patterns and that complete dispositions of all call attempts were recorded.

CATI interviewers received written materials about the survey instrument and received formal training for this particular project. The written materials were provided prior to the beginning of the field period and included an annotated questionnaire that contained information about the goals of the study, as well as detailed explanations as to why questions were being asked, the meaning and pronunciation of key terms, potential obstacles to be overcome in getting good answers to questions, respondent problems that could be anticipated ahead of time, and strategies for addressing the potential problems. Due to the sensitive nature of some of the questions, interviewers were given specific instructions on how to cope with respondents who seemed agitated or distressed by the questions.

Interviewer training was conducted immediately before the survey was fielded. Call center supervisors and interviewers were walked through each question from the

questionnaire. Interviewers were given instructions to help them maximize response rates and ensure accurate data collection.

In order to maximize survey response, SSRS enacted the following procedures during the field period:

- An average of seven follow-up attempts were made to contact non-responsive numbers (e.g. no answer, busy, answering machine).
- Each non-responsive number was contacted multiple times, varying the times of day and the days of the week that call-backs were placed using a programmed differential call rule.
- Interviewers explained the purpose of the study and, when asked, stated as accurately as possible the expected length of the interview (approximately 20 minutes).
- Respondents were offered the option of scheduling a call-back at their convenience.
- Specially trained interviewers contacted respondents who had initially refused to participate in the survey and attempted to convert them into completed interviews.

Screening Procedures

The target population of the survey was specified as people who identify their religion as either Muslim or Jewish. For landline respondents, if the person who answered the phone was neither Muslim nor Jewish, we asked if anyone in the household considered himself or herself to be a different religion than the respondent and, if so, what religion that would be. If another household member was Jewish or Muslim, we then asked to speak with that person. If no person in the household fit the religion criteria, we terminated the interview. Any cell phone respondent who was not a Muslim or Jew was immediately screened out of the survey since cell phone respondents are considered individual households for the purposes of the selection process.

Response Rate

Response rate for the ISPU survey was calculated using AAPOR's Response Rate 3 formula. This percentage divides the number of completed interviews in each sampling frame by the estimated number of eligible phone numbers in the frame. The response rate for the prescreened landline sample is 22.8%. The response rate for the prescreened cell phone sample is 24.7%. The response rate on the SSRS Omnibus poll, where sample was prescreened, is typically 7%. Finally, the combined response rate for all listed sample is 5.1%. The web panel response rate is 6.3%.

Data Processing and Deliverables

At the end of the field period SSRS delivered two banners of cross tabulations, including combination tables for multiple related questions and an SPSS data file. The final deliverables also included a methods report.

Weighting Procedures

Survey data were weighted to: 1) adjust for the fact that not all survey respondents were selected with the same probability and 2) account for non-response across known demographic parameters for the Jewish and Muslim adult populations.

1. Base Weight:

- **Total Probability of Selection Weight=**

The weighting process takes into account the disproportionate probabilities of household and respondent selection due to the number of separate landline and cell phones answered by respondents and their households, as well as the probability associated with the random selection of an individual household member.

Probability of selection (Pphone): A phone number's probability of selection depends on the number of phone-numbers selected out of the total sample frame. So for each respondent whose household has a landline phone number, this is calculated as total landline numbers dialed divided by total numbers in the landline frame. Conversely for respondents answering at least one cell phone number, this is calculated as total cell phone numbers divided by total numbers in the cell phone frame.

Probability of respondent selection (Pselect): In households reached by landline, a single respondent is selected. Thus, the probability of selection within a household is inversely related to the number of adults in the household.

Total probability of selection: This is calculated as the phone number's probability of selection (by frame), multiplied by the number of devices of each type the

respondent answers. For landlines, this divided by the number of adults in the household.[1] Thus, for each respondent a probability can be calculated for being reached via landline (LLprob) and for being reached via cell phone (Cellprob). These calculations are:

LLprob=Pphone*Pselect
Cellprob=Pphone

The sample weights derived at this stage are calculated as the inverse of the combined probability of selection, or:

1/(LLprob+Cellprob-LLprob*CellProb)

The final base-weight is fully calculated for those from the phone portion of this study. Since we are unable to calculate probability of selection for those from the web, those respondents were given a base-weight of 1.

2. Post stratification weighting:

Following application of the above base-weight, the full sample was post-stratified and balanced by key demographics such as age, race, sex, region, education, marital status, number of adults in the household, voter registration, and political party identification within the Jewish and Muslim portions of this study, separately, for the adult population 18 years of age and older. The sample was also adjusted by the distribution of phone usage of the Jewish and/or Muslim population (that is, by the proportion of those who are cell phone-only, landline-only, and mixed users).

Weighting was accomplished using SPSSINC RAKE, an SPSS extension module that simultaneously balances the distributions of all variables using the GENLOG procedure. The sample was balanced to match estimates of the Jewish and/or Muslim populations determined from two years of data collected through our SSRS Omnibus as well as informed by Pew Research Center estimates. This process of weighting was repeated until the root mean square error for the differences between the sample and the population parameters is zero or near-zero.

The population parameters used for post-stratification were: age (18-29, 30-49, 50-64, 65+), gender, U.S. Census region (Northeast, North-Central, South, West), education

1 To avoid extremely large or small weights, the maximum number of devices for each type of phone, and the maximum number of adults was capped at 3.

(less than high school, high school graduate, some college, four-year college or more); race/ethnicity (white non-Hispanic, Other non-Hispanic, Black non-Hispanic, Hispanic); marital status (single, married, other), registered voter (Yes/No), political affiliation (Republican, Democrat, Independent/Other), Number of Adults (1, 2, 3, or more), and phone-usage (cell phone only, landline only, both).

To handle missing data among some of the demographic variables, we employed a technique called hot decking. Hot deck imputation replaces the missing values of a respondent randomly with another similar respondent without missing data. These are further determined by variables predictive of non-response that are present in the entire file. We used an SPSS macro detailed in "Goodbye, Listwise Deletion: Presenting Hot Deck Imputation as an Easy and Effective Tool for Handling Missing Data" (Myers, 2011).

Weight truncation ("trimming"): Weights were trimmed to prevent individual interviews from having too much influence on the final results. The Jewish sample was truncated at the 5th and 95th percentiles and the Muslim sample was truncated at the 2nd and 98th percentiles. The following tables compare weighted and un-weighted sample distribution to target population parameters.

Table 1a. Weight Summary - Jewish Sample

	Parameter	Unweighted	Weighted
Sex			
Male	51.6	53.8	52.8
Female	48.4	46.2	47.2
Age			
18-29	20.1	10.0	15.0
30-49	25.4	17.8	24.1
50-64	25.5	29.3	28.1
65+	29	42.9	32.9
Education			
Less than high school	4.9	0.6	1.9
HS grad	18.5	10.5	16.5
Some college	18.9	15.7	19.1
College+	57.8	73.2	62.4
Race/Ethnicity			
White/Other	89.9	94.8	91.2
African American	3.5	2.5	3.5

Hispanic	6.6	2.7	5.3
Marital status			
Single/living with partner	29.2	22.6	25.7
Married	52.1	58.6	54.3
Other	18.6	18.8	20.0
Adults in HH			
One	23.2	26.2	25.2
Two	53.1	56.9	52.3
Three+	23.8	16.9	22.4
Region			
Northeast	36.3	41.0	34.4
North Central	12.4	11.7	12.6
South	27.6	26.6	29.7
West	23.7	20.7	23.4
Registered to vote			
Not registered	15.6	4.0	10.7
Registered	84.4	96.0	89.3
Party ID			
Rep	16.3	15.9	18.4
Dem	47.8	55.6	49.0
Independent/Other	35.9	28.5	32.6

Table 1b. Weight Summary – Muslim Sample

	Parameter	Unweighted	Weighted
Sex			
Male	55.4	56.2	55.5
Female	44.6	43.8	44.5
Age			
18-29	40.1	31.8	37.2
30-49	42.9	41.9	44.7
50-64	12.2	17.8	12.9
65+	4.8	8.5	5.1
Education			

LT HS	13.0	5.0	11.4
HS grad	32.3	21.2	32.0
Some college	21.9	24.1	22.4
College+	32.9	49.8	34.2
Race/Ethnicity			
White/Other	64.4	68.0	65.4
African American	28.2	24.1	27.8
Hispanic	7.5	8.0	6.8
Marital status			
Single/living with partner	40.2	37.7	38.5
Married	49.4	51.5	50.7
Other	10.4	10.8	10.8
Adults in HH			
One	14.6	15.6	15.0
Two	41.7	49.8	42.8
Three+	43.7	34.7	42.3
Region			
Northeast	30.5	28.9	31.3
North Central	22.0	20.1	22.0
South	29.0	36.4	28.8
West	18.5	14.6	17.8
Registered to vote			
Not registered	42.3	21.4	40.5
Registered	57.7	78.6	59.5
Party ID			
Rep	7.1	10.0	7.2
Dem	47.9	54.6	50.0
Ind/Other	45.1	35.4	42.8

Effects of Sample Design on Statistical Inference

Post-data collection, statistical adjustments require analytical procedures that reflect departures from simple random sampling. SSRS calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called "design effect" or "deff" represents the loss in statistical efficiency that results from systematic non-response.

SSRS calculates the composite design effect for a sample of size n, with each case having a weight, wi as:

$$deff = \frac{n\sum w_i^2}{(\sum w_i)^2}$$

In a wide range of situations, the adjusted *standard error* of a statistic should be calculated by multiplying the usual formula by the square root of the design effect ($\sqrt{deff}$). Thus, the formula for computing the 95% confidence interval around a percentage is:

$$\hat{p} \pm \left(\sqrt{deff} \times 1.96 \sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \right)$$

where $\hat{p}$ is the sample estimate and *n* is the un-weighted number of sample cases in the group being considered.

The survey's *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample—the one around 50%. For example, the margin of error for the entire Jewish sample is ±5.5 percentage points. This means that in 95 out every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than ±5.5 percentage points away from their true values in the population. Table 2 shows design effects and margins of sampling error for the Jewish and Muslim samples.

Table 2. Design Effects and Margins of Sampling Errors

	Number of Interviews	Margin of Error with Design Effect	Design Effect
Muslims	802	+/- 5.7 percentage points	2.75
Jews	478	+/- 5.5 percentage points	1.53

TRITON POLLING METHODOLOGY

ISPU Survey of U.S. General Public

The Institute *for* Social Policy *and* Understanding commissioned Triton to conduct a poll of the general American public between January 8 and January 24, 2018. From this overall sample, researchers examined the views of self-identified Protestants (parsing out white Evangelicals), Catholics, and those who are non-affiliated with a faith. Triton conducted a total of 1,201 interviews with respondents via live telephone calls to landlines and cell phones. The margin of error for this data set is a 95% confidence level ±2.8%. Weights were applied to the data on the basis of gender, age, region, and race.

Triton's live interview telephone surveys are conducted by our in-house, state-of-the-art call center located outside of Bend, Oregon. Triton's automated surveys are carried out by our proprietary, automated telephone survey system. All surveys incorporate standard statistical methods to select a representative sample of the target population.

Lists

Lists used to conduct Triton surveys are obtained from various sources, often the client, list vendors, government entities, and other sources. The type of list will vary by the nature of the survey, most often lists are of registered voters, random digit sampling, or consumer lists. Three attempts are made per contact to maximize participation from each contact in the sample.

Cell Phones

Triton utilizes numerous list vendors who can supply high-quality cell phone lists. This is increasingly important as more than a third of the nation is cell-only, and young people are much more likely than older people to be cell only.

Interviewing

Triton live interview surveys were conducted by Triton employees located in our Bend, Oregon call center. Triton's interviewers are among the most experienced in the industry in all aspects of polling and survey research. Typically, calls are placed from 5 pm to 9 pm local time during the week. Saturday calls are made from 11 am to 6 pm local time and Sunday calls from 1 pm to 8 pm local time. Triton's call center utilizes a custom developed Computer Assisted Telephone Interviewing system built upon Microsoft SQL Server.

Triton automated telephone surveys require that questions be digitally recorded and then loaded into a proprietary automated calling program. Respondents use the keypad on the phone to answer questions.

Online Panel Surveys

Triton Polling & Research conducts online surveys via a partner network comprised on the largest online panel universes in the United States. In total, Triton's partner network of online panels includes more than 8 million potential respondents.

Triton online surveys are non-probability surveys where respondents "opt-in" to participate. A random selection of respondents are invited to participate in the survey who meet on various demographic criteria including age, gender, location, ethnicity, religion, income, and education. An appropriate number of respondents are invited to participate who meet the various demographic criteria to ensure the sample reflects the demographic composition of the United States based upon the Census Bureau's American Community Survey.

Data Integrity, Weighting and Analysis

Data integrity and proper application of statistical methods are essential to gaining a true understanding of your survey audience. There are specific methods for cleaning, randomizing, and matching that must be adhered to in order to ensure statistically significant results. Triton employs enterprise grade software tools, including Microsoft SQL Enterprise Server 2012 and IBM SPSS, along with rigorous data-handling procedures.

Upon completion of calling, the raw survey data is weighted using industry-standard statistical procedures to ensure the sample reflects the overall population, typically in terms of age, gender, ethnicity, political party affiliation, geography, etc. This processing step is essential because different segments of the population answer the phone in different ways. For example, women answer the phone more than men, older citizens are home more and participate more often than younger people, and rural residents typically answer the phone more frequently than urban residents. Without a proper weighting model, in most cases survey samples are heavily skewed one direction or another and are not representative of the target population.