

# The Effect of Muslim Identity on Evaluations of Belonging in the U.S.

Appendix Figures and Tables

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### **Appendix 1: Country of Origin as Proxy for Race/Ethnicity**

A key contribution of this study is to examine how the ethnoracial category of MENA is understood. To that end, we examine which countries are commonly thought to be categorized as MENA by the public---in part, because there is no universally accepted or used definition of which countries belong in the MENA region. Iran, Libya, and Lebanon are always included in the definition of the MENA. Turkey is sometimes coded as European or Mediterranean, Afghanistan is often coded as a part of South Asia, and Sudan is often considered a part of Sub-Saharan Africa. Thus, we conducted two additional tests to examine the utility of counties as racial proxies, including which countries were viewed as MENA.

### **Study 1: Mechanical Turk**

In the first study, 122 respondents were conducted via MTurk from November 7 to 26, 2018. we set up the conjoint similar to the one presented in the main text. However, we also asked a question about how respondents would rate the skin pigmentation of the immigrant. No image accompanied the profile. We used an 11-point pigment scale (see Telles & Steele, 2012), and asked respondents to record what they believed the skin pigmentation would be for each immigrant.

Figure 1, below, shows the pigmentation scale we provided to respondents. Again, since no images accompanied the immigrant profiles, the results were about respondents' beliefs about the skin pigmentation of each immigrant. We then compared the mean pigmentation score by country of origin, to see whether individuals grouped Sudanese immigrants with the other MENA immigrants. That is, we wanted to see whether Sudanese were scored as being similar in pigmentation to Libyans, Iranians, and Lebanese.

*Figure 1: Skin Pigmentation Scale*



It is important to acknowledge that this is an imperfect measure, particularly because phenotype alone cannot determine race/ethnicity. However, race/ethnicity is generally understood as having harder boundaries, which often include skin pigmentation (Desmond and Emirbayer 2009; Omi and Winant 2015; Telles 2014).

Our results in Table 1, below, show Lebanese, Iranians, and Libyans were grouped similarly. The differences in the mean pigmentation score between these three countries were statistically insignificant. Moreover, the differences in the mean pigmentation score between these three countries and Sudan were all statistically significant. Lebanese, Iranians, and Libyans were all rated as having similar skin pigments, and that pigment was lighter than Sudanese. While Sudanese and Libyans are both North African, our pilot data suggest that respondents might not have grouped the two countries because of perceived racial differences.

*Table 1: Difference of Mean Pigment Score by Country*

<b>Lebanon</b> $\bar{x} = 4.984$ $sd = 1.812$	<b>Libya</b> $\bar{x} = 5.429$ $sd = 2.328$	<b>Sudan</b> $\bar{x} = 6.580$ $sd = 2.570$	<b>Pakistan</b> $\bar{x} = 5.592$ $sd = 1.701$	<b>India</b> $\bar{x} = 6.229$ $sd = 1.787$	<b>Bosnia</b> $\bar{x} = 4.017$ $sd = 1.858$	<b>Russia</b> $\bar{x} = 3.032$ $sd = 2.570$
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<i>Iran</i> $\bar{x} = 5.273$ $sd = 1.787$	$\Delta = -0.290$ $df = 249$ $p = 0.203$	$\Delta = 0.155$ $df = 206$ $p = 0.567$	$\Delta = 1.307$ $df = 194$ $p < 0.001$	$\Delta = 0.319$ $df = 254$ $p = 0.143$	$\Delta = 0.956$ $df = 256$ $p < 0.001$	$\Delta = -1.257$ $df = 240$ $p < 0.001$	$\Delta = -2.241$ $df = 245$ $p < 0.001$
<i>Lebanon</i> $\bar{x} = 4.984$ $sd = 1.812$		$\Delta = -0.445$ $df = 209$ $p = 0.106$	$\Delta = -1.596$ $df = 197$ $p < 0.001$	$\Delta = -0.608$ $df = 248$ $p < 0.01$	$\Delta = -1.245$ $df = 251$ $p < 0.001$	$\Delta = 0.967$ $df = 238$ $p < 0.001$	$\Delta = 1.952$ $df = 244$ $p < 0.001$
<i>Libya</i> $\bar{x} = 5.429$ $sd = 2.328$			$\Delta = -1.152$ $df = 219$ $p < 0.001$	$\Delta = -0.164$ $df = 200$ $p = 0.539$	$\Delta = -0.800$ $df = 206$ $p < 0.01$	$\Delta = 1.412$ $df = 212$ $p < 0.001$	$\Delta = 2.400$ $df = 220$ $p < 0.001$
<i>Sudan</i> $\bar{x} = 6.580$ $sd = 2.570$				$\Delta = 0.988$ $df = 187$ $p < 0.001$	$\Delta = 0.351$ $df = 193$ $p = 0.225$	$\Delta = 2.563$ $df = 201$ $p < 0.001$	$\Delta = 3.548$ $df = 209$ $p < 0.001$
<i>Pakistan</i> $\bar{x} = 5.592$ $sd = 1.701$					$\Delta = -0.637$ $df = 258$ $p < 0.01$	$\Delta = 1.575$ $df = 237$ $p < 0.001$	$\Delta = 2.560$ $df = 242$ $p < 0.001$
<i>India</i> $\bar{x} = 6.229$ $sd = 1.787$						$\Delta = 2.212$ $df = 241$ $p < 0.001$	$\Delta = 3.197$ $df = 247$ $p < 0.001$
<i>Bosnia</i> $\bar{x} = 4.017$ $sd = 1.858$							$\Delta = 0.985$ $df = 240$ $p < 0.001$

## Study 2: Student Sample

In Study 1, respondents may have thought of Sudanese as ‘African’, or ‘Black’, instead of ‘Middle Eastern or North African’. We test this possibility with another study. This second supplemental study was conducted at a large, Midwestern research university in March 2021 among undergraduate students. We asked 102 students to rate the race/ethnicity of the typical individual across many countries around the world. In Table 2, below, we see that Sudanese were classified as Black or African American 17.6 percentage points more than Middle Eastern or North African with a two-tailed significance of  $p < 0.01$ . On the other hand, we see respondents rated Libyans, Iranians, and Lebanese as Middle Eastern or North African at levels statistically significantly different from Black or African American.

Table 2: Difference of Mean Black versus MENA Assignment by Country of Origin

	Black or African American	Middle Eastern or North African	Difference
Sudan	0.578	0.402	0.176 ***

Libya	0.333	0.647	-0.314 ***
Iran	0.0	0.980	-0.980 ***
Lebanon	0.030	0.851	-0.821 ***
<i>Note:</i>	*p**p***p<0.01		

Yet another consideration is whether MENA is even appropriate for Libyans, Iranians, and Lebanese, given that they are legally classified as White in the US. In Table 1, above, we see the skin pigmentation of Libyans, Iranians, and Lebanese are all darker than Bosnians or Russians at a two-tailed level of  $p < 0.001$ . Moreover, in the same test of Midwestern undergraduate students, Libyans, Iranians, and Lebanese were all assigned as MENA at levels statistically higher than White. The results of the difference in mean White versus MENA assignment are presented in Table 3, below.

*Table 3: Difference of Mean Black versus MENA Assignment by Country of Origin*

	White	Middle Eastern or North African	Difference
Libya	0.0	0.647	0.647 ***
Iran	0.010	0.980	-0.970 ***
Lebanon	0.069	0.851	-0.782***
<i>Note:</i>	* p ** p *** p < 0.01		

Thus, Libyans, Iranians, and Lebanese are evaluated as MENA while Sudan is evaluated as Black. We feel confident that this grouping is the most accurate in minimizing measurement error.

## **Appendix 2: Demographics**

The demographic markers of the respondents generally align with the national averages for non-Latinx, White Americans. Table 4, below, displays the respondent demographics alongside the national benchmarks. The largest differences are that the sample is slightly younger than the national benchmarks. 67% of respondents were aged 18 to 54 relative to the national benchmark of 59.4%. The respondents were also slightly more educated than the national benchmarks. 40.5% of respondents had a 4-year college degree relative to 20.9% of the US population. Respondents were also slightly less wealthy than the national benchmarks. Following Druckman and Kam (2011), the differences between respondent and general population benchmarks matter for external validity if these variables consistently moderate treatment effects. In the figures below, we show that they do not.

*Table 4: Demographic Characteristics (All whites, non-Latinx)*

	<u>US Census 2018</u>	<u>Respondents</u>
Male	49%	49.3%
Female	51%	50%
18-34	27.6%	30.5%
35-54	31.8%	36.5%
55-64	17.5%	15.1%
65+	23.1%	17.9%
Less than a high school diploma	9.8%	1.3%
High school graduate (or equivalent)	27%	24.8%
Some college or associate degree	29.3%	40.5%
Bachelor's degree	20.9%	21.6%
Graduate or professional degree	13%	11.8%
Income below \$50,000	35.2%	41.1%
\$50,000 or higher	64.6%	58.9%

Again, we confirm these differences undermine my inferences since none of these variables' moderate treatment effects for gender, age, education, and income.

Figure 2, below, shows that the respondent's gender does not moderate treatment effects. There are no systematic differences in preferences of which immigrants to give a green card to, based upon gender. Thus, the relationship between which immigrant profile is selected does not differentially change based upon the respondent's gender.

- What is your gender?*
- o Male (1)*
  - o Female (2)*
  - o Non-binary (3)*

Figure 2: AMCE Based Upon Respondent Gender

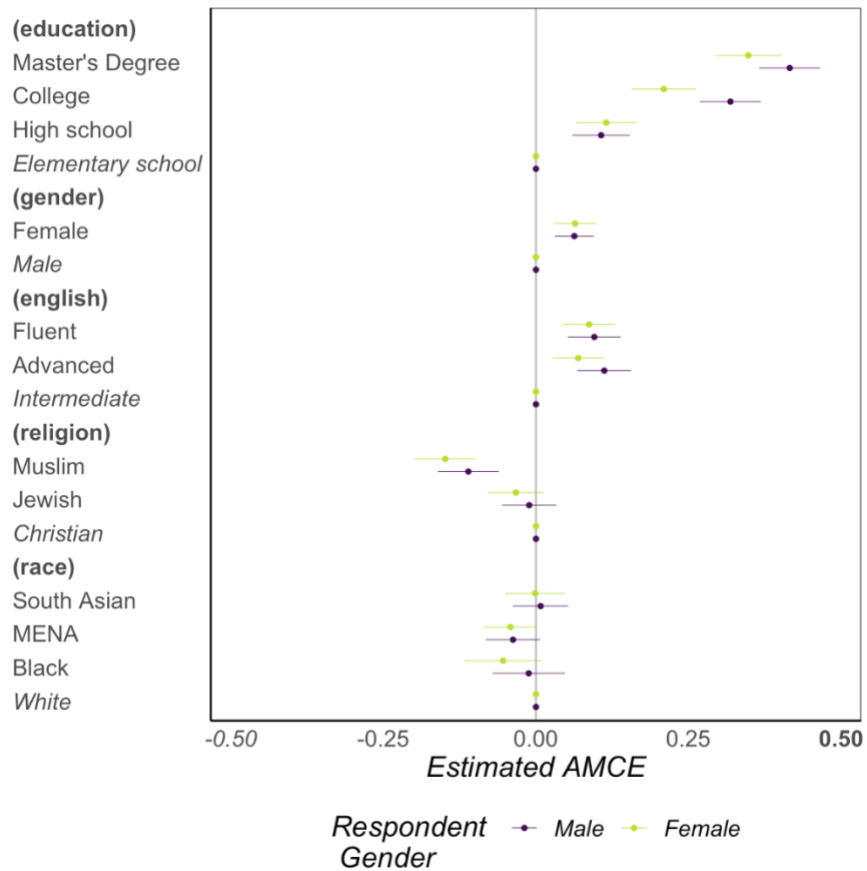




Figure 3, below, shows that age, broken up into four cohorts, does not moderate treatment effects. There are no systematic differences in preferences of which immigrants to give a green card to, based upon age cohort. Thus, the relationship between which immigrant profile is selected does not differentially change based upon the age of the respondent.

*How old are you?*

Figure 3: AMCE Based Upon Respondent Age

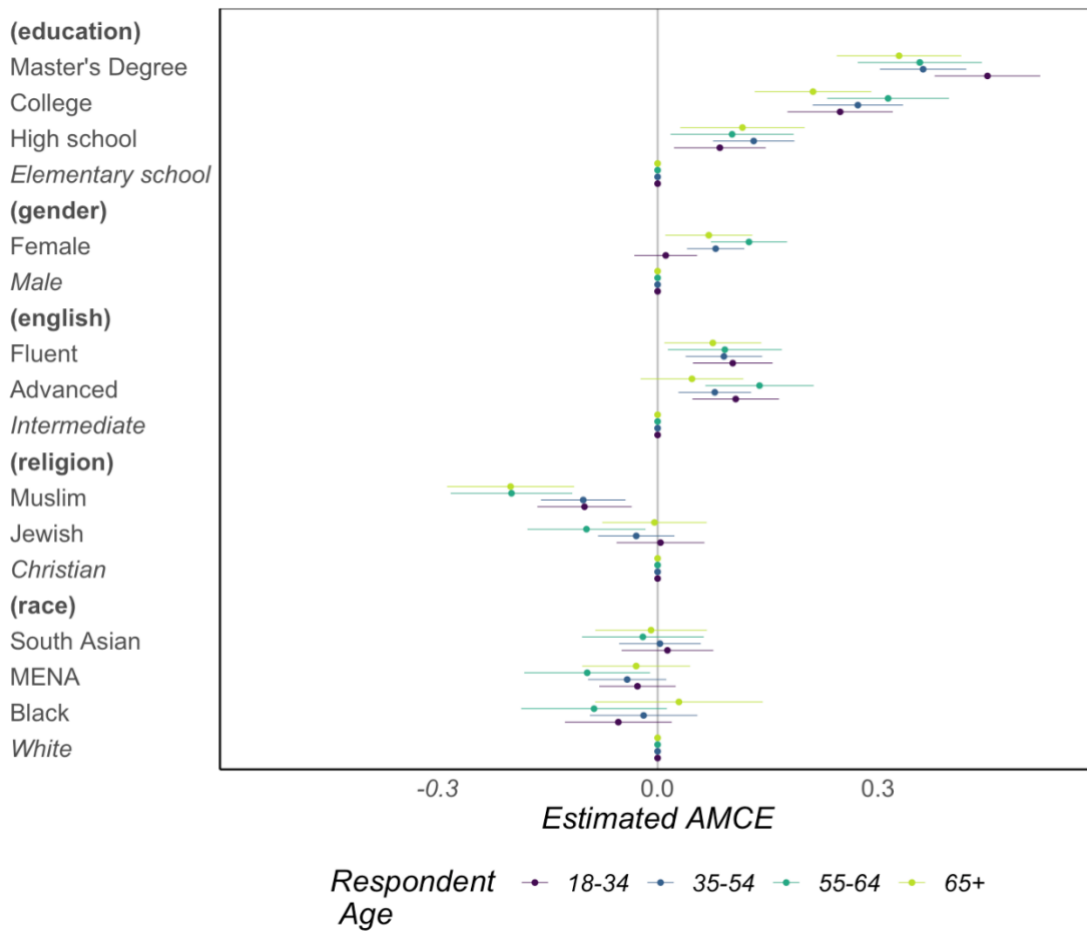


Figure 4, below, shows that education, measured as the highest degree received, does not moderate treatment effects. There are no systematic differences in preferences of which immigrants to give a green card to, based on education.

- What is the highest level of education you have completed?*
- o Did not graduate from high school (1)*
  - o High school graduate (2)*
  - o Some college, but no degree (3)*
  - o 2-year college degree (4)*
  - o 4-year college degree (5)*
  - o Post-graduate degree (MA, MBA, MD, JD, PhD, etc.) (6)*

Figure 4: AMCEs Based Upon Respondent Education

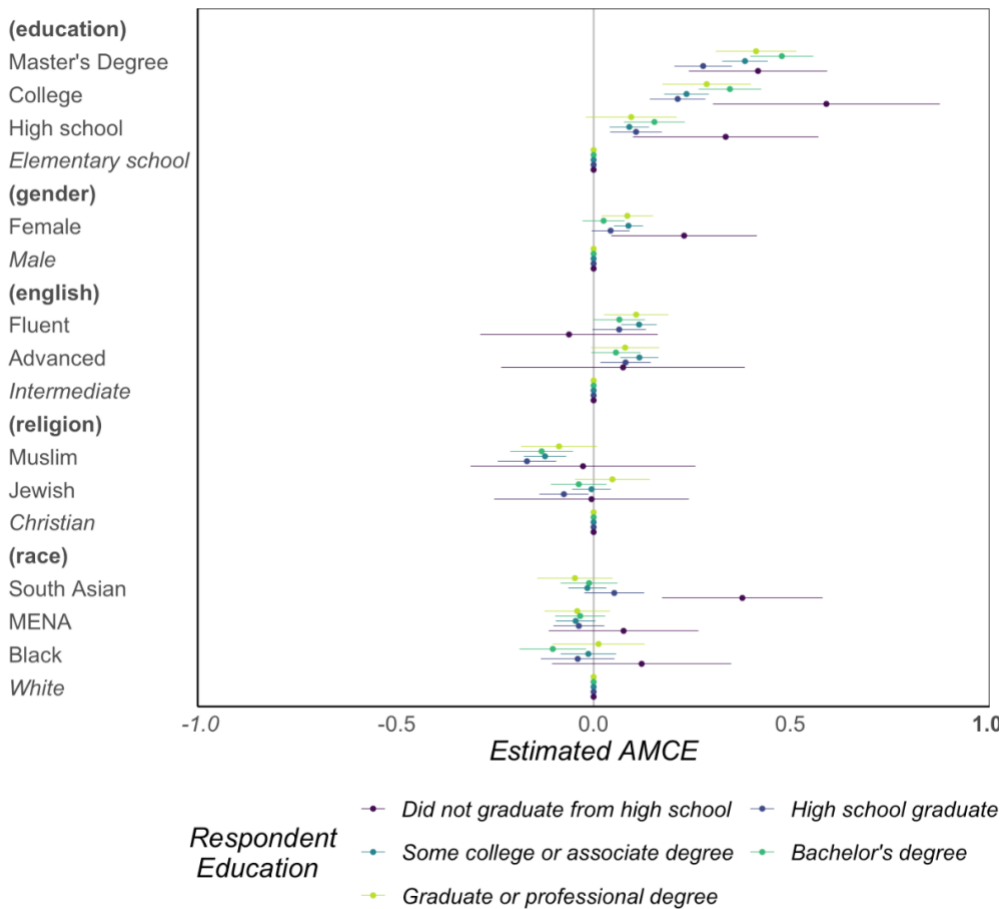
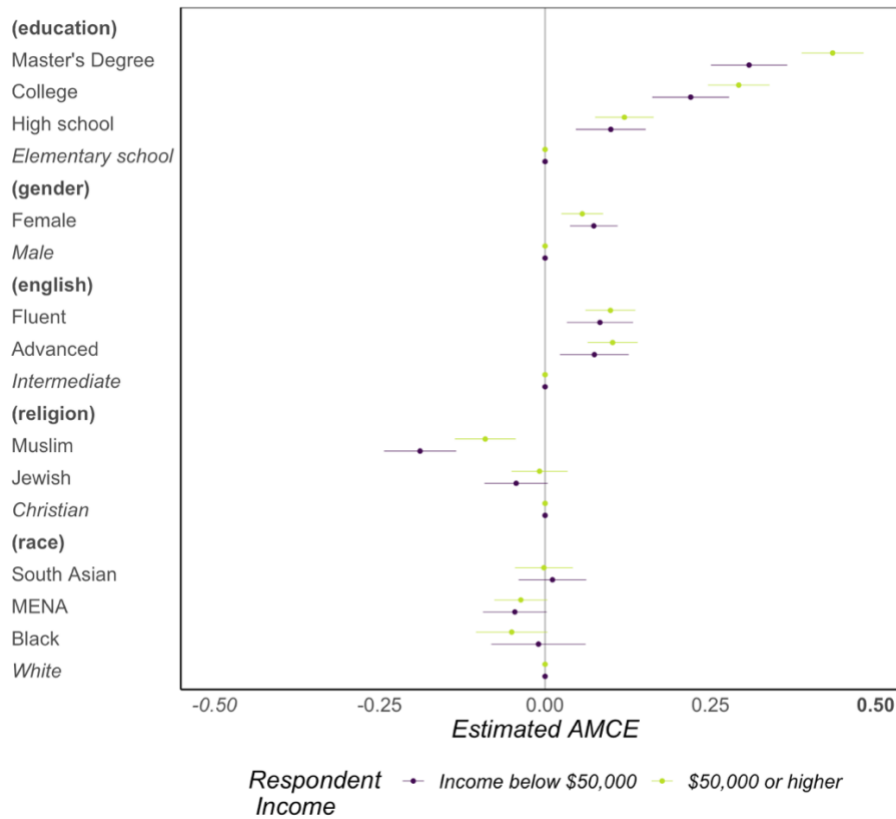


Figure 5, below, shows that income, measured in two major groups for ease of interpretation, does not moderate treatment effects. There are no systematic differences in preferences of which immigrants to give a green card to, based upon income group.

*Thinking back over the last year, what was your family's annual income?*

- o Less than \$10,000 (1)*
- o \$10,000 - \$19,999 (2)*
- o \$20,000 - \$29,999 (3)*
- o \$30,000 - \$39,999 (4)*
- o \$40,000 - \$49,999 (5)*
- o \$50,000 - \$59,999 (6)*
- o \$60,000 - \$69,999 (7)*
- o \$70,000 - \$79,999 (8)*
- o \$80,000 - \$99,999 (9)*
- o \$100,000 - \$119,999 (10)*
- o \$120,000 - \$149,999 (11)*
- o \$150,000 or more (12)*

*Figure 5: AMCE Based Upon Respondent Income*



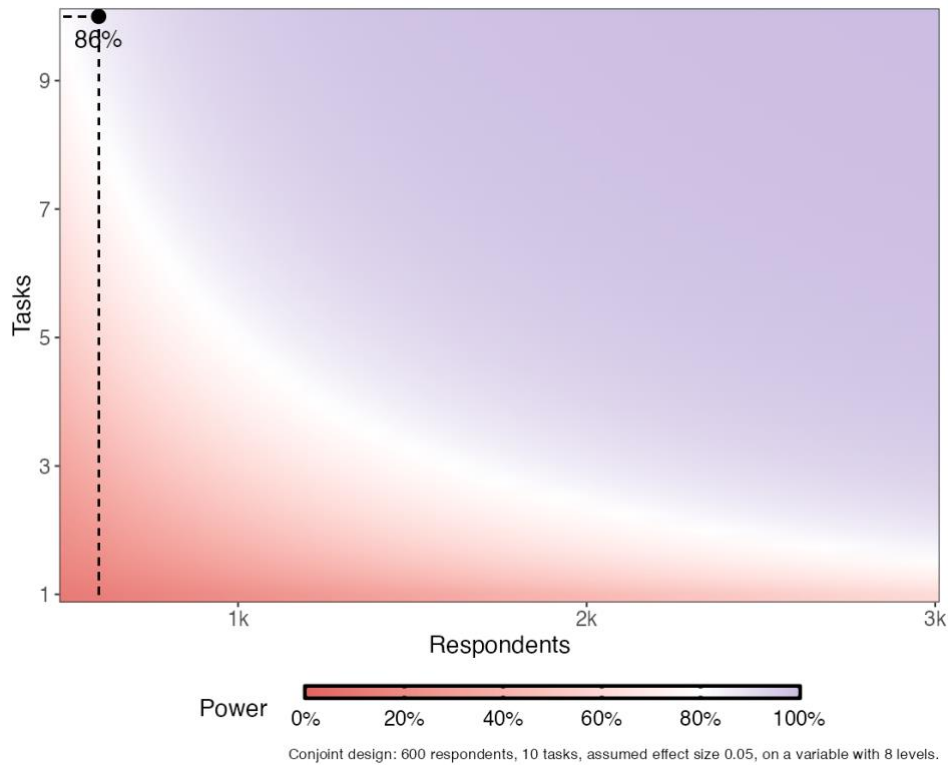
### **Appendix 3: Conjoint Parameters**

This section provides a power calculation for our study, as well as shows how often each attribute was shown in the study

#### **Power**

This conjoint design allows us to detect effect sizes as small as 0.05% with 86% power (Lukac & Stefanelli, 2020). Figure 6, below, includes the figure for power calculations.

*Figure 6: Power Calculation*



#### **Frequency of Attributes Presented**

Table 5, below, presents how often each attribute was shown across the experiment fielded. We see that in general, each of the options were shown evenly across the different

attribute levels. This ensures the results are not driven by an imbalance in which levels respondents were shown.

*Table 5: Frequency of Each Attribute Shown*

Attribute	Level	n
Education	Elementary school	1530
Education	High school	1475
Education	College	1465
Education	Master's Degree	1467
Gender	Male	2955
Gender	Female	2982
English Fluency	Intermediate	1973
English Fluency	Advanced	2000
English Fluency	Fluent	1964
Religion	Christian	1998
Religion	Jewish	1991
Religion	Muslim	1948
country	Bosnia	768
country	India	756
country	Iran	745
country	Lebanon	722
country	Libya	721
country	Pakistan	731
country	Russia	782
country	Sudan	712

**Appendix 4: AMCEs of Main Analyses**

While the manuscript presents marginal means, average marginal component effects (AMCE) are another way to present conjoint data. AMCEs are similar to linear regressions with robust standard errors clustered around the respondent.

In Figure 7, below, we see the AMCE which corresponds to the marginal means in Figure 1 of the manuscript. Relative to Christians, Muslims were selected 13.1 percentage points less often ( $p < 0.01$ ). The results from race show that relative to White immigrants, MENA immigrants were selected -4.0 percentage points less often ( $p < 0.05$ ).

*Figure 7: AMCE for Green Card Given*

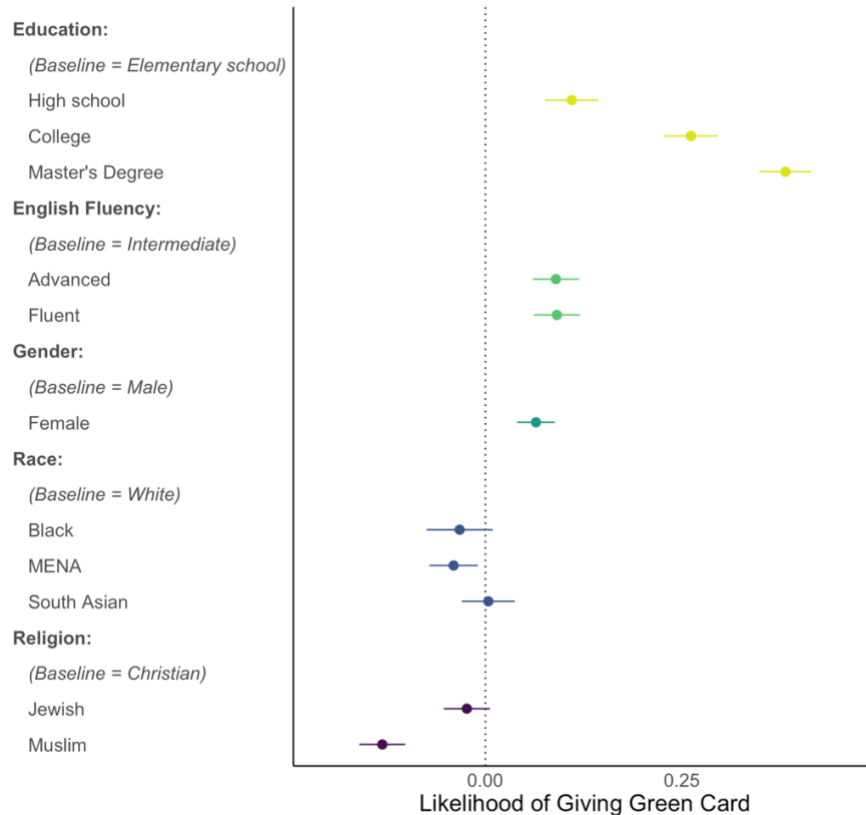


Figure 8, below, corresponds with Figure 2 of the manuscript. We see the effect of immigrants' attributes on the likelihood they are to assimilate into American culture. Those

with college ( $\beta = 0.063, p < 0.01$ ) and high school ( $\beta = 0.03, p < 0.01$ ) were also rated as more likely to assimilate relative to those with only elementary education. Moreover, those who had advanced ( $\beta = 0.025, p < 0.01$ ) English proficiency were rated as more likely to assimilate relative to those with intermediate English proficiency. Both Muslim ( $\beta = -0.098, p < 0.01$ ) and MENA ( $\beta = -0.023, p < 0.05$ ) are statistically significantly less likely to be rated as assimilating to American culture relative to their respective baselines: Christian and White.

Figure 8: AMCE Assimilation into American Culture

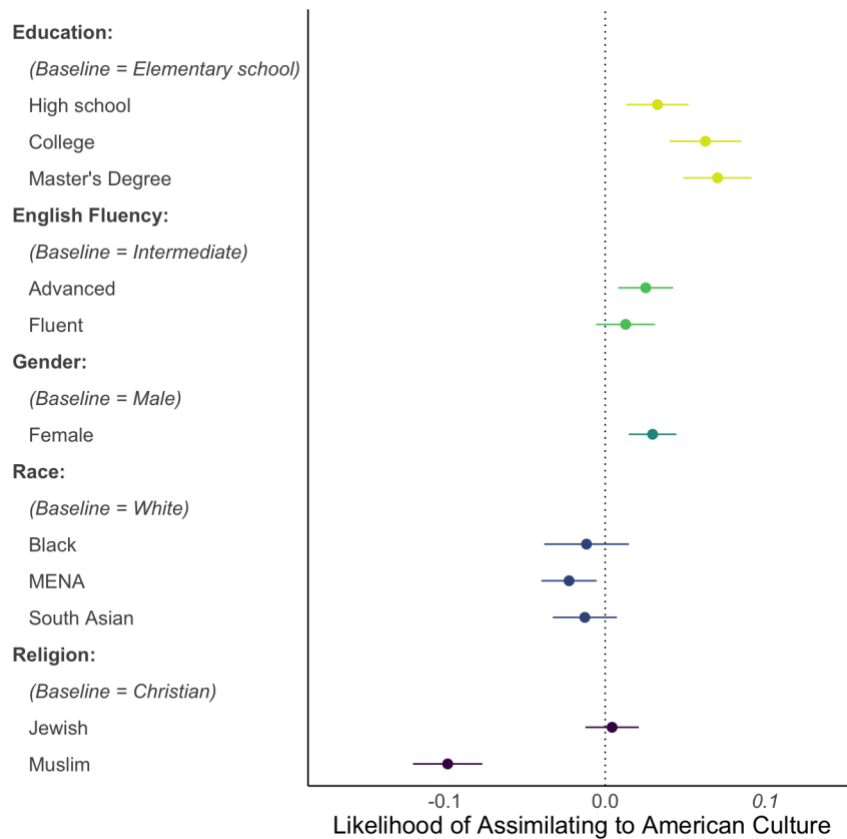


Figure 9, below, corresponds with Figure 3 in the manuscript. There is no heterogeneity based on the race of the Muslim immigrant on the likelihood of a green card given.

Figure 9: AMCE for Green Card Conditional on Religion

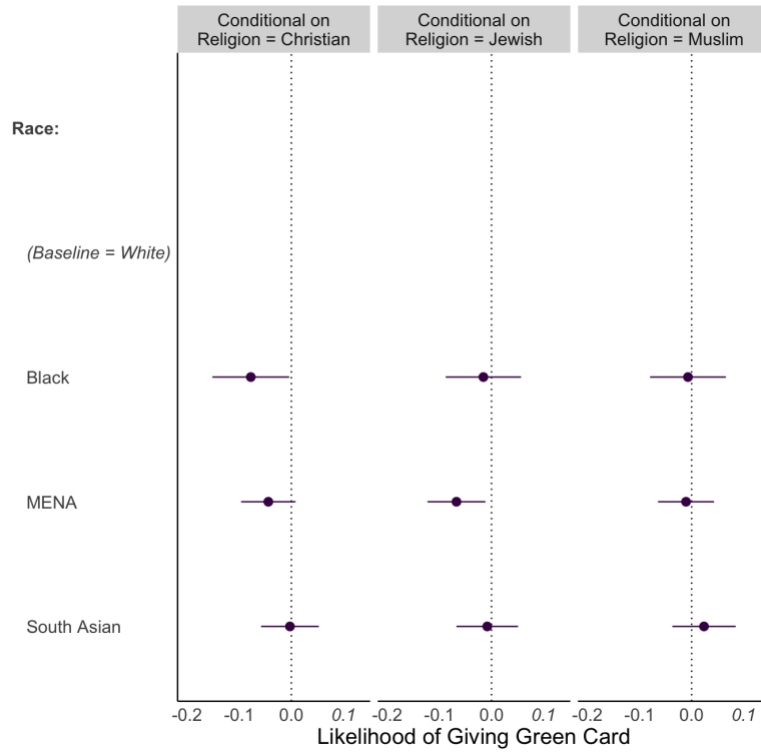
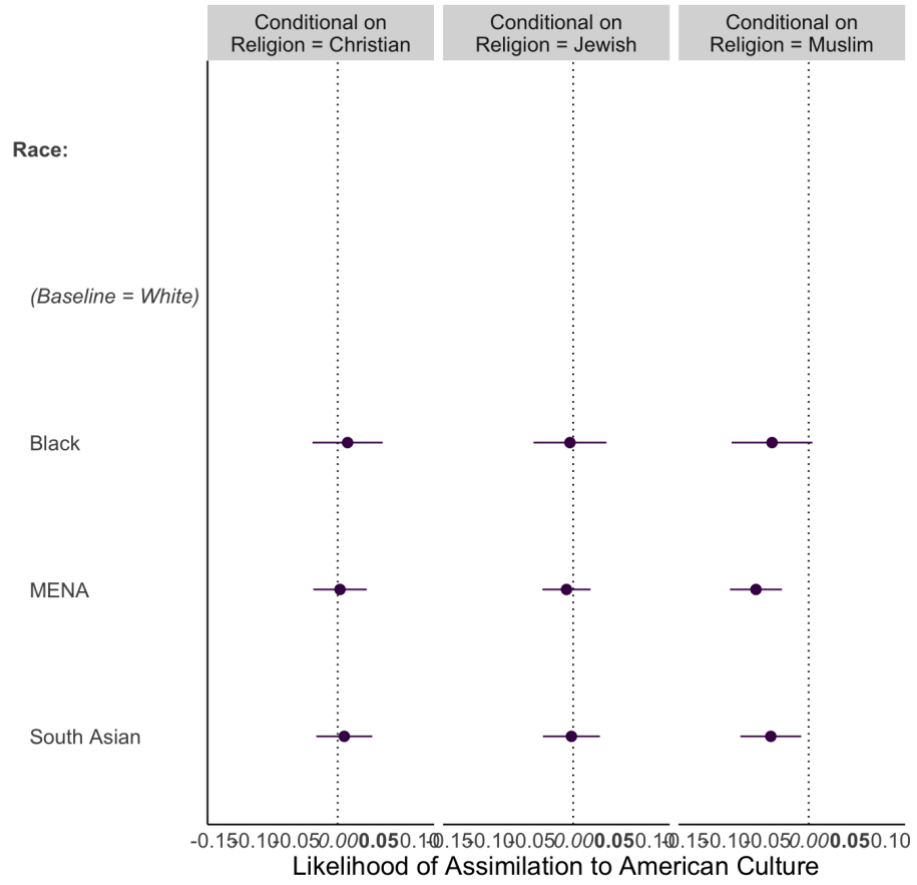


Figure 10, below, corresponds with Figure 4 in the manuscript. Black Muslims ( $\beta = -0.054$ ,  $p < 0.05$ ), South Asian Muslims ( $\beta = -0.054$ ,  $p < 0.05$ ), and MENA Muslims ( $\beta = -0.067$ ,  $p < 0.01$ ) are rated as less likely to assimilate to US culture relative to White Muslims.



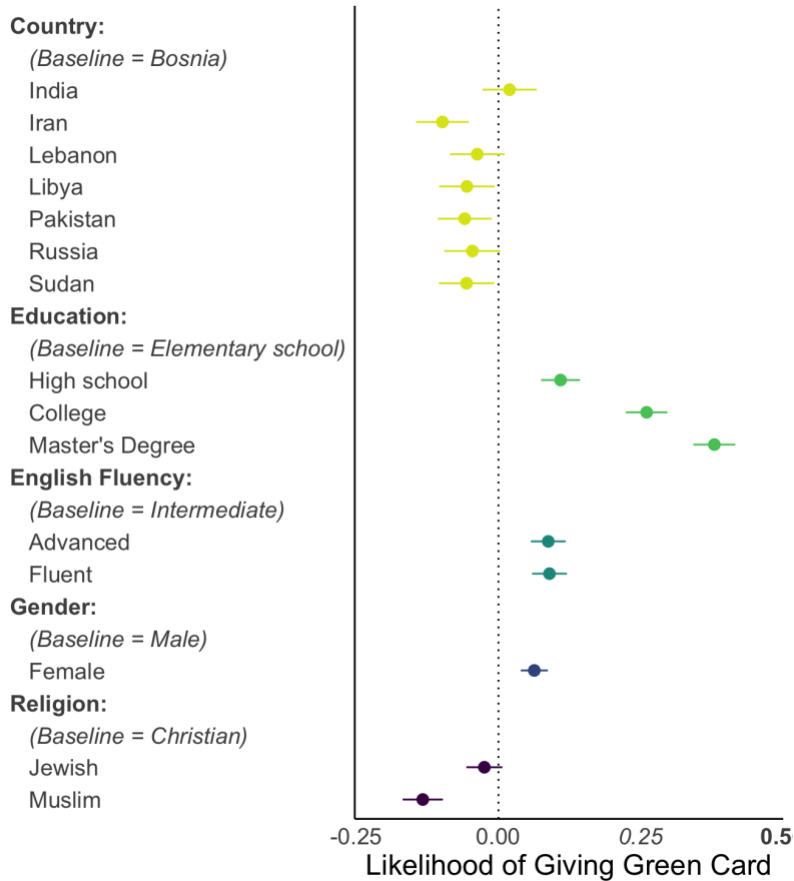
Figure 10: AMCE for Assimilation Conditional on Religion



## Appendix 5: Models with Country of Origin

In the manuscript, we use the countries of origin to proxy race/ethnicity. This allows for easier interpretation of the results. Here, we present the results with individual countries of origin and show the substantive meaning of our findings in the paper does not change when broken out this way instead of race/ethnicity. Figure 11, below, shows the AMCE of the likelihood for an immigrant to be chosen for a green card with country of origin. The largest substantive effect is still for education. We also see a substantial effect for Muslim immigrants being less likely to be selected for a green card relative to Christians. Iranian immigrants are less likely to be selected relative to Bosnians.

Figure 11: Green Card AMCE with Country of Origin



We also include the AMCE conditional upon religion by countries of origin instead of race/ethnicity in Figure 12, below. We see there are no conditional effects for Muslim immigrants from different countries of origin. This is the same as our finding in the main paper using the race/ethnicity proxy.

Figure 12: Green Card AMCE Conditional on Religion with Countries of Origin

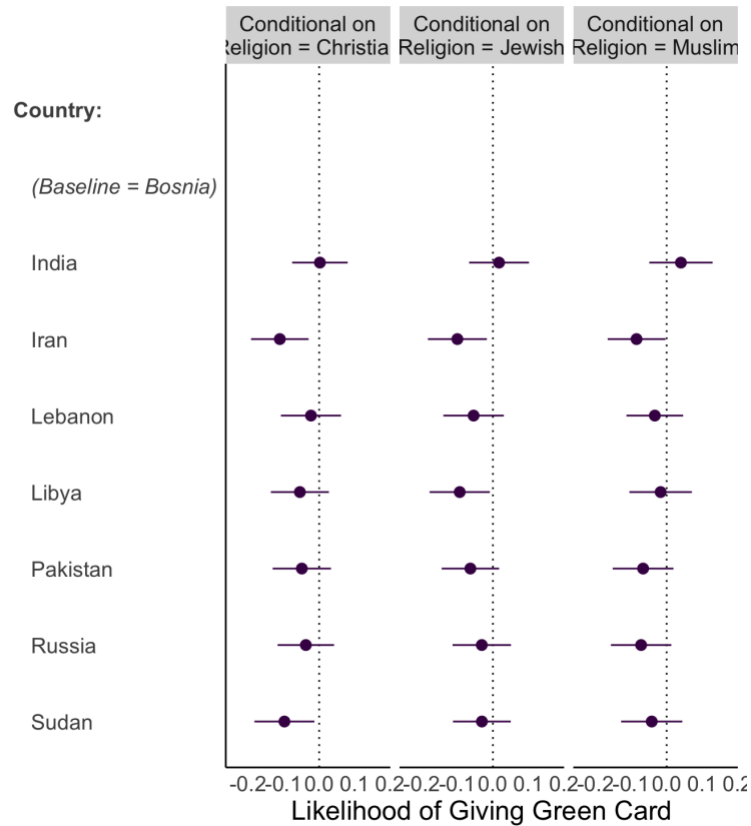


Table 6, below, provides the linear model of both the main effects and interaction effects from the conjoint. Recall, that conjoint analyses are similar to standard linear regressions, however, the standard errors are clustered around the respondent. This is because one respondent is providing multiple rows of data.

In these models, we see the same pattern as the AMCE plots in the main text, however, we have estimates. Model A in Table 6, below, presents the main effects including country of

origin without the interaction. These are presented as Average Marginal Component Effects (AMCE) in the plots. It shows that the standard controls used in prior conjoints of evaluations of immigrants are highly statistically significant. These include education, English fluency, and gender. Among our covariates of interest, relative to Bosnian immigrants, Iranian immigrants are less likely to be given a green card at a level of  $p < 0.01$ , holding all else constant. Libyan, Sudanese, and Pakistani immigrants are less likely to be given a green card at a level of  $p < 0.05$ , holding all else constant. And Russian immigrants are less likely to be given a green card at a level of  $p < 0.1$ , holding all else constant. Moreover, Muslim immigrants are less likely to be given a green card relative to Christians at a level of  $p < 0.01$ , holding all else constant.

In Model B, below, we see that the interaction between religion and country of origin is not statistically significant, just as displayed in Figure 12, above. That is, Muslim identity is prioritized, as argued in the paper. It is not a matter of fitting into the prototype of the Middle Eastern Muslim but merely being Muslim, which prompts Americans to be less likely to give a green card to a given immigrant.

*Table 6: LM of Conjoint Analysis with Countries of Origin for Green Card Given*

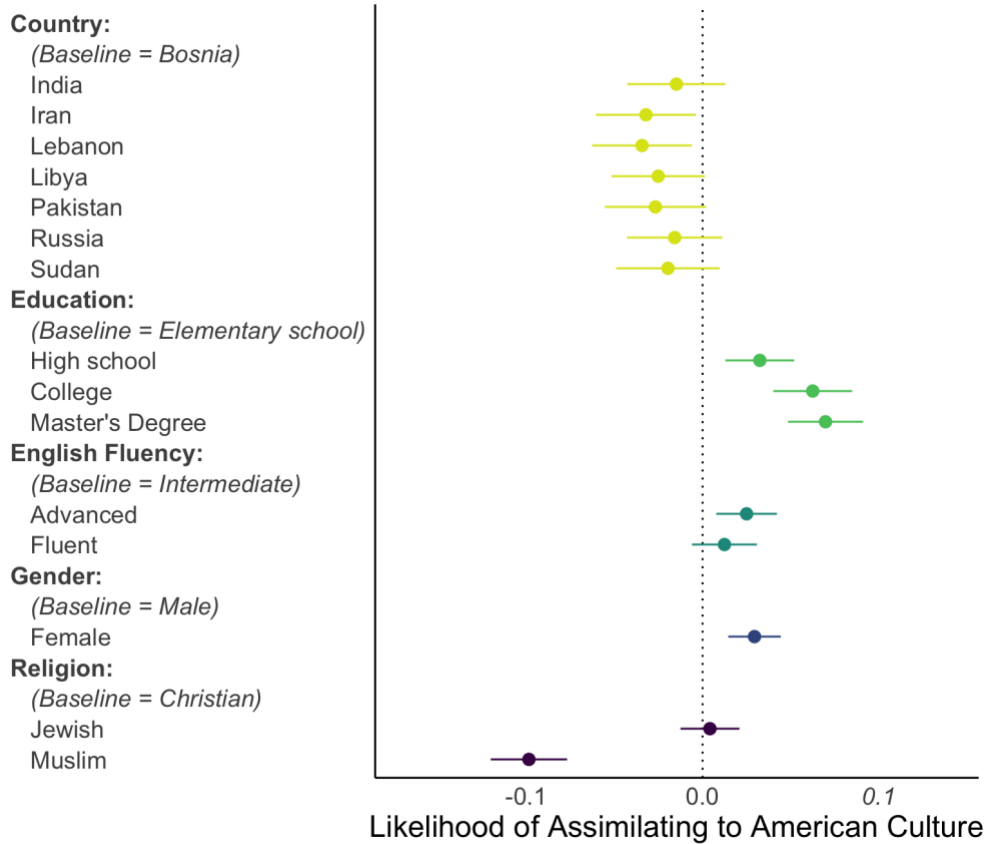
<i>Dependent variable: Green Card to Immigrant</i>		
	A) Main Effects	B) Interaction
Jewish	-0.024 (0.016)	-0.022 (0.041)
Muslim	-0.132*** (0.018)	-0.140*** (0.045)
High school	0.109*** (0.017)	0.109*** (0.017)
College	0.262***	0.261***

	(0.019)	(0.019)
Master's Degree	0.381***	0.381***
	(0.019)	(0.019)
Female	0.063***	0.063***
	(0.012)	(0.012)
Advanced	0.088***	0.089***
	(0.016)	(0.016)
Fluent	0.089***	0.090***
	(0.015)	(0.015)
India	0.021	0.007
	(0.024)	(0.040)
Iran	-0.097***	-0.106**
	(0.024)	(0.041)
Lebanon	-0.036	-0.018
	(0.025)	(0.043)
Libya	-0.055**	-0.052
	(0.025)	(0.041)
Pakistan	-0.059**	-0.047
	(0.024)	(0.042)
Russia	-0.045*	-0.035
	(0.025)	(0.041)
Sudan	-0.055**	-0.095**
	(0.025)	(0.043)
Jewish x India		0.008
		(0.058)
Muslim x India		0.033
		(0.062)
Jewish x Iran		0.006
		(0.058)
Muslim x Iran		0.024
		(0.060)
Jewish x Lebanon		-0.036
		(0.061)
Muslim x Lebanon		-0.018
		(0.061)
Jewish x Libya		-0.042
		(0.062)
Muslim x Libya		0.035

		(0.061)
Jewish x Pakistan		-0.016
		(0.060)
Muslim x Pakistan		-0.022
		(0.062)
Jewish x Russia		0.001
		(0.058)
Muslim x Russia		-0.034
		(0.057)
Jewish x Sudan		0.064
		(0.060)
Muslim x Sudan		0.053
		(0.062)
Constant	0.311***	0.313***
	(0.025)	(0.034)
Observations	5,937	5,937
R <sup>2</sup>	0.114	0.115
Adjusted R <sup>2</sup>	0.112	0.111
Residual Std. Error	0.471 (df = 5921)	0.472 (df = 5907)
F Statistic	50.786*** (df = 15; 5921)	26.514*** (df = 29; 5907)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

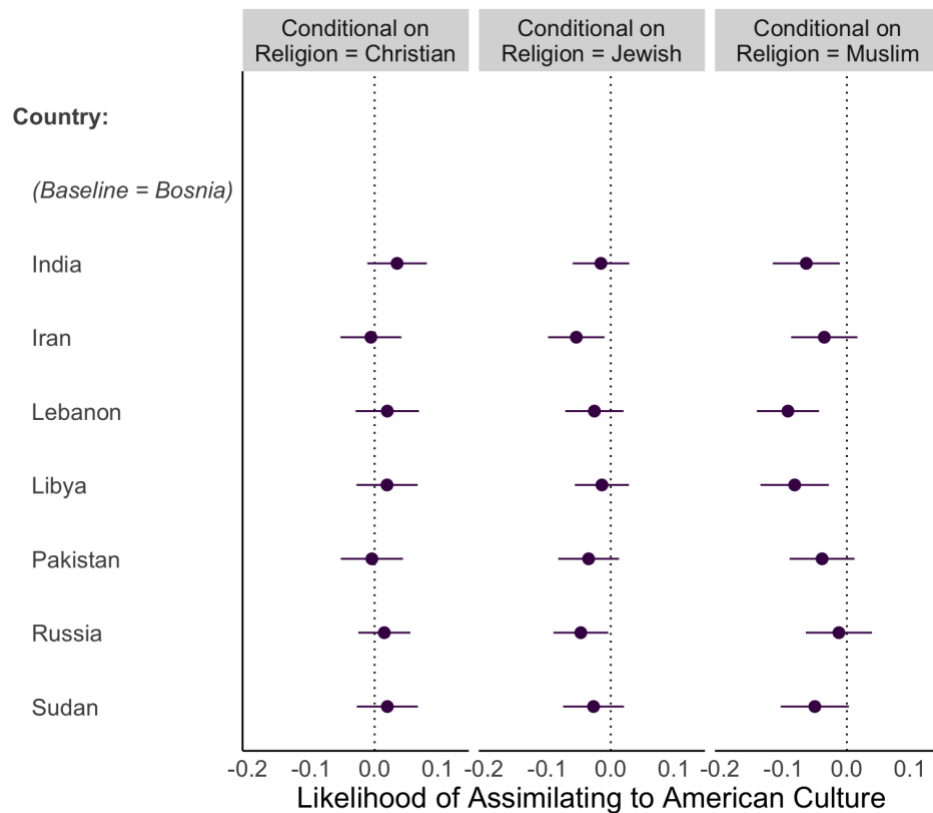
Next, we consider our second DV, assimilation to the US. In Figure 13, below, we see that the largest substantive effect is that Muslims, relative to Christians, are less likely to be evaluated as assimilating into American culture. We also see an effect for Iran and Lebanon, which aligns with the findings with the substantive findings in the main text using race/ethnicity. That is, there was also a small substantive effect against MENA individuals being assessed as assimilating relative to Whites.

Figure 13: Assimilation AMCE with Countries of Origin



In Figure 14, we see there are differences by country of origin when observing the AMCE conditional on religion. Iranian and Lebanese Muslims are seen as less likely to assimilate into American culture relative to Muslims from other countries of origin. This aligns with our substantive findings in the main text of the paper that indicates MENA Muslims are seen as less likely to assimilate.

Figure 14: Assimilation AMCE Conditional on Religion with Countries of Origin



We have also included the linear regression models in Table 7, below. In Model C, we see that the Muslim immigrant is the largest substantive effect for least likely to be perceived as assimilating into the US. This is statistically significant relative to the Christian baseline at a level of  $p < 0.01$ . We do not observe any country of origin-specific differences, however. In Model D, below, we see there are some interaction effects relative to Christian Bosnians. For instance, Lebanese Muslims and Libyan Muslims are seen as less likely to assimilate into the US relative to the baseline. This is in line with our racial proxy findings of the MENA Muslim being seen as less likely to assimilate relative to the White Muslim. We also see that Bosnian Muslims are seen as more likely to assimilate relative to Jewish Russians, as well. However, this difference is statistically significant at  $p < 0.05$ .



Table 7: LM of Conjoint Analysis with Countries of Origin for Assimilation to the US

	<i>Dependent variable:</i>	
	Assimilate to US Culture	
	(C) Main Effects	(D) Interaction
Jewish	0.004 (0.009)	0.044* (0.023)
Muslim	-0.098*** (0.011)	-0.039 (0.026)
High school	0.032*** (0.010)	0.033*** (0.010)
College	0.062*** (0.011)	0.063*** (0.011)
Master's Degree	0.070*** (0.011)	0.070*** (0.011)
Female	0.029*** (0.008)	0.029*** (0.008)
Advanced	0.025*** (0.009)	0.025*** (0.009)
Fluent	0.012 (0.009)	0.012 (0.009)
Russia	-0.016 (0.014)	0.015 (0.021)
Sudan	-0.020 (0.015)	0.020 (0.025)
Jewish x India		-0.051 (0.034)
Muslim x India		-0.100*** (0.036)
Jewish x Iran		-0.049 (0.033)
Muslim x Iran		-0.030 (0.036)
Jewish x Lebanon		-0.046 (0.034)
Muslim x Lebanon		-0.113*** (0.035)
Jewish x Libya		-0.034 (0.034)
Muslim x Libya		-0.102*** (0.037)

Jewish x Pakistan		-0.031 (0.035)
Muslim x Pakistan		-0.035 (0.036)
Jewish x Russia		-0.063** (0.029)
Muslim x Russia		-0.028 (0.033)
Jewish x Sudan		-0.047 (0.035)
Muslim x Sudan		-0.071* (0.037)
Constant	0.687*** (0.018)	0.653*** (0.023)
<i>Note:</i>		*p<0.05 **p<0.01 ***p<0.001

For ease of interpretability, we have used country of origin to proxy religion. The concern with this is that we may be grouping countries in ways that undermine findings based on country of origin. However, as shown in this section, for both of our DVs the substantive findings do not differ when broken out by country of origin.

## **Appendix 6: Marginal Means Tables**

Table 8, below, includes the marginal means corresponding to Figure 1 in the manuscript.

*Table 8: Marginal Means for Green Card Given*

<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
<i>Education</i>	Elementary school	0.309	0.012	***
	High school	0.423	0.011	***
	College	0.571	0.011	***
	Master's Degree	0.691	0.011	***
<i>Gender</i>	Male	0.465	0.007	***
	Female	0.528	0.007	***
<i>English Fluency</i>	Intermediate	0.433	0.010	***
	Advanced	0.529	0.010	***
	Fluent	0.527	0.010	***
<i>Religion</i>	Christian	0.550	0.010	***
	Jewish	0.520	0.010	***
	Muslim	0.417	0.011	***
<i>Race</i>	White	0.519	0.011	***
	Black	0.482	0.018	***
	Middle Eastern	0.471	0.008	***
	South Asian	0.518	0.011	***

*Note:*

\*p<0.05 \*\*p<0.01 \*\*\*p<0.001

Table 9, below, are the marginal means corresponding to Figure 2 in the manuscript.

Table 9: Marginal Means for Assimilation into American Culture

<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
<i>Education</i>	Elementary school	0.661	0.012	***
	High school	0.697	0.011	***
	College	0.724	0.011	***
	Master's Degree	0.731	0.011	***
<i>Gender</i>	Male	0.688	0.010	***
	Female	0.718	0.010	***
<i>English Fluency</i>	Intermediate	0.689	0.011	***
	Advanced	0.716	0.010	***
	Fluent	0.703	0.011	***
<i>Religion</i>	Christian	0.734	0.010	***
	Jewish	0.738	0.010	***
	Muslim	0.635	0.012	***
<i>Race</i>	White	0.717	0.011	***
	Black	0.704	0.014	***
	Middle Eastern	0.692	0.010	***
	South Asian	0.704	0.011	***

Note:

\*p\*\*p\*\*\*p<0.01

Table 10, below, includes the marginal means conditional on Christian immigrants corresponding to Figure 3 in the manuscript.

Table 10: Means Conditional on Christian for Green Card Given

<i>By</i>	<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
<i>Jewish</i>	<i>Education</i>	Elementary school	0.008	0.030	
		High school	-0.005	0.030	
		College	-0.051	0.030	*
		Master's Degree	-0.043	0.029	
	<i>Gender</i>	Male	-0.023	0.022	
		Female	-0.037	0.022	*
	<i>English Fluency</i>	Intermediate	-0.039	0.027	
		Advanced	-0.024	0.027	
		Fluent	-0.027	0.027	
	<i>Race</i>	White	-0.024	0.031	
		Black	0.016	0.045	

<i>By</i>	<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
<i>Muslim</i>	<i>Education</i>	Middle Eastern	-0.049	0.026	*
		South Asian	-0.026	0.029	
		Elementary school	-0.108	0.029	***
		High school	-0.104	0.031	***
		College	-0.172	0.031	***
	<i>Gender</i>	Master's Degree	-0.147	0.029	***
		Male	-0.123	0.021	***
	<i>English Fluency</i>	Female	-0.141	0.022	***
		Intermediate	-0.139	0.027	***
		Advanced	-0.093	0.027	***
	<i>Race</i>	Fluent	-0.162	0.027	***
		White	-0.157	0.030	***
		Black	-0.097	0.047	**
		Middle Eastern	-0.127	0.026	***
South Asian		-0.129	0.030	***	

Note:

\*p\*\*p\*\*\*p<0.01

Table 11, below, includes the marginal means conditional on Christian immigrants corresponding to Figure 4 in the manuscript.

*Table 11: Mean Conditional on Christian for Assimilation into American Culture*

<i>By</i>	<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
<i>Jewish</i>	<i>Education</i>	Elementary school	-0.010	0.022	
		High school	0.025	0.020	
		College	0.009	0.019	
		Master's Degree	-0.008	0.019	
	<i>Gender</i>	Male	0.011	0.017	
		Female	-0.005	0.016	
	<i>English Fluency</i>	Intermediate	0.003	0.019	
		Advanced	-0.001	0.018	
		Fluent	0.008	0.018	
	<i>Race</i>	White	0.012	0.021	
		Black	-0.010	0.027	
		Middle Eastern	0.001	0.017	
		South Asian	0.004	0.021	
Elementary school		-0.122	0.024	***	
<i>Christian</i>	<i>Education</i>	High school	-0.099	0.023	***
		College	-0.085	0.022	***

<i>By</i>	<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>
		Master's Degree	-0.090	0.022	***
	<i>Gender</i>	Male	-0.088	0.019	***
		Female	-0.110	0.018	***
	<i>English Fluency</i>	Intermediate	-0.100	0.021	***
		Advanced	-0.084	0.019	***
		Fluent	-0.113	0.021	***
	<i>Race</i>	White	-0.056	0.022	***
		Black	-0.111	0.030	***
		Middle Eastern	-0.120	0.019	***
		South Asian	-0.106	0.023	***

Note:

\*p\*\*p\*\*\*p<0.01

**Appendix 7: Means Conditional on Race (White)**

Next, we present the conditional means relative to White, rather than relative to Christian. We believe the ease of interpretation for the same results is best presented when comparing across religion, rather than racial groups.

Figure 15, below, shows the comparison is relative to White immigrants. Table 12, below, provides the means. We see that relative to Christian Whites, Christians Middle Easterners are slightly less likely to be selected ( $p < 0.1$ ). Jewish Middle Easterners are also selected less frequently relative to Jewish Whites ( $p < 0.05$ ). However, there was no statistically significant difference between Muslim Middle Easterners and Muslims who are White

Figure 15: Mean Conditional on White for Green Card Given

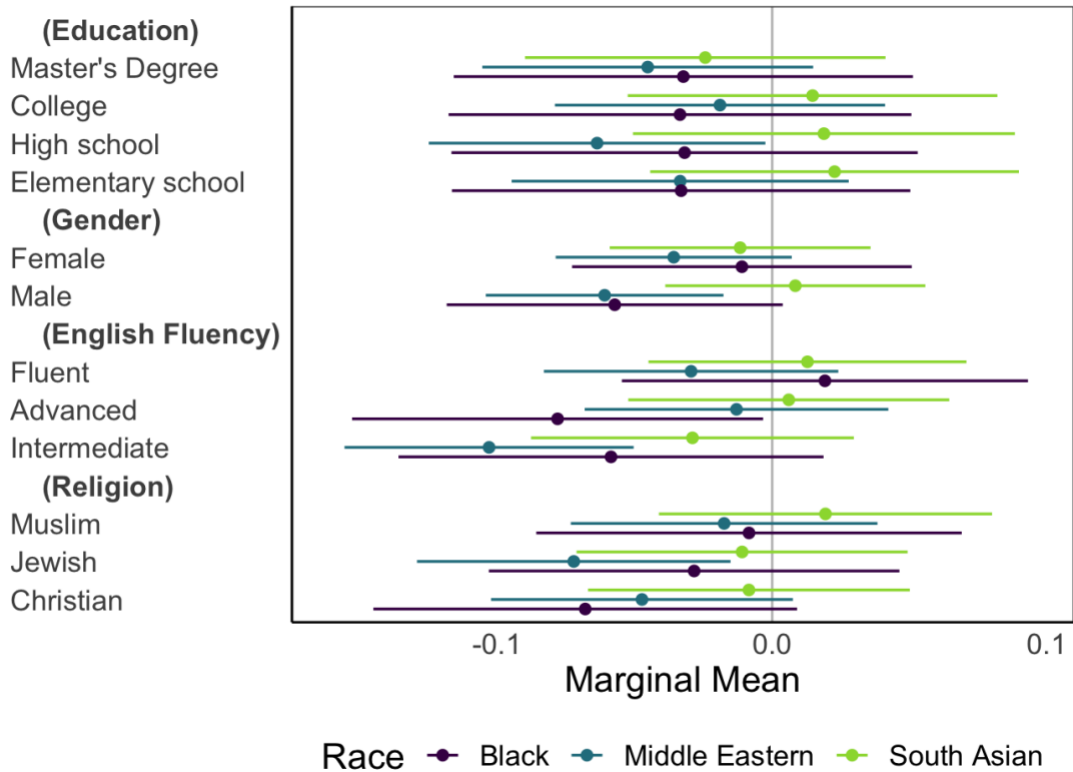


Table 12: Mean Conditional on White for Green Card Given

By	Attribute	Level	Marginal Mean	Standard Error	p
Black	Education	Elementary school	-0.033	0.043	
		High school	-0.032	0.043	
		College	-0.034	0.043	
		Master's Degree	-0.032	0.043	
	Gender	Male	-0.057	0.031	*
		Female	-0.011	0.032	
	English Fluency	Intermediate	-0.059	0.039	
		Advanced	-0.078	0.038	**
		Fluent	0.019	0.038	
	Religion	Christian	-0.068	0.039	*
		Jewish	-0.028	0.038	
		Muslim	-0.008	0.039	
Middle Eastern	Education	Elementary school	-0.033	0.031	
		High school	-0.064	0.031	**
		College	-0.019	0.031	
		Master's Degree	-0.045	0.031	
	Gender	Male	-0.061	0.022	***
		Female	-0.036	0.022	
	English Fluency	Intermediate	-0.103	0.027	***
		Advanced	-0.013	0.028	
		Fluent	-0.030	0.027	
	Religion	Christian	-0.047	0.028	*
		Jewish	-0.072	0.029	**
		Muslim	-0.017	0.028	
South Asian	Education	Elementary school	0.023	0.034	
		High school	0.019	0.035	
		College	0.015	0.034	
		Master's Degree	-0.024	0.033	
	Gender	Male	0.008	0.024	
		Female	-0.012	0.024	
	English Fluency	Intermediate	-0.029	0.030	
		Advanced	0.006	0.030	
		Fluent	0.013	0.030	
	Religion	Christian	-0.008	0.030	
		Jewish	-0.011	0.031	
		Muslim	0.019	0.031	

Note:

\*p\*\*p\*\*\*p<0.01

Figure 16, below, is similar to Figure 4 in the manuscript, however, rather than the referent category of religion, it is race. Here, the comparison is relative to White immigrants.



Table 13, below, provides the means. Muslim Middle Easterners are rated as less likely to assimilate into US culture relative to Muslims who are White ( $p < 0.01$ ).

Figure 16: Mean Conditional on White for Assimilation into American Culture

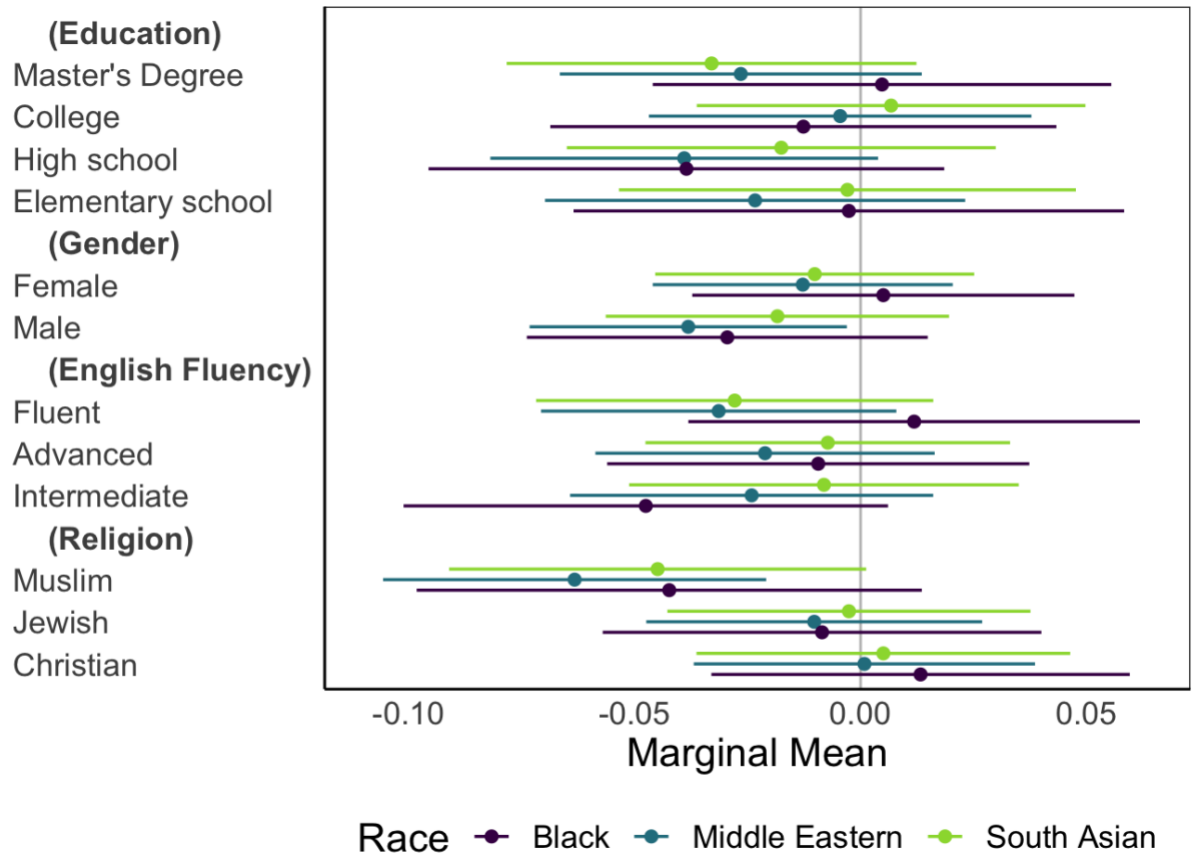


Table 13: Mean Conditional on White for Assimilation into American Culture

By	Attribute	Level	Marginal Mean	Standard Error	p	
Black	Education	Elementary school	-0.003	0.031		
		High school	-0.039	0.029		
		College	-0.013	0.029		
		Master's Degree	0.005	0.026		
	Gender	Male	Male	-0.030	0.023	
			Female	0.005	0.022	
	English Fluency	Intermediate	Intermediate	-0.048	0.027	*
			Advanced	-0.009	0.024	
			Fluent	0.012	0.026	
	Religion	Christian	Christian	0.013	0.024	

<i>By</i>	<i>Attribute</i>	<i>Level</i>	<i>Marginal Mean</i>	<i>Standard Error</i>	<i>p</i>	
<i>Middle Eastern</i>	<i>Education</i>	Jewish	-0.009	0.025		
		Muslim	-0.042	0.029		
		Elementary school	-0.023	0.024		
		High school	-0.039	0.022	*	
		College	-0.005	0.022		
	<i>Gender</i>	Master's Degree	-0.027	0.020		
		Male	-0.038	0.018	**	
		<i>English Fluency</i>	Female	-0.013	0.017	
			Intermediate	-0.024	0.021	
	<i>South Asian</i>		Advanced	-0.021	0.019	
Fluent			-0.031	0.020		
<i>Religion</i>		Christian	0.001	0.019		
		Jewish	-0.010	0.019		
<i>Education</i>		Muslim	-0.063	0.022	***	
		Elementary school	-0.003	0.026		
		High school	-0.018	0.024		
		College	0.007	0.022		
		Master's Degree	-0.033	0.023		
<i>Gender</i>		Male	-0.018	0.019		
	Female	-0.010	0.018			
	<i>English Fluency</i>	Intermediate	-0.008	0.022		
		Advanced	-0.007	0.021		
	<i>Religion</i>	Fluent	-0.028	0.022		
		Christian	0.005	0.021		
		Jewish	-0.003	0.021		
		Muslim	-0.045	0.024	*	

Note:

\*p\*\*p\*\*\*p<0.01

## **Appendix 8: Adaptive Shrinkage Robustness Check**

One concern with conjoints, however, is that one set of data are being used to conduct multiple hypotheses tests (Liu & Shiraito, 2023). As a result, conjoint analyses tend to have a propensity for false positives. Using a statistical correction is important to ensure we are not biasing our results. Ash outperforms both Bonferroni correction and the Benjamini-Hochberg procedure by avoiding false negatives and reducing false positives (Liu & Shiraito, 2023). This section provides findings with Ash robustness for both DVs and both the racial/ethnic proxy and countries of origin. Overall, we find no substantive differences when accounting for multiple hypotheses testing with conjoints.

Table 14, below, includes the linear models with racial/ethnic proxy for the two dependent variables—green cards given and perception of assimilation into American culture—along with the Ash robustness check. Model E and Model G, below, are the linear regression results of the figures in the main text of the paper. Models F and H include the Ash robustness.

Model F shows most cases, but the key results remained unchanged. The key differences are that Russians are no longer restricted from green cards at a level statistically significantly distinguishable from Bosnians. And Sudanese and Libyan immigrants are less likely to be given a green card relative to Bosnians at a level of  $p < 0.1$ , holding all else constant. However, since we have directional hypotheses, this finding is still statistically significant at the  $p < 0.05$  level with a one-tailed test. We also see some differences in our second DV, assimilation to the US. We see that having a high school education and advanced English skills went from being statistically significant at the  $p < 0.01$  level to the  $p < 0.05$  level.

This does not substantively change the results. We also see that MENA immigrants are seen as less likely to assimilate from  $p < 0.05$  to  $p < 0.1$ . Although this does somewhat change the confidence of the findings, we did not have hypotheses for MENA specifically. Our main concern was for Muslim immigrants. We see this is still statistically significant a  $p < 0.01$  even with our correction.

Table 14: LM and Ash Robustness with Racial/ethnic proxy

<i>With Racial/ethnic proxy</i>				
	E) Green Card Given	F) Green Card Given (Ash)	G) Assimilation	H) Assimilation (Ash)
Jewish	-0.024 (0.016)	-0.004 (0.011)	0.013 (0.026)	0.0004 (0.003)
Muslim	-0.131*** (0.018)	-0.129*** (0.018)	-0.295*** (0.033)	-0.094*** (0.011)
High school	0.110*** (0.017)	0.108*** (0.017)	0.098*** (0.030)	<b>0.030**</b> <b>(0.018)</b>
College	0.261*** (0.019)	0.259*** (0.019)	0.188*** (0.034)	0.060*** (0.011)
Master's	0.381*** (0.019)	0.378*** (0.019)	0.210*** (0.033)	0.067*** (0.011)
Female	0.064*** (0.012)	0.064*** (0.012)	0.089*** (0.023)	0.028*** (0.008)
Advanced	0.090*** (0.016)	0.086*** (0.016)	0.076*** (0.026)	<b>0.021**</b> <b>(0.012)</b>
Fluent	0.091*** (0.016)	0.090*** (0.015)	0.038 (0.028)	0.027 (0.007)
Black	-0.033 (0.017)	-0.007 (0.017)	-0.035 (0.040)	-0.002 (0.007)
MENA	-0.040** (0.017)	-0.030** (0.025)	-0.068** (0.026)	<b>-0.015*</b> <b>(0.012)</b>
South Asian	0.004 (0.017)	0.0003 (0.005)	-0.038 (0.031)	-0.002 (0.007)
Constant	0.286*** (0.022)		3.034*** (0.048)	
Observations		5,937		5,921
R <sup>2</sup>		0.111		0.042
Adjusted R <sup>2</sup>		0.109		0.040
Residual SE		0.472 (df = 5919)		0.838 (df = 5909)
F Statistic		43.621*** (df = 17; 5919)		23.627*** (df = 11; 5909)

Table 15, below, includes the robustness with countries of origin. Models I and K, below, are the linear regression models. Models J and L, below, include the Ash correction. We see that in Model J, the country of origin effects between Libya and Sudan on green cards given decreases in statistical significance from  $p < 0.05$  to  $p < 0.1$ . This does not change our substantive interpretation relative to religion, even with the racial/ethnic proxy in the main text of the paper. As we saw with Model H, above, in Model L high school education and advanced English fluency decreases in significance from  $p < 0.01$  to  $p < 0.05$ . We see that Iran, Libya, and Pakistan are no longer statistically significant. Moreover, Lebanon decreases in significance from  $p < 0.05$  to  $p < 0.1$ . In this case, the racial/ethnic proxy results are more robust to the Ash corrections.

Table 15: LM and Ash Robustness with Country of Origin

	<i>Country of Origin</i>			
	I) Green Card Given	J) Green Card Given (Ash)	K) Assimilation	L) Assimilation (Ash)
Jewish	-0.024 (0.016)	-0.006 (0.013)	0.005 (0.009)	0.0004 (0.011)
Muslim	-0.132*** (0.018)	-0.129*** (0.018)	-0.097*** (0.011)	0.094*** (0.011)
High school	0.109*** (0.017)	0.107*** (0.017)	0.032*** (0.010)	<b>0.0295**</b> <b>(0.012)</b>
College	0.262*** (0.019)	0.259*** (0.019)	0.060*** (0.011)	0.059*** (0.011)
Master's Degree	0.381*** (0.019)	0.378*** (0.019)	0.068*** (0.011)	0.066*** (0.011)
Female	0.063*** (0.012)	0.062*** (0.012)	0.030*** (0.008)	0.028*** (0.008)
Advanced	0.088*** (0.016)	0.087*** (0.016)	0.025*** (0.009)	<b>0.020**</b> <b>(0.012)</b>

Fluent	0.089*** (0.015)	0.088*** (0.015)	0.014 (0.009)	0.003 (0.007)
India	0.021 (0.024)	0.004 (0.013)	-0.014 (0.014)	-0.003 (0.009)
Iran	-0.097*** (0.024)	-0.092*** (0.024)	-0.030** (0.015)	<b>-0.018</b> <b>(0.018)</b>
Lebanon	-0.036 (0.025)	-0.011 (0.021)	-0.033** (0.014)	<b>-0.022*</b> (0.019)
Libya	-0.055** (0.025)	<b>-0.033*</b> <b>(0.032)</b>	-0.025* (0.014)	<b>-0.010</b> <b>(0.015)</b>
Pakistan	-0.059** (0.024)	-0.043** (0.032)	-0.027* (0.015)	<b>-0.011</b> <b>(0.015)</b>
Russia	-0.045* (0.025)	-0.019 (0.027)	-0.014 (0.014)	-0.003 (0.009)
Sudan	-0.055** (0.025)	<b>-0.034*</b> <b>(0.032)</b>	-0.017 (0.015)	-0.005 (0.011)
Constant	0.311*** (0.025)		0.717*** (0.016)	
Observations		5,937		5,890
R <sup>2</sup>		0.114		0.042
Adjusted R <sup>2</sup>		0.112		0.040
Residual Std. Error		0.471 (df = 5921)		0.278 (df = 5874)
F Statistic		50.786*** (df = 15; 5921)		17.217*** (df = 15; 5874)

Note:

\*p\*\*p\*\*\*p<0.01

## Appendix 9: Pre-registration



### The Role of Race and Religion in Anti-Immigrant Sentiment (#26669)

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#### 1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

#### 2) What's the main question being asked or hypothesis being tested in this study?

Anti-Muslim sentiment is high in the U.S. At the same time there has been a racialization of the term itself. It is unclear how much anti-Muslim sentiment is driven by prejudice against those of Middle Eastern descent, or because of their religion, or possibly because of a combination of both features. To this end, we plan to conduct a conjoint experiment that allows us to differentiate the level of prejudice as a result of race/country of origin compared to religion.

We do not have a rank ordering of our hypotheses: our purpose is to adjudicate between them. H1: Attitudes are less friendly toward immigrants who are Muslim than Christian or Jewish.

H2: Attitudes are less friendly toward immigrants from Middle Eastern and North African (MENA) countries.

H3: Attitudes will be less friendly toward Muslim and MENA immigrants if respondents score higher on the MAR scale.

#### 3) Describe the key dependent variable(s) specifying how they will be measured.

The key dependent variables are:

+MAR, drawn from Lajevardi and Oskooii (2018).

+Acceptance of immigrants into the U.S. by race and religion (A choice outcome that .

+Assessment of immigrant profiles and potential for criminal, economic, and personal threat, based on the scales drawn from Gubler, Halperin, and Hirschberger (2015).

#### 4) How many and which conditions will participants be assigned to?

Subjects are randomly assigned to one of three conditions that vary the placement of the MAR battery (2nd wave, pre- or post-treatment) for a separate study. Subjects are also given a conjoint experiment manipulating the nation of origin (Middle Eastern, North African, Asian, and European) and religion (Muslim, Jewish, and Christian) and asked for who should be allowed into the country as well as opinions on whether each immigrant profile poses an economic, cultural, or physical threat to those in the U.S.

#### 5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

We will calculate the AMCE for each attribute. We will also conduct subgroup analysis. First, if we see differences between groups as a result of MAR placement, we will conduct our analysis within each group separately. Which subgroup we use for the final analysis depends on what we observe. If there are no changes to MAR based on placement, but there are changes to outcomes of the conjoint, we will use the post-treatment MAR placement results. If there are changes to MAR, but no changes to the conjoint outcomes, we will use the pre-treatment MAR placement. Second, we anticipate conducting subgroup analysis by those who place high on the MAR scale and those who place low on the MAR scale.

#### 6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We plan to include all respondents who consent to the study. We will use list-wise deletion where respondents skip questions. We also will omit respondents who complete the study too quickly (below two standard deviations from the mean) and too slowly (above two standard deviations from the mean).

#### 7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

We are conducting a pretest on Mechanical Turk to ensure that the experiment has internal validity and that timing of the instrument is as we would expect. As the goal of this test is primarily to check for timing and survey function, we plan to capture only 100 subjects. We also plan to recruit 750 subjects through Bovitz, as this number has been demonstrated to adequately assess treatment effects in conjoint experiments (Orme 2010).

#### 8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

In our pretest, we are asking whether subjects differently consider individuals from the different countries. To do this, we ask perceived religiosity of the various individuals and to guess at the skin color of the individuals. We want to know if the different attributes (country origin and religion) shift in relation to each other. Additionally, we are asking subjects to complete a dehumanization scale post-treatment from Kteily et al. (2015), and we will conduct a subgroup analysis comparing responses of those who score high on the dehumanization scale for those who score lower.

## **Works Cited**

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