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The social desirability of (in)tolerance toward Muslim immigrants in the United States: results from a population-level list experiment

Preliminary Draft as of October 2011

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Abstract:

Do Muslim immigrants face a great social barrier to their acquisition of citizenship in the United States? To assess the degree to which Muslim immigrants are targeted, we compare the results to opposition to Christian immigrants. By employing a randomized, experimental design, we move beyond standard direct estimates, which do not account for the social pressure to appear tolerant. We show that opposition to citizenship for Muslim immigrants is not more widely held, but is more openly expressed. Therefore, in the public sphere, Muslim immigrants are indeed targeted. However, there is no significant difference in the underlying, true level of opposition. This stems from significant social pressure to publically appear tolerant toward Christian immigrants. In addition, some determinants of opposition (e.g. political ideology, income and ethnicity) only predict overt expression of opposition, not the true underlying level of opposition. We conclude that although the social barrier is no greater for Muslim immigrants, they are more likely to experience it.

The ebb and flow of migrants has elicited a wide range of responses from receiving societies. In the U.S., which has a long tradition of immigration, opposition to immigrants and has played an important historical (Jaret 1999) and contemporary role (Parea 1997) within the two major political parties. In Europe, sentiment toward immigrants in general and Muslim immigrants in particular has hardened and its expression has given rise of a new generation of political parties (Anderson 1996; Lubbers et al. 2002). Beyond politics, public sentiment toward immigrants is one dimension of the context of reception, which can play an important explanatory role in subsequent assimilation trajectories (segmented citation here (Portes and Zhou 1993). This sentiment can be targeted toward specific immigrant groups (e.g. Muslims or Mexicans) or generalized to immigrants as a singular identity (i.e. Non-natives). Although much work has been done to isolate the general determinants of overt anti-immigrant sentiment, focusing mostly on economic or ethnic factors and the European context (Schneider 2008; Meuleman et al. 2009; Hainmueller and Hiscox 2007; Mayda 2006), little work has directly considered variation in sentiment toward migrants to the U.S. characterized by their religious background.

Our primary focus is on legal Muslim immigrants, which are relatively new immigrant group to the U.S. In 2010, Muslims made up only about 0.8% of the U.S. population, but 9.4% or 88,000 out of 938,000 new permanent residents (Pew 2011). This still small but increasing presence invites a number of questions about the prospect of incorporation into U.S. society. Moreover, it gives opportunity for the potential targeting of specific immigrant groups for reasons of their religious affiliation, which requires inquiry about a group that is clearly distinct from the non-immigrant population. Given that about 80% of the U.S. population is Christian (Pew 2011), the Muslim migrants to the U.S. offer an opportunity to explore the borders of U.S. religious tolerance. Importantly, the conversation about Islam in the U.S. has become public in recent years with elected officials holding public hearings that target Muslims as potential sources of violence (NY Times 3/10/2011). In a recent publication by the White House, "Immigrant integration" has been specifically promoted as strategy to prevent "radicalization" (White House Report 8/2011).

Despite the urgent tone of recent debate, little empirical work has assessed the landscape confronting potential Muslim citizens.

From the perspective of public policy, this work offers a systematic assessment of the opposition that legal Muslim immigrants potentially face on their road to citizenship and contrasts it with that which confronts their Christian equivalents. Uniquely, we decompose opposition to citizenship for legal Christian or Muslim immigrant into what is likely to be experienced by the immigrant (i.e. direct opposition) from that which is held, but unexpressed (i.e. indirect opposition). The implication of this work for public policy is undergirded by a theoretical foundation. Specifically, we look to measure the extent to which religion delineates membership into a pluralistic, secular social compact that defines citizenship in the U.S. In other words, we are concerned with the extent to which religion structures opposition to new members of social group and, perhaps more importantly, the extent to which these religious frontiers are articulated.

Methodologically, we tailored an experimental design specifically to the task at hand, allowing us to distinguish directly and indirectly expressed opposition. Our approach offers two advantages. Firstly, it allows us to measure the contribution of social desirability pressure to an underestimation of the level of anti-immigrant sentiment in the U.S. Secondly, we can distinguish the determinants of overt and covert opposition. As a result we address the extent to which our current understanding of anti-immigrant sentiment in the U.S. is driven only by sentiment that is directly observed rather than the true underlying level of opposition.

Methods

Directly assessing anti-immigrants sentiment assumes that a response to a direct question reflects the respondent's true sentiment. By allowing respondents to mask their responses, research on affirmative action (), racial tolerance () and immigration (Janus 2010) has shown that in some cases true sentiment, which can be only indirectly measured, diverges significantly and systematically from that which is directly expressed. One method to elicit truthful responses is the

list experiment[a], which allows respondents to permanently conceal their individual responses from researchers, reducing or eliminating the bias attributable to the social desirability of a given response. Respondents are divided between a control group and, in this case, two treatment groups. The control group is asked a single question about the following list of items:

> Below you will read three things that sometimes people oppose or are against. After you read all three, just tell us *HOW MANY* of them you *OPPOSE*. We don't want to know which ones, just *HOW MANY*.
>
> (1) the federal government increasing assistance to the poor
>
> (2) professional athletes making millions of dollars per year
>
> (3) large corporations polluting the environment

Two independently sampled treatment groups are asked a nearly identical question, but of a list that includes a fourth item to query opposition to Muslim and Christian immigrants respectively.

> (4) granting citizenship to a legal immigrant who is Muslim
>
> (4) granting citizenship to a legal immigrant who is Christian

In its most basic incarnation, the comparison of the mean of the responses to the control list with the mean of the responses to each of the treatments offers an estimate of the proportion opposed to the additional list item. To assess the degree to which this proportion differs from that obtained via direct questioning, the response is compared to two direct questions about opposition to legal Muslim and Christian immigrants asked of the control group. Recent work using a maximum-likelihood estimator has extended the simple difference in means approach to a multivariate framework (Umai, 2011) by modeling the joint distribution of the responses as,

$$g(x,\delta) = \Pr\left(Z^*_{i,J+1} = 1 | X_i + x\right), \text{and } h_z(y;x,\psi_z) = \Pr\left(Y_i(0) = y | Z^*_{i,J+1} = z | X_i + x\right) \quad (1)$$

[a] A more detailed description of the list experiment and its methodological origins has been recently done by Umai (2011) and Blaire and Umai (2011).

where for individual i, J is equal to the number of list items and $\left(Z_{i,J+1}^{*}\right)$ represents the truthful answer to the sensitive item. The functions $\left(g(x,\delta)\right)$ and $\left(h_z(y;x,\psi_z)\right)$ represent the conditional expectation for the control and sensitive items given the covariates X. The term y is equal to the number of items $(0,\dots,J)$ and z is an indicator that can take a value of 0 or 1. This approach has the advantage over the traditional difference in means and an alternative non-linear least squares approach in that it uses all of the information of the joint distribution of $\left(Y_i(0)=y|Z_{i,J+1}^{*}\right)$ (Umai, 2011).

In addition to ascertaining an unbiased estimate the proportion of those opposed to citizenship for either legal Muslim or Christian immigrants, we are interested in the extent to which these opinions are hidden during direct questioning. The difference between the directly asked item and the estimate derived from the list experiment provides an estimate of the direct measure of the presence and magnitude of social desirability pressure $\mathrm{B}(x)$ and can be modeled as,

$$\mathrm{B}(x)=\Pr\left(Z_{i,J+1}(0)=1|X_i=x\right)-\Pr\left(Z_{i,J+1}^{*}=1|X_i=x\right) \quad (2)$$

Where $\left(Z_{i,J+1}(0)\right)$ is the respondents response to the sensitive question (e.g. opposition to citizenship for legal Muslim immigrants) when asked directly and the first term can $\left(\Pr\left(Z_{i,J+1}(0)=1|X_i=x\right)\right)$ can be estimated using the observed value of the response to the sensitive question (e.g. opposition to citizenship for legal Muslim immigrants) when asked directly, using a logistic regression. Equation 1 and equation 2[i] were estimated using the R package *list*[ii].

Data

The data used were collected in June of 2010 as part of Time-Sharing Experiments for the Social Sciences' (TESS), a multi-investigator data collection fielded by the Indiana University Center for Survey Research. TESS utilizes the KnowlegePanel®, which is a probability-based

online panel. Sampled individuals are provided laptops and access to the internet. The sampling frame is representative of 97% of the U.S. population (Knowledge Networks, 2011). The sampling methodology is a mixture of random-digit dialing and addressed-based sampling with a response rate of 66.6%[iii]. The total, combined sample includes 2,305 individuals derived from three independent samples – the control group (n=768), the treatment group for the list item about Muslim immigrants (n=783) and the treatment group for the list item about Christian immigrants (n=754).

Results

Analytic Strategy

The results will be presented in the following order. First, we will report the overall trends in the level of opposition to citizenship for Muslim and Christian immigrants and the degree to which this opposition is kept form the public sphere (i.e. social desirability bias). Second, we will introduce a number of important determinants of opposition to citizenship for both Muslim and Christian immigrants. These determinants will theoretically drive a set of multivariate models that assess within-group differences (e.g. differences in opposition by level of education). These multivariate models will also explore the degree to which social desirability bias drives the results. Finally, these determinants will be assessed separately, measuring the degree to different subgroups mask their opposition to Muslim and Christian immigrants. In contrast to the multivariate models, this reveals the degree to which members of a specific subgroup (e.g. liberals) mask their opposition to either Muslim or Christian immigrants.

Overall Trends

[insert Plot 1 – opposition to citizenship for Muslim immigrants]

[insert Plot 2 – opposition to citizenship for Christian immigrants]

Plot 1 shows the proportion and 95% confidence interval of the U.S. population opposed to citizenship for Muslim immigrants. The first and second columns are the proportion opposed when estimated using direct questioning (i.e. the control group) or indirect questioning (i.e. the list experiment). When asked directly, 0.28 (±0.03) of respondents express unconditional opposition. When asked indirectly, estimated using equation 1, the proportion is notable similar at 0.31 (±0.06). The third column, which can be directly determined using estimates from the first two columns and their standard erros as the samples are independent, confirms that there is no significant difference between the direct and indirect estimates. In other words, slightly less than a third of the U.S. population opposes citizenship for Muslim immigrants and there is no evidence that this opposition kept out of the public sphere.

Plot 2 shows that same estimates as Plot 1, but for opposition to legal Christian immigrants. At only 0.11 (±0.02), the directly estimated proportion of opposition to Christian immigrants (column 2) is significantly and substantively lower than that estimated for Muslim immigrants. In contrast, the indirectly estimated proportion (column 1) is nearly identical at 0.30 (±0.07). Succinctly put, a fifth of the opposition to citizenship to legal Christian immigrants is hidden and only emerges when respondents are allowed to mask their opinion. One interpretation of this difference is that the social desirability of appearing tolerant toward Christian immigrants results in about a 20% underestimation of true proportion opposed, which is not the case for opposition to Muslim immigrants.

Determinants of Opposition to Muslim and Christian Immigrants

[insert table 1]

To directly assess the determinants of opposition to citizenship for Christian and Muslim immigrants a number of individual characteristics are considered. Age is included as a linear and quadratic term. Although some research has show that older respondents can be less welcoming of newcomers, the association is not expected to be strong if present. Sex is also included, but as with age, large differences are not expected between male and female respondents.

Two socioeconomic measures, education and income, are measured using the highest level of completed schooling and the income quintile derived from reported family income. Proportionally, migration to the U.S. tends to include more unskilled labor, which can be interpreted as greater competition for those with less education and income. However, higher socioeconomic status may also imply greater sensitivity to social norms and greater pressure to avoid the appearance of intolerance. Therefore, we expect significantly less opposition to citizenship for Muslim and Christian immigrants to be limited to direct, overt opposition. We expect the underlying level of opposition to differ little by level of education or income.

To account for religious affiliation, four broad categories are assessed – "mainline Protestant", "evangelical Christian", "Catholic/Orthodox" and "other". These four groups are derived from a larger menu of affiliations in the following way. Mainline Protestants are defined by respondents who self-identify as Protestant (n=519), which include Methodists and Lutherans who were not distinguished in the original data collection. Evangelical Christians are composed of Baptists (n=395) and Pentecostals (n=76). Eastern Orthodox (n=7) are combined with Roman Catholics (n=395). The "other" category is admittedly heterodox, largely if not entirely due to sample size, combining Mormons (n=39), Jews (n=57), Hindus (n=8), Buddhists (n=20) and "other Christians" (n=260). Muslim respondents (n=8) were eliminated from the sample. Although we have little literature upon which to base a clear expectation of the role of religious affiliation, we consider more active/expansive Christian denominations to be more likely to perceive Christianity to be a component of being a U.S. citizen. Therefore, we expect evangelicals to be significantly more likely oppose citizenship only for Muslim immigrants. In addition, we expect this targeted

opposition to emerge only from indirect questioning with overt expression to differ little from mainline Protestants, Catholics, Orthodox or those classified as "other".

Political ideology is a three-part categorical variable defined as liberal, moderate and conservative. Liberals are respondents who consider themselves "extremely liberal" (n=68), "liberal" (n= 297) and "somewhat liberal" (n=233). Similarly, conservatives are the combination of respondents who self identify as "extremely conservative" (n=68), "conservative" (n= 297) and "somewhat conservative" (n=233). Moderates are respondents who see themselves as "moderate or middle of the road". Our expectation is that relative to conservatives and moderates, liberals will overtly profess significantly greater tolerance. This tolerance will be directed at both Muslim and Christian immigrants. However, following research on affirmative action (), we expect this overt tolerance to be limited to the public sphere and, when allowed to mask their opinions, liberals will express opposition similar to their more conservative peers.

Three broad racial and ethnic groups are considered. Respondents who self-identify as non-Hispanic, Whites (n=1,698) and Hispanics (n=255) are directly self-identified. The "Nonwhite" category includes non-Hispanic respondents, who identify as Black (n=187), "other" (n=98) or as having more than one race/ethnicity (n=67). We expect, given the countries of origin of more recent migrants, that Hispanics will feel greater empathy toward legal immigrants in general and, therefore, express significantly greater tolerance. This will reduce opposition and will be present in both direct and indirect estimates.

Multivariate Analysis of Determinants of Opposition to Citizenship for Muslim Immigrants

[insert Table 2 here]

[insert Table 3 here]

Table 2 reports the estimated coefficients and test statistics for the binomial logistic regression of direct opposition to citizenship for Muslim immigrants to the United States. Table 3 reports results for the same covariates, but estimated indirectly using equation 1. All models control for race/ethnicity, age, sex and region of residence. In models that control for socioeconomic status (column 1 in table 3 and 4), having a bachelors degree relative to a high school diploma is negatively and significantly associated with a lower likelihood of opposing citizenship for Muslim immigrants. In addition, the direction of the coefficient for "some college" and "less than high school" imply that greater education generally reduces opposition. This is true for both the direct and indirect estimates, indicating that social desirability bias does not significantly affect the estimates.

Column 2 in table 2 and 3, in addition to controls for race/ethnicity, age, sex and region of residence, includes the measure of religious affiliation. As expected evangelicals are only significantly more opposed to citizenship for Muslim immigrants, relative to mainline Protestants, when their opposition is allowed to be masked. In other words, overt expression of opposition underestimates the true level of opposition and gives the impression that no significant difference exists.

Political ideology is included in Column 3 in both table 2 and 3. As expected, liberals are significantly less likely to be opposed to extending citizenship to legal Muslim immigrants. However the magnitude and significance of the estimated coefficient is lower in the models estimated with the list experiment, which suggests that liberals are less tolerant than they might appear. However, the standard errors are fairly large so the change in magnitude is not so easily interpreted. In other words, although there is some indication that liberals, relative to moderates, hide their opposition, they remain significantly less likely to be opposed in both the direct (table 2) and indirect estimates (table 3).

Column 4 includes all covariates. In a model that controls for socioeconomic status (education and income) and political ideology, evangelical Christians are no longer significant in

the list models. In both the indirect and direct models a bachelor's degree and liberal political inclinations remain significantly associated with less opposition to citizenship for Muslim immigrants. The magnitude and significance is slightly greater in the direct models, but the results are somewhat consistent. Notably, conservatives are marginally more likely to be opposed to citizenship relative to moderates, but only when the opposition is measured directly. Hispanics are less overtly opposed, but the magnitude is similar in both direct and indirect estimates, suggesting that the larger standard errors in the indirect model, which are a result of the joint distribution used to calculate equation 1, explains the difference.

Multivariate Analysis of Determinants of Opposition to Citizenship for Christian Immigrants

[insert Table 4 here]

[insert Table 5 here]

The coefficients and relevant test statistics for the multivariate models of the determinants of opposition to citizenship for Christian immigrants are reported in table 4 and 5. Table 4 reports the direct estimates while table 5 reports the indirect estimates derived from the list experiment (equation 1). As with the estimates of opposition to citizenship for Muslim immigrants all models include controls for race/ethnicity, age, sex and region of residence. In this way, comparing the direct (table 4) to the indirect (table 3) estimates reveals the extent to which significant differences are a product of social desirability.

Column 1 in table 4 an 5, in addition to the above-mentioned controls, includes two measure of socioeconomic status – education and income. Similar to the models of opposition to citizenship for Muslim immigrants, a bachelor's degree has a negative and significantly association in direct models. In contrast, no significant association is observed and have some college is marginally and

negatively associated. Although the estimated coefficient is still negative the results suggest that some of the association is attributable to a desire to appear more tolerant under direct questioning.

Religious affiliation is included in column 2 in both table 4 and 5. The direction of the coefficients is positive for evangelicals and negative for Catholics/Orthodox, but does not approach significance in the direct or indirect estimates. The implication is that religious affiliation, similar to what was observed for Muslim immigrants, is not a significant predictor of opposition.

Column 2 in table 4 and 5 introduces political ideology. Relative to moderates, both conservative and liberal respondents are significantly less likely to be opposed to citizenship for Christian immigrants. However, when allowed to mask their opposition, no significant difference remains and the estimated coefficient for liberal is very close to zero. Clearly, reduced opposition is only found in direct estimates. Indirect estimates demonstrate that the true, underlying opposition is similar across groups and, relative to moderates, the coefficient for conservatives is positive.

The full model (column 4 in table 4 and 5) leaves little doubt that direct estimates are biased. In the direct estimates, the story remains largely unchanged – a bachelor's degree, a greater income, being liberal/conservative ideology and identifying as Hispanic are all associated with less opposition to citizenship for Christian immigrants. However, with the exception of education, no predictor is significantly associated with opposition to citizenship for legal Christian immigrants when indirectly estimated from the list experiment. For most of the significant predictors in the direct model (income, political ideology, and race/ethnicity), the estimated coefficient was attenuated more than the standard error increased, indicating that the loss of significance was not largely attributable to increased standard errors due to the joint distribution used in the estimation strategy described by equation 1.

Estimates of Social Desirability Bias

[insert Table 6]

The multivariate models offer insight into the relative significance of a number of theoretically relevant covariates. Additionally, the degree to which these associations are products of social desirability can be inferred. However, of equal interest is the degree to which the magnitude of the estimated social desirability bias (equation 2) changes the estimated overall proportion opposed for a given subgroup (e.g. evangelical Christians). This is distinct from the estimates of the relative importance (e.g. liberals vs. moderates) derived from the estimates in tables 2, 3, 4 and 5. In other words, are member of a specific subgroup (e.g. evangelicals) underreporting their opposition to a specific religious immigrant group?

Table 6 reports the within-group proportion from the indirect and direct estimates of opposition to citizenship for Muslim immigrants. In addition, the difference between the two proportions, interpreted as the magnitude of social desirability bias and estimated using equation 2, is also reported. For directly measured opposition to the extension of citizenship to legal Muslim immigrants (column 2), the estimated proportion varies with estimates as high as 0.36 for low levels of education (high school) and as low as 0.13 for high levels of education (bachelor's or more). Similarly, when directly asked, the proportion of liberal respondents opposed is 0.13 compared 0.29 and 0.35 for moderate and conservative respondents respectively. This is compared to an overall proportion of 0.28 across all groups. In a sense this variation is reflected in the significant differences observed for some groups in the multivariate models although the within-group proportion could not be directly observed. What is of greater interest is the degree to which the opposition is hidden, or not hidden in this case, from the public sphere.

Without exception, no subgroup significantly hides opposition to citizenship for legal Muslim immigrants. In other words opposition is overt, reflecting almost no social desirability pressure to appear tolerant. That does not mean that some point estimates for the difference (column 3) are greater or, in a few cases, slightly less than zero. But, for all estimates of the 95% confidence interval, the lower bound is negative and the upper bound is positive, indicating that the

difference (i.e. the magnitude of the social desirability bias) is statistically indistinguishable from zero.

[insert Table 7]

The results for estimates of within-group social desirability bias for opposition to citizenship for legal Christian immigrants (table 7) contrast substantially with the estimates in table 6. As before, among directly estimated opposition, variation is observed with opposition as low as 0.04 for Hispanics and as high as 0.18 for low levels of education. This is compared to an overall proportion opposed of 0.11. By simply assessing the direct opposition, one could conclude that the overall level of opposition is both lower within groups and lower overall and that legal Muslim immigrants are targeted.

The indirect estimates offer a different story. In addition to the significant overall difference of between 0.13 and 0.27, which was also observed in plot 1 and plot 2, nearly every subgroup significantly masks opposition to citizenship for Christian immigrants. Notable exceptions are the less educated (less than high school or high school) and those with lower incomes (1st and 2nd quintile). Nonwhites, a decidedly heterogeneous and difficult to interpret group, also does not demonstrate significant social desirability bias. That said most subgroups (better educated, higher incomes, all religious groups, all political ideologies whites, Hispanics, males, females and all regions of residence) significantly mask their opposition to citizenship for legal, Christian immigrants (i.e. positive value in column 3 and a positive lower bound). In other words the direct opposition experienced by Christian immigrants is significantly less than that which is actually held (i.e. indirect opposition). In contrast Muslim immigrants experience no such restraint.

Comparison of estimated opposition to citizenship for Muslim and Christian immigrants – direct vs. indirect estimates

Despite significant differences in the degree to which opposition to citizenship for Muslim and Christian immigrants is openly expressed, little difference exists when respondents can mask their responses. In other words, the true, underlying opposition is largely similar. Even among groups that do show some difference in point estimates (e.g. less than high school), the lower bound for one always crosses the upper bound for the other. Succinctly put, large differences in the direct estimates, which appear to target Muslim immigrants with greater levels of opposition, are confined to the public sphere.

Conclusions

The first goal of this work was to establish the degree to which Muslim immigrants were subjected to targeted opposition. More broadly, we sought to test the social acceptability of excluding a specific, legal immigrant group from citizenship for reasons of religious identity. We conclude that legal Muslim immigrants are indeed subject to targeted bias. However, this bias is limited to the public sphere. That overt expression is likely to be the most salient in the day-to-lives of Muslim immigrants, but it also contrasts with a more generalized opposition to the incorporation of immigrants, including Christian immigrants. In other words, opposition in the U.S. only openly targets Muslim immigrants, but is otherwise quite generalized.

A second goal of this work, which drove our research design, was the measurement of the degree that social desirability bias explains variation in direct measures of opposition. Indirect expression of opposition, measured when the respondent can be assured that she/he can never be linked to the response, clearly shows that citizenship for Christian immigrants is opposed to the same extent as citizenship for Muslim immigrants. This also holds across a number of subgroups. We suggest that what sets opposition to Muslim immigrants apart is not that is more widely held, but that it is more openly expressed and the explanation for this is the greater reluctance to articulate bias toward Christian immigrants. This allows an important nuance to enter the

discussion – public opposition to certain immigrant groups may not translate into greater opposition in situations that offer anonymity.

Social desirability bias changes the interpretation of more than just the overall story. Individual-level determinants are also sensitive to whether or not the opposition is being expressed openly. The fact that some of the significant predictors of opposition are only found in models of direct opposition, suggests that some of what we know about anti-immigrant sentiment may be limited to its overt expression. Granted the findings are limited to a comparison between Muslim and Christian immigrants, but there is little reason to think that social desirability bias only targets models of opposition to religious immigrants. What is clear is that the size of the bias is present almost regardless of the respondent's political or religious stripe.

An obvious next step is to assess anti-immigrant sentiment toward other immigrant groups, defined by country/region of origin for example, and to test for the social desirability of appearing tolerant in a variety of contexts of destination. This work would also be well served to explore sentiment to ward citizenship for Muslim immigrants in contexts where Muslim immigrants have a longer tradition. Any next steps require an experimental approach, which allows individual-level predictors of opposition to be assessed for both direct opposition and underlying, indirect opposition.

Appendix 1:

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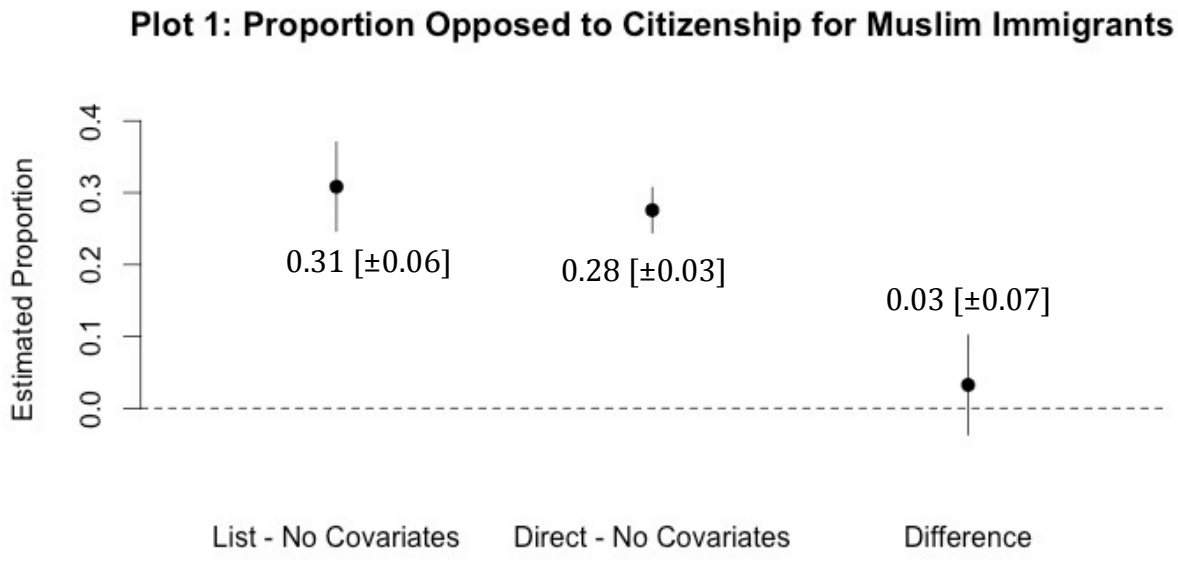
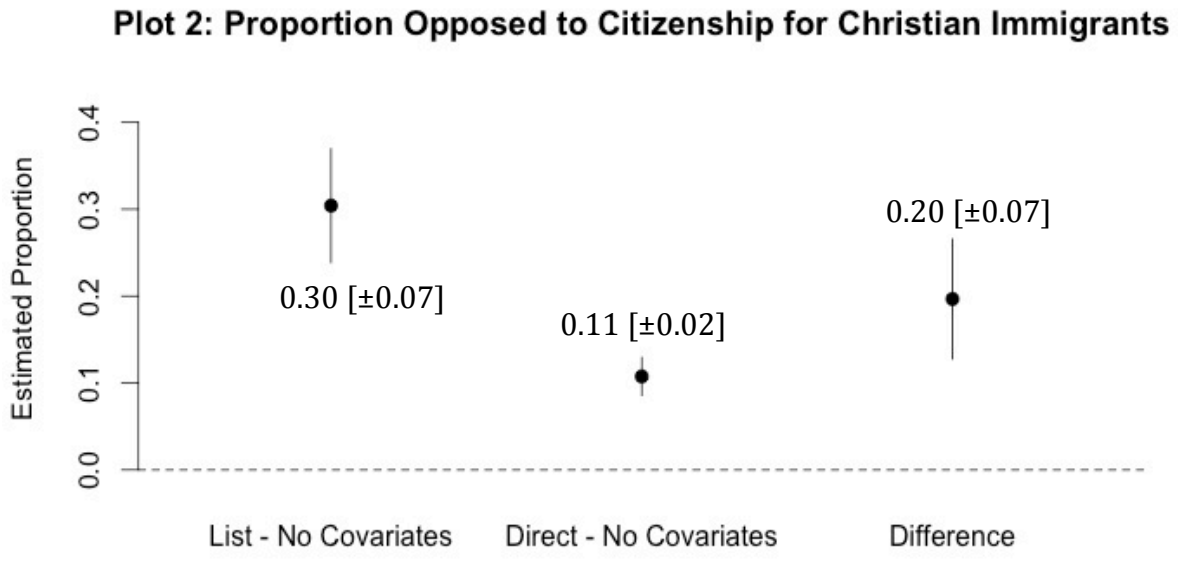
[i] The first term in equation 2, derived from a standard logistic regression, was estimated using *glm* in R.

[ii] *list* is a free, open-source software developed by Blaire and Umai (2010) and available through the Comprehensive R Archive Network (CRAN; http://cran.r-project.org/package=list).

[iii] The reported response rate is based on a sample of 4,942 of which 3,290 responded. This total sample includes one treatment group (n=840) that was not used in the analysis reported here.



Source: TESS/Knowledge Networks® 2010



Source: TESS/Knowledge Networks® 2010

Table 1: Descriptive statistics

	Direct	List (Muslim)	List (Christian)
Less than high school	11.62	14.36	11.98
High school	32.77	27.18	31.03
Some college	29.37	29.49	27.56
Bachelors or more	26.24	28.97	29.43
1st Income Quintile	17.23	20.90	19.04
2nd	19.06	20.13	19.97
3rd	26.24	26.03	26.63
4th	18.02	12.56	16.11
5th	19.45	20.38	18.24
Mainline Protestant	24.15	21.92	21.70
Evangelical	22.19	19.74	19.57
Catholic / Orthodox	24.28	26.15	25.03
Other	29.37	32.18	33.69
Liberal	23.89	27.18	26.76
Moderate	35.12	35.00	35.69
Conservative	40.99	37.82	37.55
White	73.37	73.97	74.03
Nonwhite	15.93	14.87	14.65
Hispanic	10.70	11.15	11.32
Female	54.18	52.95	53.79
Male	45.82	47.05	46.21
Northeast	20.50	19.74	17.84
Midwest	22.98	22.95	23.30
South	35.64	34.62	35.95
West	20.89	22.69	22.90
n	768	783	754

Table 2: Binomial logistic regression of opposition to citizenship for legal Muslim immigrants - direct estimates

	b	S.E.						
	(1)		(2)		(3)		(4)	
High school (ref.)	-						-	
Less than high school	0.06	0.27					0.17	0.26
Some college	-0.31	0.21					-0.28	0.21
Bachelors or more	-1.21	0.27***					-1.21	0.27***
1st Income quintile (ref.)	-						-	
2nd	-0.25	0.27					-0.22	0.28
3rd	-0.15	0.24					-0.14	0.25
4th	-0.03	0.31					-0.01	0.32
5th	-0.26	0.31					-0.17	0.31
Mainline Protestant (ref.)			-				-	
Evangelical			0.26	0.25			0.02	0.26
Catholic / Orthodox			0.05	0.24			-0.03	0.25
Other			-0.31	0.24			-0.26	0.25
Moderate (ref.)					-		-	
Liberal					-1.04	0.26***	-0.76	0.27**
Conservative					0.22	0.18	0.33	0.19+
White (ref.)	-		-		-		-	
Nonwhite	-0.27	0.25	-0.32	0.24	-0.08	0.24	-0.13	0.26
Hispanic	-0.59	0.30*	-0.39	0.30	-0.38	0.30	-0.52	0.31+
Age	0.03	0.03	0.01	0.03	0.01	0.03	0.02	0.03
Age squared	-0.00	0.00	-0.00	0.00	0.00	0.00	-0.00	0.00
Male	-0.00	0.17	-0.07	0.16	-0.10	0.17	-0.03	0.17
Midwest (ref.)	-		-		-		-	
South	-0.01	0.22	-0.05	0.22	-0.02	0.22	-0.04	0.23
West	0.01	0.25	-0.01	0.25	-0.04	0.25	0.07	0.26
Northeast	-0.30	0.26	-0.36	0.26	-0.31	0.26	-0.24	0.27
Intercept	-1.25	0.71	-1.20	0.70+	-1.02	0.70	-0.83	0.75
n (control)	768							

Table 3: List experiment regression of opposition to citizenship for legal Muslim immigrants - indirect estimates

	b	S.E.						
	(1)		(2)		(3)		(4)	
High school (ref.)	-						-	
Less than high school	0.83	0.55					0.72	0.56
Some college	-0.01	0.40					-0.13	0.43
Bachelors or more	-1.06	0.50+					-1.03	0.53+
1st Income quintile (ref.)	-						-	
2nd	0.23	0.59					0.28	0.62
3rd	-0.20	0.46					-0.19	0.48
4th	0.40	0.57					0.52	0.62
5th	0.14	0.60					0.18	0.65
Mainline Protestant (ref.)			-				-	
Evangelical			1.14	0.50*			0.79	0.55
Catholic / Orthodox			0.54	0.46			0.47	0.48
Other			0.09	0.46			0.15	0.50
Moderate (ref.)					-		-	
Liberal					-0.70	0.44+	-0.69	0.48+
Conservative					0.09	0.35	0.17	0.37
White (ref.)	-		-		-		-	
Nonwhite	-0.31	0.45	-0.47	0.48	-0.11	0.46	-0.21	0.50
Hispanic	-0.53	0.54	-0.46	0.53	-0.22	0.52	-0.57	0.55
Age	0.04	0.01	0.01	0.01	0.03	0.01	0.03	0.01
Age squared	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00
Male	0.16	0.33	0.23	0.31	0.17	0.31	0.19	0.34
Midwest (ref.)	-		-		-		-	
South	0.40	0.44	0.17	0.44	0.27	0.43	0.19	0.47
West	0.29	0.49	0.18	0.48	0.08	0.47	0.32	0.52
Northeast	0.26	0.53	0.13	0.52	0.14	0.51	0.37	0.55
Intercept	-1.94	0.83*	-1.67	0.78*	-1.65	0.71*	-2.04	0.97*
n (control)	768							
n (treatment)	783							
n (total)	1,551							

Table 4: Binomial logistic regression of opposition to citizenship for legal Christian immigrants - direct estimates

	b	S.E.						
	(1)		(2)		(3)		(4)	
High school (ref.)	-						-	
Less than high school	0.24	0.35					0.31	0.35
Some college	-0.46	0.31					-0.39	0.31
Bachelors or more	-1.05	0.40**					-0.92	0.41*
1st Income quintile (ref.)	-						-	
2nd	-0.47	0.37					-0.42	0.37
3rd	-0.49	0.32					-0.46	0.32
4th	-1.10	0.50+					-1.04	0.50*
5th	-0.84	0.45+					-0.75	0.45+
Mainline Protestant (ref.)			-				-	
Evangelical			0.17	0.35			0.05	0.37
Catholic / Orthodox			-0.16	0.37			-0.29	0.38
Other			-0.12	0.34			-0.11	0.36
Moderate (ref.)					-		-	
Liberal					-0.96	0.35**	-0.69	0.37+
Conservative					-0.54	0.26*	-0.45	0.27+
White (ref.)	-		-		-		-	
Nonwhite	-0.08	0.32	0.03	0.31	0.15	0.31	-0.06	0.34
Hispanic	-1.55	0.61*	-1.28	0.61*	-1.36	0.61*	-1.47	0.62*
Age	0.03	0.04	0.01	0.04	0.01	0.04	0.02	0.04
Age squared	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00
Male	0.11	0.25	0.05	0.24	0.08	0.24	0.13	0.25
Midwest (ref.)	-		-		-		-	
South	0.27	0.33	0.23	0.33	0.27	0.32	0.18	0.34
West	0.58	0.36	0.45	0.35	0.46	0.35	0.58	0.36+
Northeast	-0.20	0.41	-0.26	0.41	-0.33	0.41	-0.20	0.42
Intercept	-1.75	1.03+	-2.12	1.00*	-1.76	1.00+	-1.35	1.07
n (control)	768							

Table 5: List experiment regression of opposition to citizenship for legal Christian immigrants - indirect estimates

	b	S.E.					
	(1)		(2)		(3)		(4)	
High school (ref.)	-						-	
Less than high school	-0.66	0.57					-0.59	0.58
Some college	-0.80	0.46+					-0.91	0.48+
Bachelors or more	-0.79	0.50					-0.92	0.53+
1st Income quintile (ref.)	-						-	
2nd	-0.34	0.58					-0.46	0.61
3rd	0.58	0.50					0.59	0.52
4th	0.42	0.61					0.40	0.62
5th	-0.05	0.61					-0.10	0.64
Mainline Protestant (ref.)			-				-	
Evangelical			0.25	0.49			0.12	0.52
Catholic / Orthodox			-0.17	0.51			-0.18	0.53
Other			0.10	0.44			0.27	0.48
Moderate (ref.)					-		-	
Liberal					-0.03	0.45	0.09	0.50
Conservative					0.25	0.36	0.31	0.40
White (ref.)	-		-		-		-	
Nonwhite	-0.55	0.55	-0.58	0.55	-0.50	0.53	-0.58	0.57
Hispanic	-0.09	0.61	0.18	0.54	0.17	0.52	-0.19	0.66
Age	-0.01	0.01	-0.01	0.01	-0.01	0.01	0.00	0.01
Age squared	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00
Male	0.31	0.33	0.33	0.33	0.29	0.33	0.25	0.34
Midwest (ref.)	-		-		-		-	
South	-0.18	0.46	-0.13	0.43	-0.11	0.43	-0.21	0.47
West	-0.04	0.50	-0.02	0.48	-0.08	0.48	-0.00	0.52
Northeast	-0.29	0.54	-0.15	0.52	-0.21	0.52	-0.29	0.55
Intercept	0.19	0.90	-0.39	0.81	-0.27	0.72	-0.33	0.94
n (control)	768							
n (treatment)	754							
n (total)	1,522							

Table 6: Magnitude of social desirability bias in estimates of opposition to citizenship for legal Muslim immigrants

	List			Direct					
	(A)	Lower	Upper	(B)	Lower	Upper	(A - B)	Lower	Upper
	(1)			(2)			(3)		
Overall	0.31	0.25	0.37	0.28	0.24	0.31	0.03	-0.04	0.10
Less than high school	0.48	0.30	0.67	0.35	0.25	0.45	0.14	-0.08	0.35
High school	0.34	0.21	0.47	0.36	0.30	0.42	-0.02	-0.16	0.12
Some college	0.32	0.21	0.43	0.28	0.22	0.34	0.04	-0.08	0.16
Bachelors or more	0.16	0.07	0.26	0.13	0.08	0.18	0.03	-0.07	0.14
1st Income Quintile	0.36	0.21	0.50	0.34	0.26	0.42	0.01	-0.15	0.18
2nd	0.40	0.20	0.61	0.28	0.20	0.35	0.13	-0.09	0.34
3rd	0.26	0.16	0.36	0.29	0.23	0.34	-0.03	-0.14	0.09
4th	0.36	0.20	0.53	0.28	0.19	0.37	0.08	-0.11	0.27
5th	0.25	0.11	0.39	0.19	0.13	0.26	0.06	-0.09	0.21
Mainline Protestant	0.23	0.11	0.34	0.30	0.23	0.36	-0.07	-0.20	0.06
Evangelical	0.46	0.31	0.62	0.33	0.26	0.40	0.13	-0.04	0.30
Catholic / Orthodox	0.33	0.20	0.45	0.28	0.22	0.34	0.05	-0.09	0.19
Other	0.25	0.14	0.35	0.21	0.16	0.27	0.03	-0.08	0.15
Liberal	0.19	0.09	0.30	0.13	0.08	0.17	0.07	-0.05	0.18
Moderate	0.33	0.22	0.44	0.29	0.24	0.35	0.03	-0.09	0.16
Conservative	0.36	0.26	0.46	0.35	0.29	0.40	0.01	-0.10	0.13
White	0.32	0.25	0.39	0.29	0.25	0.33	0.03	-0.05	0.11
Nonwhite	0.26	0.11	0.40	0.25	0.17	0.32	0.01	-0.16	0.18
Hispanic	0.26	0.09	0.44	0.21	0.12	0.30	0.05	-0.14	0.25
Male	0.33	0.23	0.43	0.26	0.22	0.31	0.07	-0.04	0.17
Female	0.29	0.21	0.37	0.28	0.24	0.33	0.00	-0.09	0.09
Midwest	0.28	0.15	0.42	0.30	0.23	0.37	-0.02	-0.17	0.13
South	0.34	0.24	0.45	0.29	0.24	0.34	0.05	-0.07	0.17
West	0.29	0.17	0.40	0.28	0.21	0.34	0.01	-0.13	0.15
Northeast	0.29	0.15	0.44	0.22	0.16	0.29	0.07	-0.09	0.23

Table 7: Magnitude of social desirability bias in estimates of opposition to citizenship for legal Christian immigrants

	List			Direct					
	(A)	Lower	Upper	(B)	Lower	Upper	(A - B)	Lower	Upper
	(1)			(2)			(3)		
Overall	0.30	0.24	0.37	0.11	0.09	0.13	0.20	0.13	0.27
Less than high school	0.28	0.11	0.46	0.18	0.10	0.26	0.10	-0.09	0.30
High school	0.38	0.26	0.50	0.14	0.10	0.18	0.24	0.11	0.37
Some college	0.26	0.14	0.38	0.09	0.06	0.13	0.17	0.04	0.29
Bachelors or more	0.26	0.14	0.38	0.05	0.02	0.08	0.21	0.08	0.34
1st Income Quintile	0.29	0.14	0.44	0.18	0.12	0.25	0.11	-0.06	0.27
2nd	0.26	0.10	0.42	0.11	0.06	0.16	0.15	-0.02	0.32
3rd	0.37	0.24	0.49	0.11	0.07	0.15	0.26	0.13	0.39
4th	0.34	0.16	0.52	0.06	0.01	0.11	0.28	0.09	0.46
5th	0.23	0.09	0.37	0.06	0.02	0.10	0.17	0.02	0.31
Mainline Protestant	0.27	0.15	0.39	0.11	0.06	0.15	0.16	0.03	0.29
Evangelical	0.30	0.16	0.44	0.14	0.09	0.19	0.15	0.01	0.30
Catholic / Orthodox	0.27	0.13	0.41	0.08	0.04	0.12	0.19	0.05	0.34
Other	0.36	0.24	0.48	0.10	0.06	0.14	0.26	0.13	0.38
Liberal	0.29	0.15	0.43	0.07	0.03	0.10	0.22	0.08	0.37
Moderate	0.28	0.17	0.39	0.15	0.11	0.19	0.13	0.02	0.25
Conservative	0.33	0.23	0.43	0.10	0.06	0.13	0.24	0.13	0.34
White	0.30	0.23	0.38	0.11	0.09	0.14	0.19	0.11	0.27
Nonwhite	0.21	0.05	0.36	0.13	0.07	0.19	0.08	-0.09	0.24
Hispanic	0.40	0.20	0.60	0.04	-0.00	0.08	0.36	0.16	0.57
Male	0.34	0.24	0.45	0.11	0.08	0.14	0.24	0.13	0.34
Female	0.27	0.19	0.35	0.11	0.08	0.14	0.16	0.08	0.25
Midwest	0.30	0.16	0.44	0.10	0.05	0.14	0.20	0.06	0.35
South	0.29	0.19	0.40	0.12	0.08	0.16	0.17	0.06	0.29
West	0.32	0.18	0.45	0.13	0.08	0.18	0.19	0.04	0.33
Northeast	0.30	0.14	0.46	0.07	0.03	0.11	0.23	0.07	0.39