

**The Centrality of Ethnicity and Religion in Stereotypes about Immigration:  
Evidence from Conjoint Experiments in the United States and Britain**

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[Draft. Please don't cite or circulate]

## **Abstract**

Political scientists have extensively studied attitudes toward immigration, while stereotypes about immigrants receive much less attention. At the same time, a number of important questions in the politics of immigration deal specifically with stereotypes. For instance, existing literature often makes a presumption that Americans think of immigrants as mostly Hispanics. But how central is ethnicity to these stereotypes, when compared with other attributes such as skill? And is thinking about immigration in terms of ascriptive identities a uniquely American or a more general phenomenon? I answer these questions using two original conjoint experiments carried in the United States and Britain, in which respondents estimate hypothetical persons' probabilities of being immigrants on the basis of presented descriptions. Results demonstrate that stereotypes about immigrants among Americans and Britons are strongly dominated by ethnicity and religion. Regression analyses using individual-level estimates from conjoint experiments show that stereotypes about immigrants' ethnicity, religion, and criminal behavior consistently predict anti-immigration attitudes—whereas stereotypes about skills do not. Overall, the findings indicate that ascriptive identities dominate both content and consequences of stereotypes about immigration and that this phenomenon holds across national contexts.

*Keywords:* attitudes, conjoint analysis, ethnicity, immigration, skill, stereotypes

An extensive literature in political science explores the factors that shape public *attitudes* toward immigration (for a review, see Hainmueller and Hopkins 2014). Much less attention in the discipline is paid to the content and implication of *stereotypes* about immigrants—or, using a popular definition from social psychology, beliefs about their characteristics, attributes, and behaviors (Hilton and Von Hippel 1996). And there are several reasons why studying these stereotypes can help to better understand the politics of immigration.

Attitudes toward immigrants are broadly believed to be heavily impacted by group-based prejudice, with Hispanics in the United States being the most prominent case.<sup>1</sup> Presentation of Hispanic immigrants in the news media changes whites' opinions on the issue (Brader, Valentino, and Suhay 2008), and implicit attitudes toward Hispanics spills over into immigration policy preferences (Perez 2010). The standard interpretation of these findings has to deal with stereotypes: according to a popular logic, Americans imagine immigrants as predominantly Hispanics, and these perceptions color opinions on immigration as a political issue. However, existing evidence for this conjecture is only indirect since the degree to which “Hispanic” as an attribute is central to the mental representations of “immigrants” among members of the American public has never been measured.

Importantly, group affect is not the only consideration that likely factors into natives' opinions on immigration—and, consequently, ethnicity is not the only dimension of stereotypes about immigrants that researchers may be interested in exploring. For instance, Americans as well as voters in other industrial democracies agree that potential immigrants who have valuable skills should be preferred for admission (Hainmueller and Hopkins 2015; Valentino et al. 2019).

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<sup>1</sup> In my experiment, I use “Hispanic” as an attribute because incorporating gendered labels like “Latina” and “Latino” in conjoint designs is less straightforward whereas the gender-neutral term “Latinx” may be still unfamiliar to many respondents. Throughout the paper, I also use “Hispanic” as a group label for consistency.

Immigrants' willingness to integrate and respect both formal and informal rules of the host society also prominently impact opinions on immigration (Levy and Wright 2020; Ostfeld 2017). At the same time, there is evidence that preferences for skilled and law-abiding immigrants can mask group-based prejudice among natives. In the U.S. context, Hispanic immigrants are more strongly penalized for transgressive behavior (Hartman, Newman, and Bell 2014), and when compared with European immigrants, their evaluations more heavily depend on skill (Newman and Malhotra 2018). In other words, different dimensions of stereotypes about immigration—such as natives' beliefs about immigrants' group identity, potential economic contribution, and threatening behavior—likely overlap.

Disentangling these dimensions—that, according to a well-suited metaphor from race and politics, can be thought of as a “bundle of sticks (Sen and Wasow 2016)—is a complicated task. Recent research employing latent class analysis demonstrates that attributes potentially associated with immigrants, such as “Hispanic” and “low-skilled,” are indeed intertwined in the minds of white Americans (Flores and Azar 2022). A limitation of the latent class approach is that, while it allows exploring how different attributes are conflated in common immigrant “archetypes,” there is no straightforward way to compare their centrality in the content and consequences of stereotypes. There are also studies that use respondents' self-reports to explore stereotype dimensions separately (Blinder 2015; Zhirkov 2021), but they are subject to other methodological problems including social desirability bias and innumeracy.

This discussion allows sketching a number of requirements that a good measure of stereotypes about immigrant populations should satisfy. First, it must allow investigating multiple beliefs simultaneously: potential examples include immigrants' ethnicity or religion, skill/occupation, and propensity for criminal behavior. Second, with such a measure one should

be able to compare the centrality or importance of different dimensions in both content and consequences of stereotypes about immigrants. Third, a method has to be subtle in order to decrease concerns about social desirability due to sensitivity of immigration as a topic. Fourth, a good measure should be flexible—and applicable to stereotypes about immigrant populations beyond the case of Hispanics in the United States.

In this paper, I contribute to the literature by exploring the content and implications of stereotypes about immigrants using a recently validate method based on conjoint experiments (Myers, Zhirkov, and Lunz Trujillo 2022). In these experiments, respondents are presented with profiles that describe hypothetical persons in terms of several attributes and, then, asked to estimate these persons' probability of belonging to a certain social category (in this case, being immigrants). Estimated effects from such conjoint designs measure the direction and strength of cognitive associations between each included attribute and the social category in question.

The conjoint method of measuring stereotypes adheres to all the requirements specified above: It is inherently multidimensional since respondents are asked to rate profiles described in terms of several attributes. Inferring stereotypes from observed categorizations instead of relying on self-reports provides greater protection against social desirability, demand effects, and rationalization. Since conjoint effects are estimated independently for different stereotype dimensions, they allow comparing the centrality of different attributes for both content and consequences of beliefs about immigrants.

Results of two original conjoint experiments carried out in the United States and Britain demonstrate that respondents primarily rely on persons' ethnicity and religion when making guesses about their nativity status. Further, regression analyses that employ individual-level estimates from conjoint experiments show consistent effects of stereotypes about immigrants'

ethnicity and religion on attitudes toward immigration—but not of stereotypes about skills. These findings have important implications for the politics of immigration by illustrating the centrality of ethnicity and religion in both content and consequences of stereotypes about immigration and highlighting their general rather than U.S.-specific character.

### **Stereotypes and Attitudes toward Immigration**

The realities of life in a modern society create an essential gap between people’s cognitive abilities and the amount of information they have to acquire and process (Lippmann 1922). To cope with these challenges of information processing and storage, people create simplified and often distorted mental images of social reality. Then these images, rather than the underlying reality, inform social attitudes. This conjecture, even though first put forward a century ago, has held up well till the present: people’s preferences are largely built on imagination, and policies that benefit populations imagined as “undeserving” enjoy lower levels of public support (Petersen 2012; Schneider and Ingram 1993).

This framework is applicable to immigration for a number of reasons. Immigrants form a social category: individuals can be defined as its members or not on the basis of certain shared qualities (Macrae and Bodenhausen 2000). Therefore, immigrants can become a target of stereotyping and given their cognitive functions, stereotypes are likely to exaggerate the differences between immigrants and natives (Bordalo et al. 2016).

Moreover, immigrants are a complicated and abstract category that most people are not familiar with and have little knowledge about (Lutz and Bitschnau 2022). Studies have repeatedly demonstrated large and consequential misperceptions about the sizes of immigrant populations among the publics in industrial democracies (Citrin and Sides 2008; Gorodzeisky and Semyonov 2020; Hjern 2007). The centrality of stereotypes in formation of attitudes toward

immigration can explain their stability (Kustov, Laaker, and Reller 2021), given that beliefs about immigrants are extremely resilient even in the light of new relevant information (Glinitzer, Gummer, and Wagner 2021; Hopkins, Sides, and Citrin 2019).

Recently, researchers have moved from describing perceptions about sizes of immigrant populations to explore more detailed stereotypes: beliefs about the specific attributes that, in people's minds, distinguish immigrants from natives. Studies have shown that natives' beliefs about immigrant populations significantly deviate from objective data and that these beliefs predict attitudes toward immigration (Blinder 2015; Flores and Azar 2022; Zhirkov 2021). In other words, people's opinions are based on stereotypes about immigrants rather than on the underlying social reality.

### **Problems with Measuring Stereotypes**

Existing studies on stereotypes about immigrants measure them with standard survey questions. For instance, respondents may choose the most frequent value of certain attribute, such as reason for migration (Blinder 2015). Such responses can be analyzed using the latent class technique in order to see which immigrant attributes tend to go together in people's minds: for instance, whether respondents who associate immigration with Hispanics are also more likely to see more immigrants as low-skilled (Flores and Azar 2022). Alternatively, respondents estimate the percentages of immigrants having the attribute values of interest, such as being college-educated or English-proficient (Zhirkov 2021). Then, independently of the specific measurement method, self-reported attitudes are regressed on self-reported stereotypes.

This inferential strategy carries a number of methodological challenges. One of them is social desirability bias, a tendency to underreport beliefs considered inappropriate (Nederhof 1985). Another problem is demand effects that arise when participants make guesses of the study

purpose and change responses to fit that assumed purpose (Nichols and Maner 2008). Self-reported stereotypes, especially for attributes involving strong affect, can also be rationalizations of pre-existing attitudes rather than their antecedents (Lodge and Taber 2013).

These methodological issues likely have different consequences for measuring various stereotype dimensions and estimating their social implications. Respondents may be more hesitant to express stereotypes about immigrants' ethnicity and religion while arguments about immigrants' economic productivity and reliance on welfare are more accepted in the public debate. As a result, researchers may underestimate both extent and variation of ethnic and religious stereotypes about immigrants—and this can bias estimated relationships between these stereotypes and attitudes toward immigration.

### **Measuring Stereotypes using Conjoint Experiments**

In this paper, I address these challenges by measuring stereotypes about immigrants with conjoint experiments. The conjoint is a survey-experimental design that allows researchers to study choices potentially affected by multiple factors or considerations (Hainmueller, Hopkins, and Yamamoto 2014). Conjoint experiments are commonly used to explore multidimensional preferences—including on immigration (Clayton, Ferwerda, and Horiuchi 2021; Ford and Mellon 2020; Hainmueller and Hopkins 2015). In such tasks, respondents are presented with multiple pairs of hypothetical immigrants described using a set of randomized attributes and, then, asked to choose an immigrant they would prefer to admit.

Recently, researchers have started using conjoint experiments to study beliefs about the social world rather than preferences (Flores and Schacter 2018; Goggin, Henderson, and Theodoridis 2020; Schachter, Flores, and Maghbouleh 2021). In these categorization-based conjoint experiments, respondents are asked to infer group memberships of hypothetical persons

from presented attributes rather than express preferences. For instance, the task can present respondents with profiles of political candidates and ask to guess whether each profile belongs to a Democrat or a Republican on the basis of information about religion, military experience, occupation, and so on.

The conjoint-experimental design offers essential protections against social desirability, demand effects, and rationalization. First, it effectively allows respondents to “conceal” the characteristics most impactful for their classification decisions since the profiles they are asked to categorize differ on multiple dimensions. Second, unlike standard survey questions that require respondents to rate stereotypes on all dimensions of interest, conjoint designs tap judgments only on the basis of dimensions relevant for each respondent. Third, conjoint tasks infer stereotypes indirectly from observed choices, meaning that concerns about rationalization are decreased. In addition, conjoint-based measures have been externally validated (Hainmueller, Hangartner, and Yamamoto 2015; Jenke et al. 2020), are resilient to a number of data quality problems in survey research, such as satisficing (Bansak et al. 2018, 2021), and help to decrease social desirability bias (Horiuchi, Markovich, and Yamamoto 2021).

Conjoint experiments have another important benefit as a measure of stereotypes: protection from survey participants using factual knowledge. When answering a standard question on stereotypes, like an item asking about the percentage of immigrants who are younger than 40, a respondent can simply know the statistic or even look it up online (Clifford and Jerit 2016). However, a conjoint-based measure makes application of such knowledge nearly impossible because of the provision of multiple attributes in profiles. For instance, calculating the conditional probability of being an immigrant (*A*) for a woman (*B*) with a high-skilled job (*C*)

would require knowing both the joint probability of having the latter two characteristics and the joint probability of having all three:

$$\Pr(A|B, C) = \frac{\Pr(A, B, C)}{\Pr(B, C)}.$$

This obviously becomes even more difficult as more attributes enter the calculation process.

### **Individual-Level Estimates from Conjoint Experiments**

Usually, researchers use average marginal component effects (AMCEs) from conjoint experiments to describe aggregate stereotypes in studied populations. However, a procedure to obtain individual marginal component effects, or IMCEs, has been recently proposed (Zhirkov 2022). This procedure does not require any additional assumptions compared to the standard conjoint analysis. At the same time, there are some design requirements: using an interval response scale, minimizing the number of randomized values per attribute, and maximizing the number of profiles presented to respondents. IMCEs from categorization-based conjoint experiments measure individual-level stereotypes, similarly to how estimates from standard choice-based conjoint tasks measure preferences. These measures can be used in inferential analyses to explore how stereotypes relate to attitudes (Myers, Zhirkov, and Lunz Trujillo 2022).

Formally, the procedure of obtaining IMCEs and using them as predictors in subsequent regression analysis can be described as follows. Consider a sample of respondents indexed  $i = 1, \dots, I$ . Each respondent rates profiles of hypothetical people indexed  $j = 1, \dots, J$  by likelihood of being immigrants. Profiles have attributes indexed  $k = 1, \dots, K$ . Each attribute has a specific number of levels indexed  $l = 1, \dots, L^k$ . At the first step, IMCEs for each attribute  $k$  are estimated using respondent-specific regression models

$$y_{ij} = \alpha_{ik} + \sum_{l=2}^{L^k} \beta_{ikl} x_{ijkl} + \varepsilon_{ijk}$$

where  $y_{ij}$  is the rating given by respondent  $i$  to profile  $j$ ,  $\alpha_{ik}$  is the constant,  $\beta_{ikl}$  is the respondent-specific regression coefficient for value  $l$  of attribute  $k$ ,  $x_{ijkl}$  is an indicator variable that equals 1 if attribute  $k$  from profile  $j$  presented to respondent  $i$  has value  $l$  and 0 otherwise, and  $\varepsilon_{ijk}$  is the error. To achieve identification,  $\beta_{ik1}$  is not estimated and IMCEs effectively represent the estimated differences in average ratings between profiles with their respective attribute values and profiles with the baseline value.

Estimate of IMCE for value  $l$  of attribute  $k$  specific to respondent  $i$ , denoted  $\pi_{ikl}$ , is equivalent to the estimate of respondent specific regression coefficient

$$\hat{\pi}_{ikl} = \hat{\beta}_{ikl}$$

This estimate assesses the direction and strength of the stereotype along a specific dimension for each individual: the degree to which respondent  $i$  associates value  $l$  of attribute  $k$  (e.g., having a low-skilled occupation) with the outcome (e.g., being an immigrant). At the second step, IMCE estimates for all  $K$  attributes and  $(L^k - 1)$  attribute values (baseline values excluded) are used in regression analysis to predict the outcome of interest  $z$ , such as attitudes toward immigration, with a set of control variables indexed  $h = 1, \dots, H$

$$z_i = \gamma + \sum_{k=1}^K \sum_{l=2}^{L^k} \delta_{kl} \hat{\pi}_{ikl} + \sum_{h=1}^H \theta_h w_{ih} + u_i$$

where  $\gamma$  is the constant,  $\delta_{kl}$  is the coefficient of stereotype  $l$  along dimension  $k$ ,  $\theta_h$  is the coefficient of control variable  $h$ ,  $w_{ih}$  is the value of variable  $h$  for respondent  $i$ , and  $u_i$  is the error.

## **Study 1: United States**

### **Data and Measures**

To explore stereotypes about immigrants in the United States, I designed and fielded an original survey-experimental study in March 2019. Participants were recruited using the Lucid panel that

matches the American National Election Study on a number of benchmarks (Coppock and McClellan 2019). The survey, including the conjoint task, was completed by 916 respondents. The sample characteristics were the following. Mean age was 44.5 years. Gender ratio was 49% male to 51% female. In terms of race/ethnicity, 70.6% of respondents self-identified as non-Hispanic whites. College education was reported by 39.3% of respondents. Finally, 38% of respondents were Democrats, 36% were Republicans, and 26% were independents.

In the conjoint experiment, each respondent rated 20 profiles (presented in ten pairs) by probability of being an immigrant using a scale from 0% to 100%.<sup>2</sup> Even though the task was formulated in terms of percentages, its goal was not to measure the true conditional probability of a profile belonging to an immigrant given certain description. It is well established that most people have trouble calculating percentage-based quantities (Landy, Guay, and Marghetis 2018). Moreover, as discussed in the previous section, presentation of conjoint profiles in terms of multiple attributes makes calculation of true conditional probabilities practically impossible. Therefore, I simply use conjoint estimates as measures of stereotypes, or associative networks linking immigrants to certain attributes in the minds of respondents.

Profiles were described in terms of six attributes selected following the current literature on public attitudes toward immigration. They included age and gender (Ward 2019), race/ethnicity (Valentino, Brader, and Jardina 2013), occupational status (Hainmueller and Hiscox 2010), reliance on government benefits (Garand, Xu, and Davis 2017), and criminal record (Hartman, Newman, and Bell 2014).<sup>3</sup> In conjoint profiles shown to respondents I used

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<sup>2</sup> When completing the conjoint experiment, 12 respondents ended up rating less than 20 profiles (the lowest number was 17 rated profiles for one respondent). These respondents were kept in the analysis.

<sup>3</sup> I had to exclude some attributes used in previous studies on public attitudes toward immigration because they would allow unambiguously categorizing a profile as belonging to an immigrant. Examples include country of origin (Konitzer et al. 2019), language proficiency (Hopkins 2015), and legal status (Wright, Levy, and Citrin 2016).

varying attribute labels to make them more realistic (e.g., using specific occupation names rather than just “low-skilled” or “high-skilled”), but the analysis only contrasted dichotomized attribute values. The only exception was the race/ethnicity attribute with four randomized values that were included in the analysis this way. See Table 1 for the full list of attributes with potential values.

**Table 1.** Attributes for profiles in U.S. conjoint experiment

Attribute	Values
Age	<i>Young: 25–39</i> <i>Older: 40–54</i>
Gender	Female Male
Race/ethnicity	White Black Hispanic Asian
Occupation	<i>High-skilled: Accountant, Engineer, Graphic designer, Nurse, Teacher</i> <i>Low-skilled: Cook, Day laborer, Gardener, Janitor, Waiter</i>
Government benefits	<i>No benefits: None</i> <i>Receives benefits: Food stamps, Housing assistance, Medicaid, Supplemental income</i>
Police record	<i>No record: None</i> <i>Has record: Assault, Drug possession, Drunk driving, Theft, Trespassing</i>

*Note.* Age values (in years) were randomly chosen from the specified intervals. Collapsed values are in italics.

Attribute values were fully and independently randomized with uniform distributions—that is, all distinct values for a specific attribute had equal probabilities of being presented.<sup>4</sup> For government benefits and police record attributes, I assigned equal probabilities to “no” and “yes” categories with each specific welfare program or crime having equal chances of being presented. See Figure 1 for an example of conjoint profiles as presented to respondents.

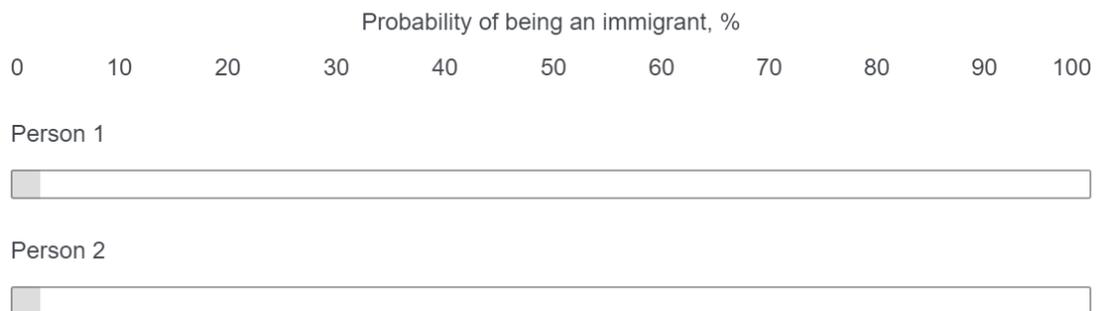
<sup>4</sup> Due to randomization, 11 respondents never saw a profile with at least one specific attribute value and were excluded from the analysis.

Pair 1 out of 10.

Please carefully review the profiles detailed below, then answer the questions.

	Person 1	Person 2
<b>Age</b>	27	47
<b>Gender</b>	Male	Female
<b>Race/ethnicity</b>	Asian	White
<b>Occupation</b>	Engineeer	Waiter
<b>Government benefits</b>	None	Medicaid
<b>Police record</b>	Drunk driving	None

Please rate the probability of being an immigrant for each of the two persons.



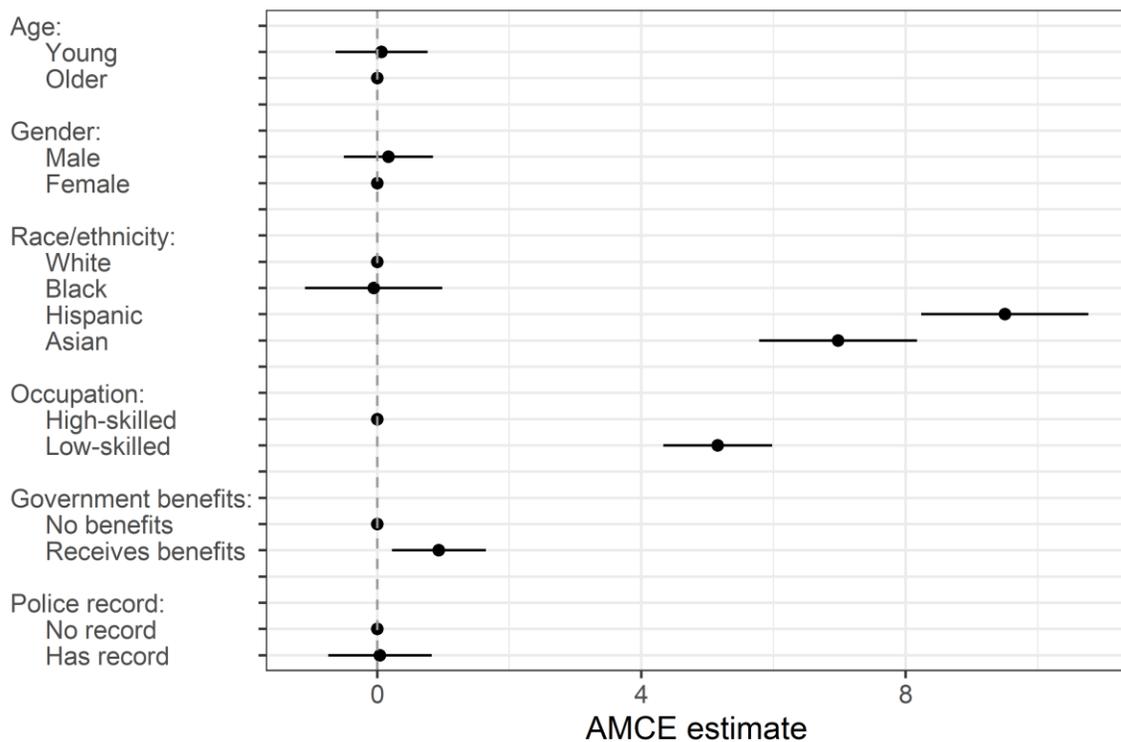
**Figure 1.** Sample screenshot from the U.S. conjoint task

Attitudes toward immigration were measured using a three-item battery that asked respondents to assess the impact of immigrants on American economy, culture, and communities. See Supplementary Material for questions and response options.

## Results

I begin by implementing the standard procedure for conjoint experiments: estimating the average marginal component effects (AMCEs) of different profile attributes on the probability of being categorized as an immigrant. Results are presented in Figure 2. Standard errors are clustered on

the level of individual respondents. Estimates suggest that stereotypes about immigrants among U.S. respondents are dominated by race/ethnicity. Specifically, being described as Hispanic (compared with white) increases profile's perceived probability to be an immigrant by 9.5 percentage points. The corresponding effect for being described as Asian is 7 percentage points. Occupational status also makes a significant component of stereotypes about immigrants: profiles described as having low-skilled occupations (compared with high-skilled ones) are rated 5.2 percentage points higher by probability of being an immigrant. Age, gender, being described as black, and having police record do not have significant effects. Receiving government benefits is significant on the 95% confidence level but its estimated effect on probability of a profile to be categorized as an immigrant is less than one percentage point.



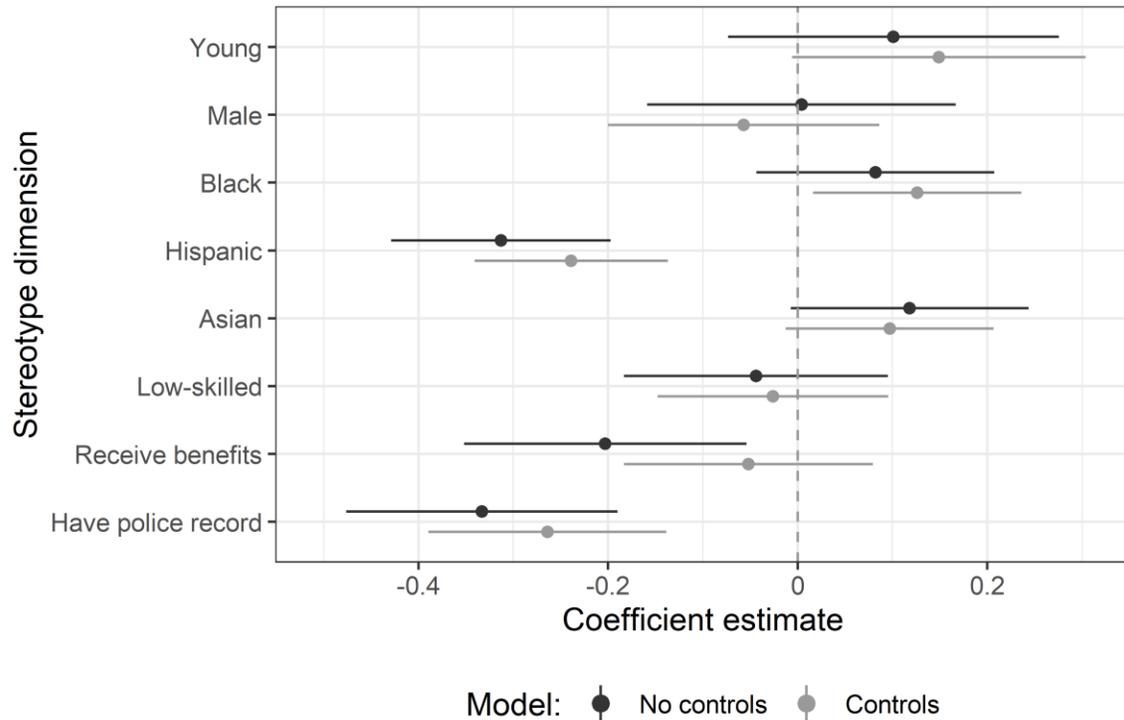
**Figure 2.** Conjoint results: effects of different attribute values on a profile's estimated probability of belonging to an immigrant, U.S. sample

The standard conjoint analysis presented above describes the average stereotypes about immigrants and reveals the central role of race/ethnicity in respondents' categorization of people as foreign-born. At the same time, it does not tell whether the stereotypes about immigrants are consequential for attitudes toward immigration. This question, however, is exactly the one that can be answered with the help of individual marginal component effects (IMCEs).

I use IMCEs as measures of U.S. respondents' stereotypes about immigrants to predict attitudes toward immigration.<sup>5</sup> Results are presented in Figure 3. The dependent variable is recoded to the same scale as the stereotype variables (from 0 to 100), so that coefficients can range approximately from  $-1$  to  $1$ . When stereotypes are measured using the conjoint method, two dimensions are consistently consequential: stereotypes about immigrants as, respectively, Hispanics and those with criminal records predict negative attitudes toward immigration. Stereotype about immigrants as recipients of government benefits loses significance as controls are added. Interestingly, stereotype about immigrants as blacks shows a positive effect on immigration attitudes in the model with controls—although the coefficient is low and only marginally significant. Stereotypes about immigrants' age, gender, Asian ancestry, and occupation are not consequential on the 95% confidence level.

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<sup>5</sup> IMCEs were successfully estimated for 905 respondents.



**Figure 3.** OLS regression results predicting attitudes toward immigration using different dimensions of stereotypes about immigrants, British sample  
*Note.* Controls: respondents' age, gender, income, race/ethnicity, education, partisanship

These findings highlight the importance of looking into individual-level stereotypes rather than just describing them in the aggregate. For instance, conjoint profiles described as having police record are not rated by respondents as more likely belonging to immigrants than to natives. At the same time, there is consequential individual-level variation on this stereotype dimension: respondents who associate immigrants with criminal behavior tend to express negative attitudes toward immigration.

## Study 2: Britain

### Data and Measures

Study 2 was carried out in Britain in September 2019.<sup>6</sup> Participants were recruited using Prolific, a crowdsourcing platform in many aspects similar to Amazon Mechanical Turk (Berinsky, Huber and Lenz 2012), but its participants tend to be less experienced survey-takers (Peer et al. 2017). The survey, including the conjoint task, was completed by 679 respondents. The sample characteristics were the following. Mean age was 35.4 years. Gender ratio was 43.4% male to 56.6% female. In terms of race/ethnicity, 88.1% of respondents self-identified as white British. College education was reported by 42.6% of respondents. Finally, 49% of respondents identified as ideologically left-wing, 20% as right-wing, and 31% as centrists.

Study 2 used the same conjoint design as Study 1. The only major difference is that, instead of race/ethnicity, the experiment manipulated religion of presented profiles. This choice was informed by the centrality of prejudice against Islam and Muslims for the anti-immigrant backlash in West European societies (Adida, Laitin, and Valfort 2016; Claassen and McLaren 2021; Thijssen et al. 2022). Also, value labels for government benefits were changed to reflect the British context. See Table 2 for the full list of attributes with potential values.<sup>7</sup>

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<sup>6</sup> Sampling frame did not include Northern Ireland.

<sup>7</sup> Due to randomization, 56 respondents never saw a profile with at least one specific attribute value and were excluded from the analysis

**Table 2.** Attributes for profiles in British conjoint experiment

Attribute	Values
Age	<i>Young: 25–39</i> <i>Older: 40–54</i>
Gender	Male Female
Religion	Christian Muslim Hindu Non-religious
Occupation	<i>High-skilled: Accountant, Engineer, Graphic designer, Nurse, Teacher</i> <i>Low-skilled: Cook, General labourer, Gardener, Janitor, Waiter</i>
Government benefits	<i>No benefits: None</i> <i>Receives benefits: Housing benefit, Child benefit, Unemployment benefit, Income support</i>
Police record	<i>No record: None</i> <i>Has record: Assault, Drug possession, Drunk driving, Theft, Trespassing</i>

*Note.* Age values (in years) were randomly chosen from the specified intervals. Collapsed values are in italics

Attitudes toward immigration were measured similarly to Study 1. See Supplementary Material for questions and response options.

## Results

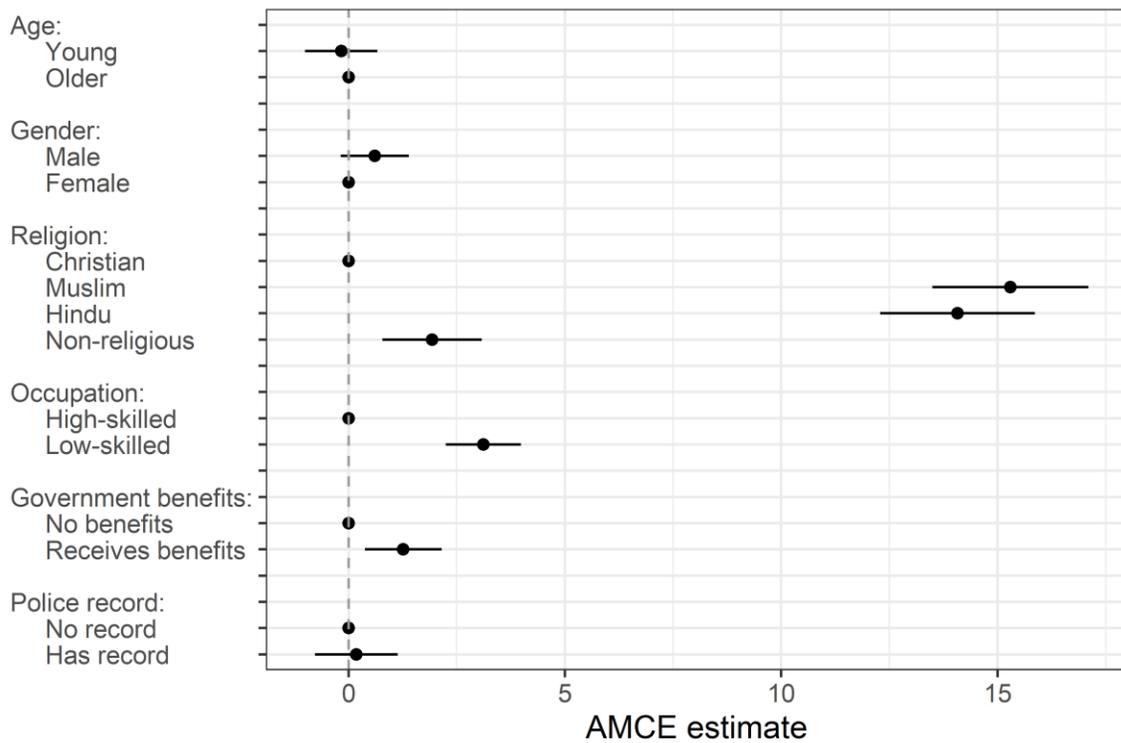
Figure 4 presents average marginal component effects (AMCEs) of different profile attributes on the probability of being categorized as an immigrant estimated in the conjoint experiment.

Standard errors are clustered on the level of individual respondents. Overall, results obtained from the British sample very closely replicate ones reported in the U.S. study. Estimates suggest that stereotypes about immigrants among British respondents are dominated by religion.

Specifically, being described as Muslim (compared with Christian) increases profile's perceived probability to be an immigrant by 15.3 percentage points. The corresponding effects for being described, as Hindu and non-religious are, respectively, 14.1 and 1.9 percentage points.

Occupational status also makes a significant component of stereotypes about immigrants:

profiles described as having low-skilled occupations (compared with high-skilled ones) are rated 3.1 percentage points higher by probability of being an immigrant. Age, gender, and having police record do not have significant effects. Receiving government benefits is significant on the 95% confidence level but its estimated effect on probability of a profile to be categorized as an immigrant is only slightly more than one percentage point.

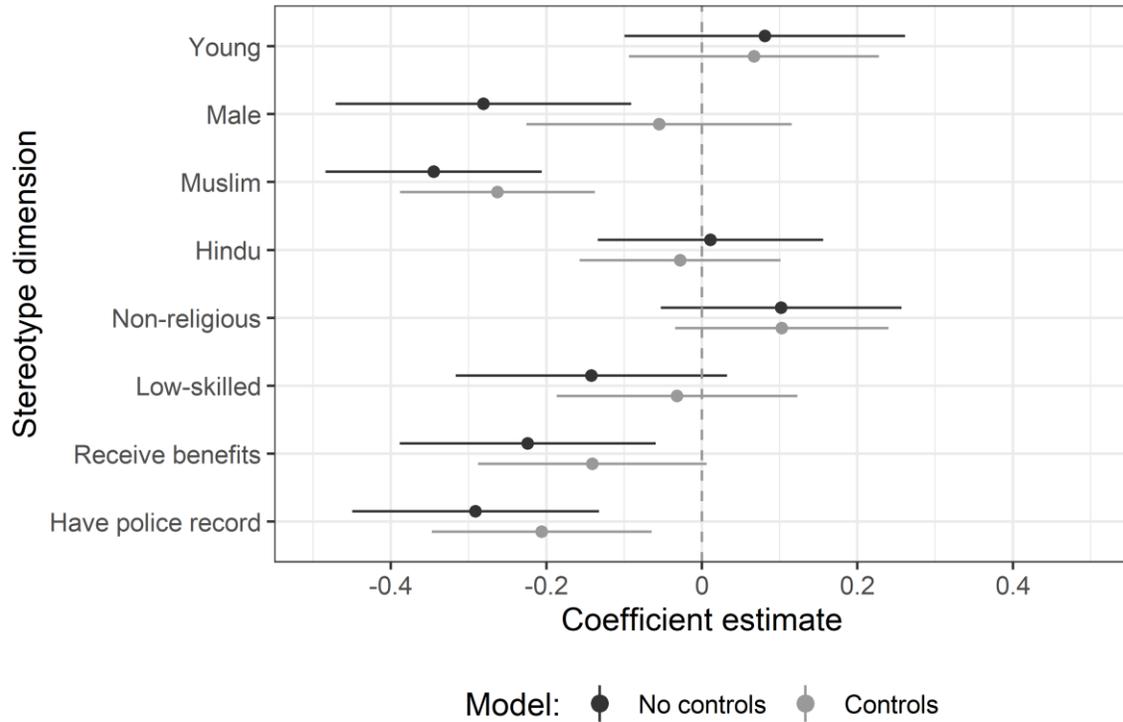


**Figure 4.** Conjoint results: effects of different attribute values on a profile’s estimated probability of belonging to an immigrant, British sample

Then, I use IMCEs as measures of British respondents’ stereotypes about immigrants to predict attitudes toward immigration.<sup>8</sup> Results are presented in Figure 5. The dependent variable is recoded to the same scale as the stereotype variables (from 0 to 100), so that coefficients can range approximately from -1 to 1. Similar to the U.S. sample, the two dimensions consistently

<sup>8</sup> IMCEs were successfully estimated for 623 respondents.

consequential for attitudes toward immigration are stereotypes about immigrants as, respectively, Muslims and law-breakers. Stereotype about immigrants as males and those receiving government benefits loses significance as controls are added. Stereotypes about immigrants' age, religion other than Islam, and occupation are not significant.



**Figure 5.** OLS regression results predicting attitudes toward immigration using different dimensions of stereotypes about immigrants, British sample  
*Note.* Controls: respondents' age, gender, income, race/ethnicity, education, ideology

### Discussion and Conclusion

In this paper, I have run survey-experimental studies to explore the content and consequences of beliefs about immigration in the United States and Britain. Using original conjoint design, I have measured respondents' stereotypes about immigrants and, then, explored how these stereotypes predict attitudes toward immigration. My results strongly suggest that immigrants' ethnicity and religion are central for both content of stereotypes and their effects on attitudes toward

immigration. When respondents are asked to estimate probabilities of being an immigrant for profiles in the conjoint experiment, they almost exclusively rely on ascriptive identities stereotyped as foreign. In the United States, profiles described as Hispanics and Asians are rated as much more likely to be immigrants. In Britain, the same effect is found for profiles described as Muslims and Hindus. Importantly, these results may underestimate the impact of ethnicity and religion on guesses about people's nativity status in real-life situations. Unlike attributes that can be easily manipulated in a conjoint but are not usually known in brief social interactions (such as occupational level), ethnicity and religion are often inferred from appearance.

When used as covariates in regression analysis, stereotypes about immigrants' ethnicity and religion demonstrate consistently significant positive associations with negative attitudes toward immigration. These effects are independent of any other stereotype dimensions, such as those concerning skills or criminality, and persist even when controlled for respondents' demographics, partisanship, and ideology. In terms of magnitudes, stereotypes about immigrants as, respectively, Hispanics and Muslims are related to attitudes toward immigration as strongly as stereotypes concerning criminal behavior. Stereotypes about immigrants as having low-skilled occupations do not predict attitudes toward immigration when measured via conjoint categorization tasks.

One important question that lies beyond the scope of this paper but can be addressed in future research concerns the origins of stereotypes about immigrant populations. The two most prominent avenues in this regard are likely the role of media (Blinder and Jeannet 2018), and local context (Hopkins 2010; Newman 2013). Due to their resilience to issues like social desirability and rationalization, measures of stereotypes obtained from classification conjoint experiments, like the ones employed in this paper, can be a useful tool in such research.

Overall, findings reported in this paper have important implications for the politics of immigration as they show that both content and consequences of stereotypes about immigrants are dominated by ascriptive identities, such as ethnicity and religion. The conjectures that Americans strongly associate immigration with Hispanics and that holding such an association predicts negative attitudes toward immigration have been made in the literature before, but evidence for them was only indirect. The present paper has corroborated these hypotheses by directly measuring stereotypes about immigrants, and it extends them by presenting evidence on a similar association between immigration and Muslims among Britons.

My findings largely confirm a previously reported result that the skill premium effect in Americans' immigration preferences may mask anti-Hispanic prejudice (Newman and Malhotra 2018). I demonstrate that, when measured through revealed associations rather than self-reports, stereotypes about immigrants as Hispanics are consequential for attitudes toward immigration—whereas stereotypes about skill are not. The same is true for immigrants' reliance on government benefits: the effect of this stereotype disappears after controlling for partisanship or ideology, suggesting that anti-immigration and anti-welfare attitudes likely stem from generalized ideological conservatism (Levy 2021). In other words, Americans may not inherently care about immigrant skill, and the effects of self-reported sociotropic economic concerns can be exaggerated due to social desirability bias. The same result regarding the primacy of social group labels in making guesses about nativity status has been obtained in Britain, thus indicating that thinking about immigration in terms of ascriptive identities is a universal rather than a specifically American phenomenon.

## References

- Adida, Claire L., David D. Laitin, and Marie-Anne Valfort. 2016. *Why Muslim Integration Fails in Christian-Heritage Societies*. Cambridge, MA: Harvard University Press.
- Bansak, Kirk, Jens Hainmueller, Daniel J. Hopkins, and Teppei Yamamoto. 2018. "The Number of Choice Tasks and Survey Satisficing in Conjoint Experiments." *Political Analysis* 26 (1): 112–19.
- Bansak, Kirk, Jens Hainmueller, Daniel J. Hopkins, and Teppei Yamamoto. 2021. "Beyond the Breaking Point? Survey Satisficing in Conjoint Experiments." *Political Science Research and Methods* 9 (1): 53–71.
- Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20 (3): 351–68.
- Blinder, Scott. 2015. "Imagined Immigration: The Impact of Different Meanings of 'Immigrants' in Public Opinion and Policy Debates in Britain." *Political Studies* 63 (1): 80–100.
- Blinder, Scott, and Anne-Marie Jeannet. 2018. "The 'Illegal' and the Skilled: Effects of Media Portrayals on Perceptions of Immigrants in Britain." *Journal of Ethnic and Migration Studies* 44 (9): 1444–62.
- Bordalo, Pedro, Katherine Coffman, Nicola Gennaioli, and Andrei Shleifer. 2016. "Stereotypes." *Quarterly Journal of Economics* 131 (4): 1753–94.
- Brader, Ted, Nicholas A. Valentino, and Elizabeth Suhay. 2008. "What Triggers Public Opposition to Immigration? Anxiety, Group Cues, and Immigration Threat." *American Journal of Political Science* 52 (4): 959–78.

- Citrin, Jack, and John Sides. 2008. "Immigration and the Imagined Community in Europe and the United States." *Political Studies* 56 (1): 33–56.
- Claassen, Christopher, and Lauren McLaren. 2021. "Do Threats Galvanize Authoritarians or Mobilize Nonauthoritarians? Experimental Tests from 19 European Societies." *Political Psychology* 42 (4): 677–94.
- Clayton, Katherine, Jeremy Ferwerda, and Yusaku Horiuchi. 2021. "Exposure to Immigration and Admission Preferences: Evidence from France." *Political Behavior* 43: 175–200.
- Clifford, Scott, and Jennifer Jerit. 2016. "Cheating on Political Knowledge Questions in Online Surveys: An Assessment of the Problem and Solutions." *Public Opinion Quarterly* 80 (4): 858–87.
- Coppock, Alexander, and Oliver A. McClellan. 2019. "Validating the Demographic, Political, Psychological, and Experimental Results Obtained from a New Source of Online Survey Respondents." *Research and Politics* 6 (1). <https://doi.org/10.1177/2053168018822174>
- Flores, Rene D., and Ariela Schachter. 2018. "Who Are the 'Illegals'? The Social Construction of Illegality in the United States." *American Sociological Review* 83 (5): 839–68.
- Ford, Robert, and Jonathan Mellon. 2020. "The Skills Premium and the Ethnic Premium: A Cross-national Experiment on European Attitudes to Immigrants." *Journal of Ethnic and Migration Studies* 46 (3): 512–32.
- Garand, James C., Ping Xu, and Belinda C. Davis. 2017. "Immigration Attitudes and Support for the Welfare State in the American Mass Public." *American Journal of Political Science* 61 (1): 146–62.

- Glinitzer, Konstantin, Tobias Gummer, and Markus Wagner. 2021. "Learning Facts About Migration: Politically Motivated Learning of Polarizing Information About Refugees." *Political Psychology* 42 (6): 1053–69.
- Goggin, Stephen N., John A. Henderson, and Alexander G. Theodoridis. 2020. "What Goes with Red and Blue? Mapping Partisan and Ideological Associations in the Minds of Voters." *Political Behavior* 42: 985–1013.
- Gorodzeisky, Anastasia, and Moshe Semyonov. 2020. "Perceptions and Misperceptions: Actual Size, Perceived Size and Opposition to Immigration in European Societies." *Journal of Ethnic and Migration Studies* 46 (3): 612–30.
- Hainmueller, Jens, Dominik Hangartner, and Teppei Yamamoto. 2015. "Validating Vignette and Conjoint Survey Experiments against Real-World Behavior." *Proceedings of the National Academy of Sciences of the United States of America* 112 (8): 2395–2400.
- Hainmueller, Jens, and Michael J. Hiscox. 2010. "Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment." *American Political Science Review* 104 (1): 61-84
- Hainmueller, Jens, and Daniel J. Hopkins. 2015. "The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes toward Immigrants." *American Journal of Political Science* 59 (3): 529–48.
- Hainmueller, Jens, Daniel J. Hopkins, and Teppei Yamamoto. 2014. "Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments." *Political Analysis* 22 (1): 1–30.

- Hartman, Todd K., Benjamin J. Newman, and C. Scott Bell. 2014. "Decoding Prejudice Toward Hispanics: Group Cues and Public Reactions to Threatening Immigrant Behavior." *Political Behavior* 36 (1): 143–66.
- Hilton, James L., and William von Hippel. 1996. "Stereotypes." *Annual Review of Psychology* 47: 237–71.
- Hjerm, Mikael. 2007. "Do Numbers Really Count? Group Threat Theory Revisited." *Journal of Ethnic and Migration Studies* 33 (8): 1253–75.
- Hopkins, Daniel J. 2010. "Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition." *American Political Science Review* 104 (1): 40–60.
- Hopkins, Daniel J. 2015. "The Upside of Accents: Language, Inter-group Difference, and Attitudes toward Immigration." *British Journal of Political Science* 45 (3): 531–57.
- Hopkins, Daniel J., John Sides, and Jack Citrin. 2019. "The Muted Consequences of Correct Information about Immigration." *Journal of Politics* 81 (1): 315–20.
- Horiuchi, Yusaku, Zachary Markovich, and Teppei Yamamoto. 2021. "Does Conjoint Analysis Mitigate Social Desirability Bias?" *Political Analysis*. Published ahead of print.  
<https://doi.org/10.1017/pan.2021.30>
- Jenke, Libby, Kirk Bansak, Jens Hainmueller, and Dominik Hangartner. 2021. "Using Eye-Tracking to Understand Decision-Making in Conjoint Experiments." *Political Analysis* 29 (1): 75–101.
- Konitzer, Tobias B., Shanto Iyengar, Nicholas A. Valentino, Stuart Soroka, and Raymond M. Duch. 2019. "Ethnocentrism versus Group-Specific Stereotyping in Immigration Opinion: Cross-national Evidence on the Distinctiveness of Immigrant Groups." *Journal of Ethnic and Migration Studies* 45 (7): 1051–74.

- Kustov, Alexander, Dillon Laaker, and Cassidy Reller. 2021. "The Stability of Immigration Attitudes: Evidence and Implications." *Journal of Politics* 83 (4): 1478–94.
- Landy, David, Brian Guay, and Tyler Marghetis. 2018. "Bias and Ignorance in Demographic Perception." *Psychonomic Bulletin & Review* 25 (5): 1606–18.
- Levy, Morris E. 2021. "Once Racialized, Now 'Immigrationized?' Explaining the Immigration-Welfare Link in American Public Opinion." *Journal of Politics* 83 (4): 1275–91.
- Levy, Morris, and Matthew Wright. 2020. *Immigration and the American Ethos*. Cambridge: Cambridge University Press.
- Lippmann, Walter. 1922. *Public Opinion*. New York: Macmillan.
- Lodge, Milton, and Charles S. Taber. 2013. *The Rationalizing Voter*. New York: Cambridge University Press.
- Lutz, Philipp, and Marco Bitschnau. 2022. "Misperceptions about Immigration: Reviewing Their Nature, Motivations and Determinants." *British Journal of Political Science*. Published ahead of print. <https://doi.org/10.1017/S0007123422000084>
- Macrae, C. Neil, and Galen V. Bodenhausen. 2000. "Social Cognition: Thinking Categorically about Others." *Annual Review of Psychology* 51: 93–120.
- Nederhof, Anton J. 1985. "Methods of Coping with Social Desirability Bias: A Review." *European Journal of Social Psychology* 15 (3): 263–80.
- Newman, Benjamin J. 2013. "Acculturating Contexts and Anglo Opposition to Immigration in the United States." *American Journal of Political Science* 57 (2): 374–90.
- Newman, Benjamin J., and Neil Malhotra. 2018. "Economic Reasoning with a Racial Hue: Is the Immigration Consensus Purely Race Neutral?" *Journal of Politics* 81 (1): 153–66.

- Nichols, Austin Lee, and Jon K. Maner. 2008. "The Good-Subject Effect: Investigating Participant Demand Characteristics." *Journal of General Psychology* 135 (2): 151–66.
- Ostfeld, Mara. 2017. "The Backyard Politics of Attitudes Toward Immigration." *Political Psychology* 38 (1): 21–37.
- Peer, Eyal, Laura Brandimarte, Sonam Samat, and Alessandro Acquisti. 2017. "Beyond the Turk: Alternative Platforms for Crowdsourcing Behavioral Research." *Journal of Experimental Social Psychology* 70: 153–63.
- Petersen, Michael Bang. 2012. "Social Welfare as Small-Scale Help: Evolutionary Psychology and the Deservingness Heuristic." *American Journal of Political Science* 56 (1): 1–16
- Schachter, Ariela, Rene D. Flores, and Neda Maghbouleh. 2021. "Ancestry, Color, or Culture? How Whites Racially Classify Others in the U.S." *American Journal of Sociology* 126 (5): 1220–63.
- Schneider, Anne, and Helen Ingram. 1993. "Social Construction of Target Populations: Implications for Politics and Policy." *American Political Science Review* 87 (2): 334–47.
- Thijssen, Lex, Frank van Tubergen, Marcel Coenders, Robert Hellpap, and Suzanne Jak. 2022. "Discrimination of Black and Muslim Minority Groups in Western Societies: Evidence From a Meta-Analysis of Field Experiments." *International Migration Review* 56 (3): 843–80.
- Valentino, Nicholas A., Ted Brader, and Ashley E. Jardina. 2013. "Immigration Opposition Among U.S. Whites: General Ethnocentrism or Media Priming of Attitudes About Latinos?" *Political Psychology* 34 (2): 149–66.

- Valentino, Nicholas A., Stuart N. Soroka, Shanto Iyengar, Toril Aalberg, Raymond Duch, Marta Fraile, Kyu S. Hahn, Kasper M. Hansen, Allison Harell, Marc Helbling, Simon D. Jackman, and Tetsuro Kobayashi. 2019. "Economic and Cultural Drivers of Immigrant Support Worldwide." *British Journal of Political Science* 49 (4): 1201–26.
- Ward, Dalston G. 2019. "Public Attitudes toward Young Immigrant Men." *American Political Science Review* 113 (1): 264–69.
- Wright, Matthew, Morris Levy, and Jack Citrin. 2016. "Public Attitudes Toward Immigration Policy Across the Legal/Illegal Divide: The Role of Categorical and Attribute-Based Decision-Making." *Political Behavior* 38: 229–53.
- Zhirkov, Kirill. 2021. "Who Are 'the Immigrants'? Beliefs About Immigrant Populations and Anti-Immigration Attitudes in the United States and Britain." *Social Science Quarterly* 102 (1): 228–37.
- Zhirkov, Kirill. 2022. "Estimating and Using Individual Marginal Component Effects from Conjoint Experiments." *Political Analysis* 30 (2): 236–49.