Stereotypes about Immigrants and Attitudes toward Immigration:

Evidence from Conjoint Experiments in the United States and Britain

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Abstract

Recent studies show that voters in industrial democracies agree to admit skilled and law-abiding immigrants—but public attitudes toward immigration still vary substantially. I propose an explanation for this discrepancy: while agreeing on the desirable qualities of hypothetical immigrants, citizens diverge in their stereotypes about actual immigrant populations. Then, I explore these stereotypes using original conjoint experiments in the United States and Britain, in which respondents estimate hypothetical persons' probability 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. Embedded priming experiments further demonstrate that the direction of causality likely goes from stereotypes about immigrants to attitudes toward immigration rather than vice versa.

Citizens of developed democracies agree that potential immigrants who have valuable skills should be preferred for admission (Hainmueller and Hopkins 2015; Naumann, Stoetzer, and Pietrantuono 2018; Valentino et al. 2019). At the same time, the political conflict around immigration in these very same countries persists—if not grows.

In the United States, popular anxiety about immigration and the growing Latino population mobilized opposition to policies aimed at reducing social inequality (Abrajano and Hajnal 2015), led white Americans to abandon the Democratic Party in large numbers (Hajnal and Rivera 2014; Ostfeld 2019; Zingher 2018), and generally increased the political importance of white identity (Jardina 2019). The most recent political manifestation of the anti-immigrant backlash in U.S. politics has been the successful presidential campaign of Donald Trump (Reny, Collingwood, and Valenzuela 2019). In Britain, growing importance of immigration politics caused white Britons to abandon the Labour Party (Evans and Chzhen 2013), impacted vote on the Brexit referendum (Goodwin and Milazzo 2017), and can affect British politics for years to come (Sobolewska and Ford 2019).[1]

Why voters are strongly divided on attitudes toward immigration while mostly agreeing on the desirable qualities of immigrants? In this paper, I propose an explanation rooted in the cognitive-psychological approach to public opinion: conflicting immigration preferences are produced by variation in people's beliefs about immigrant populations. Abstract preferences for high-skilled and law-abiding immigrants translate into policy positions depending on whether newcomers are seen as actually possessing these qualities. A person who favors admitting immigrants with higher education should endorse permissive immigration policies only if one

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[1] Although attitudes toward immigration seem to have improved after Brexit (Schwartz et al. 2021); and there is evidence that, as publics become habituated to immigration, backlash may fade in the long run (Claassen and McLaren 2021b).

also believes that most people coming to the country have college degrees—and vice versa. Differences in these beliefs, or stereotypes, explain why voters diverge in opinions on immigration despite agreeing on what kinds of immigrants should be admitted in principle.

I test this conjecture using original conjoint experiments in the United States and Britain. 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 being immigrants. Inferring stereotypes from observed categorizations instead of relying on self-reports provides greater protection against social desirability, demand effects, and rationalization—thus making a methodological advance vis-a-vis previous studies that have measured beliefs about immigrant populations (Blinder 2015; Zhirkov 2021b).

Results of the categorization tasks 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. Embedded priming experiments address the causality question: when stereotypes about immigrants are activated, participants report attitudes toward immigration that are significantly more negative. Priming attitudes, in turn, does not change the stereotype content.

These results have important implications for the literature on public attitudes toward immigration. They highlight that knowing natives' preferences with regard to qualities of hypothetical immigrants is not enough for understanding public opinion on immigration—studying people's beliefs about actual immigrant populations is equally important. My findings also suggest that recent experiments focusing on admission of individual immigrants may have

underestimated the impact of their ascriptive identities—while overestimating the skill premium. When respondents consider immigrants as a social category, stereotypes about ethnicity and religion are both more widespread and more politically consequential than those about skills.

Stereotypes and Opinions about Immigration

The realities of political 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 to make informed policy judgments (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 political opinions. This conjecture, even though first put forward almost 100 years ago, has held up well till the present: voters are low in political knowledge and engagement (Achen and Bartels 2016), do not think about politics in ideologically consistent terms (Kinder and Kalmoe 2017), and form opinions following elite cues delivered via mass media (Zaller 1992). Instead, political preferences are largely built on imagination: policies that benefit populations imagined as "undeserving" enjoy lower levels of public support (Petersen 2012; Petersen and Aaroe 2013).

This framework is applicable to politics of 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 stereotypes: "beliefs about the characteristics, attributes, and behaviors of members of certain groups" (Hilton and Von Hippel 1996, 240). Given their cognitive functions, stereotypes are likely to exaggerate the differences between immigrants and natives (Bordalo et al. 2016).

Immigrants are a complicated and abstract category that most voters are not familiar with and have little knowledge about. Studies have repeatedly demonstrated large and consequential

5

misperceptions about the sizes of immigrant populations among the publics in industrial democracies (Citrin and Sides 2008; Gorodzeisky and Semyonov 2020; Hjerm 2007). Immigrants also are a target population of government regulations on entry and integration— meaning that stereotypes about them should be consequential for policy preferences (Schneider and Ingram 1993; also see Kreitzer and Smith 2018). The centrality of stereotypes in public opinion formation can explain the stability of attitudes toward immigration (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).[2]

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; Zhirkov 2021b). In other words, people's opinions are based on stereotypes about immigrants rather than on the underlying social reality.

These findings offer important insights for the literature on politics of immigration. Specifically, they can explain why voters, while agreeing to admit hypothetical immigrants who can contribute to the economy, assimilate, and abide by law (Hainmueller and Hopkins 2015; Ostfeld 2017), diverge in attitudes toward immigration. Consider two individuals from the same country who both prefer to admit high-skilled immigrants. At the same time, one of them believes that most immigrants actually coming to the country occupy jobs like janitors and day laborers. The other individual, in turn, thinks that immigrants tend to work as engineers and

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[2] There is evidence that political speech countering negative stereotypes about immigrants may improve attitudes (Schleiter, Tavits, and Ward 2021).

software designers. Then, the first individual should perceive immigration as harmful and prefer restrictive entry policies—while the second one should endorse immigration openness.

Conjoint Measurement of Stereotypes about Immigrants

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). Alternatively, respondents estimate the percentages of immigrants having the attribute values of interest, such as being college-educated or unauthorized (Zhirkov 2021b). Then, 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 political implications. Respondents may be more hesitant to express stereotypes about immigrants' ethnicity and religion while arguments about immigrants' economic productivity 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.

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). In political science, 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; Naumann, Stoetzer, and Pietrantuono 2018). 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). 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 as well. Finally, conjoint-based measures have been externally validated

(Hainmueller, Hangartner, and Yamamoto 2015; Jenke et al. 2020), and are resilient to a number of data quality problems in survey research, such as satisficing (Bansak et al. 2018, 2021).

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, from conjoint experiments has been recently proposed (Zhirkov 2021a). 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 political opinions.

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 $i = 1, \ldots, I$. Each respondent rates profiles of hypothetical people indexed $j = 1, \ldots, J$ by likelihood of being immigrants. Profiles have attributes indexed $k = 1, \ldots, K$. Each attribute has a specific number of levels indexed $l = 1, \ldots, L^k$. 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, α_{ik} is the constant, β_{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 ε_{ijk} is the

error. To achieve identification, β_{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 π_{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 political 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 γ is the constant, δ_{kl} is the coefficient of stereotype l along dimension k, θ_h is the coefficient of control variable h, w_{ih} is the value of control variable h for respondent i, and u_i is the error.

In two original survey studies, I employ conjoint experiments to describe the content of mass stereotypes about immigrants in the United States in Britain. Then, I use individual-level estimates from the conjoint experiments to explore the consequences of these stereotypes for attitudes toward immigration. I also employ question-order experiments to test whether activating stereotypes about immigrants can change opinions on immigration.

Study 1: United States

Data and Measures

To evaluate the proposed method, I designed and fielded an original survey-experimental study in the United States 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 10 pairs) by probability of being an immigrant using a scale from 0% to 100%.[3] Profiles were described in terms of six attributes selected following the current literature on politics of immigration. They included age and gender (Ward 2019), race/ethnicity (Valentino, Brader, and Jardina 2013), occupational status (Blinder and Jeannet 2018; Hainmueller and Hiscox 2010), reliance on government benefits (Garand, Xu, and Davis 2017), and criminal record (Hartman, Newman, and Bell 2014).[4] In conjoint profiles shown to respondents I used 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

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[3] 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.

[4] I had to exclude some attributes used in previous studies on the politics of immigration because they would allow unambiguously categorizing a profile as belonging to an immigrant. Examples include country of origin (Brader, Valentino, and Suhay 2008; Konitzer et al. 2019), language proficiency (Hopkins 2015), and legal status (Wright, Levy, and Citrin 2016).

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

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.[5] 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 2 for an example of conjoint profiles as presented to respondents.

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[5]   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
Age	27	47
Gender	Male	Female
Race/ethnicity	Asian	White
Occupation	Engineeer	Waiter
Government benefits	None	Medicaid
Police record	Drunk driving	None

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

Probability of being an immigrant, %

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Person 1

Person 2
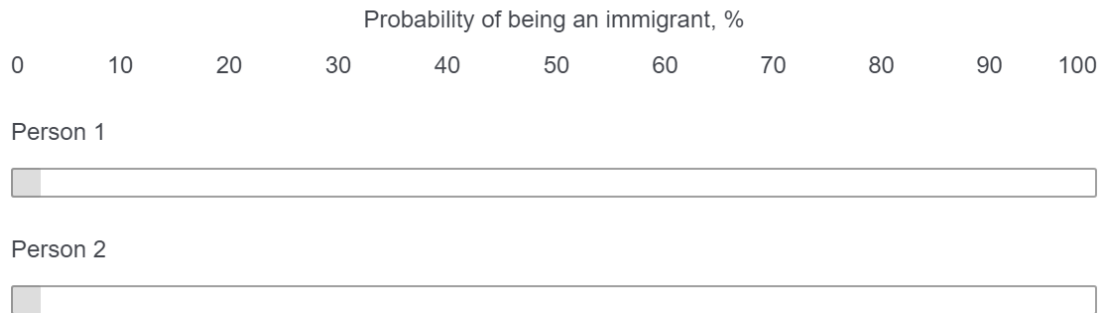
Figure 1. Sample screenshot from the U.S. conjoint task

To explore the potential differences between implicit and explicit measurement of stereotypes, I also included questions on respondents' perceptions about composition of the U.S. immigrant population. Characteristics were chosen to correspond to ones included in the conjoint experiment: age, gender, race/ethnicity, occupational status, dependence on welfare, and police record. Respondents were asked to give percentage estimates of immigrants who had the specified attributes, with possible answer scale ranging from 0% to 100%.

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 Online Appendix for questions and response options.

The survey manipulated the saliency of stereotypes about immigrants using a simple question order experiment. Specifically, respondents were randomly assigned with equal probabilities to one of the two conditions. In one condition, respondents completed the conjoint task after answering the questions about their attitudes toward immigration. In another condition, respondents answered the questions about their attitudes toward immigration after completing the conjoint task. I use this experiment to understand whether activation of stereotypes (by completing the conjoint task that requires respondents to think about immigrants and natives as social categories) changes expressed attitudes toward immigration—and vice versa.

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

14

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.
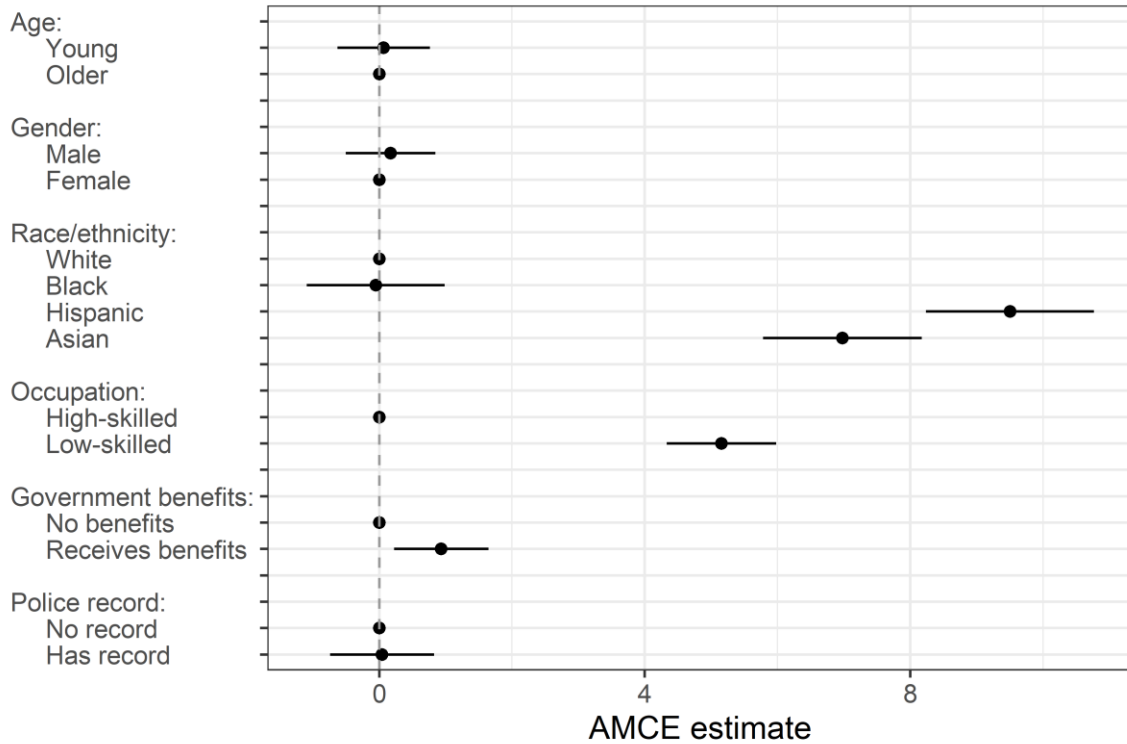

Figure 2. Conjoint results: effects of different attribute values on a profile's estimated probability of belonging to an immigrant, U.S. sample

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 anti-immigration attitudes.[6] Results are presented in Figure 3 (left-side panel). The dependent

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[6]   IMCEs were successfully estimated for 905 respondents.

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.
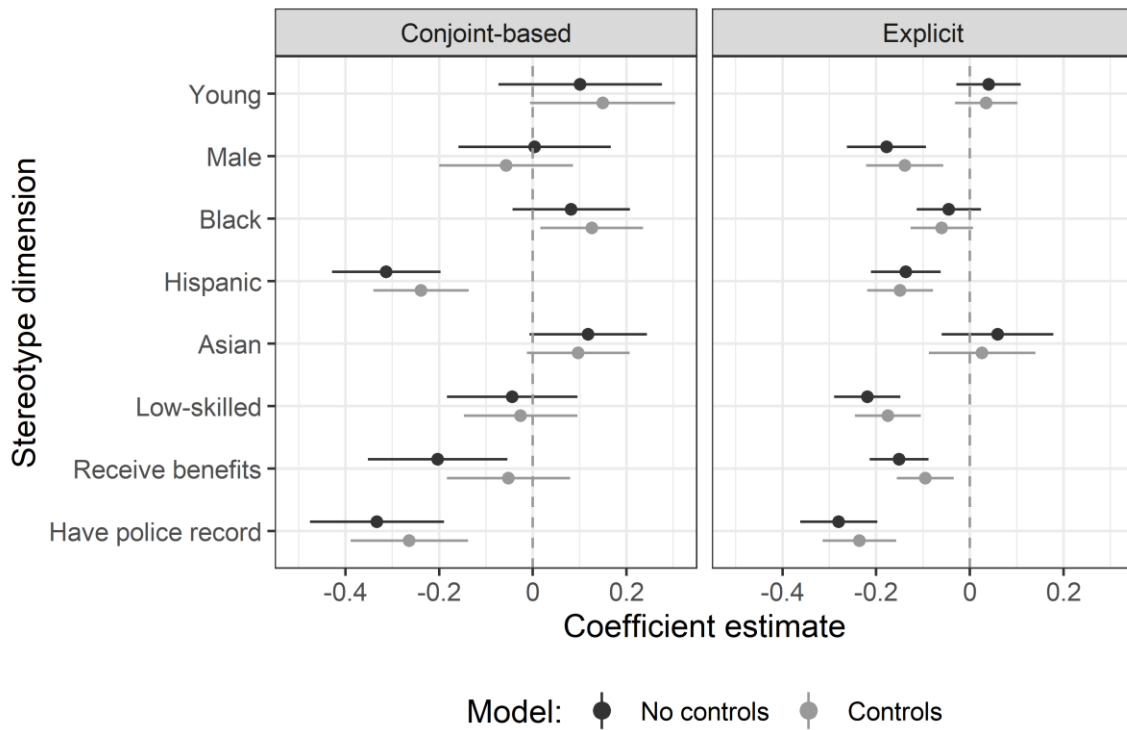
Figure 3. OLS regression results predicting attitudes toward immigration using conjoint and explicit measures of stereotypes about immigrants, U.S. sample
Note. Controls: respondent's age, gender, income, race/ethnicity, education, partisanship

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.

I also compare the effects of conjoint-based and explicit measures of stereotypes on attitudes toward immigration. Results for the latter are presented in Figure 3 (right-side panel). Note that the two measures of stereotypes are on the same scale. An important difference can be easily observed: stereotypes about immigrants' occupational status are consequential when measured explicitly but not via conjoint. One potential explanation is prominence of sociotropic economic rhetoric, both pro-immigration (immigrants bring new skills and increase economic growth) and anti-immigration (immigrants compete for jobs with natives and take advantage of public services). As a result, stereotypes about immigrants' skills become a convenient rationalization tool—and thus their effect disappears when an implicit measure is used.

Can making respondents' stereotypes about immigrants more salient change their attitudes toward immigration? To address this question, I have implemented a simple question-order experiment: within the survey study, respondents have completed the immigration policy attitudes battery either before or after the conjoint task. Using these data, I investigate whether attitudes toward immigration change when reported before or after the conjoint. This can be seen as a priming effect: the necessity to categorize persons as native- vs. foreign-born in a conjoint experiment should activate respondents' stereotypes about immigrants that, then, exert greater influence on attitudes toward immigration in subsequent questions.

17

Results of the experiment demonstrate that when stereotypes are made salient by prompting respondents to categorize immigrants and natives, attitudes toward immigration turn more negative. The average treatment effect is −0.51 on the 0–10 scale ($p = .002$).

I investigate the nature of this effect more closely using the observed distributions of anti-immigration attitudes that are presented in Figure 4. There is an interesting difference across the two conditions: attitudes expressed before completing the conjoint task show a thicker tail close at the pro-immigration (right) end of the spectrum. When immigration stereotypes are made salient, however, distribution mass moves closer to the center and the tail on the left becomes less pronounced. The nature of this shift suggests that some respondents give normative answers in favor of immigration if asked before completing the conjoint task but start to express more ambiguous attitudes after prompted to think about immigrants and natives as social categories.
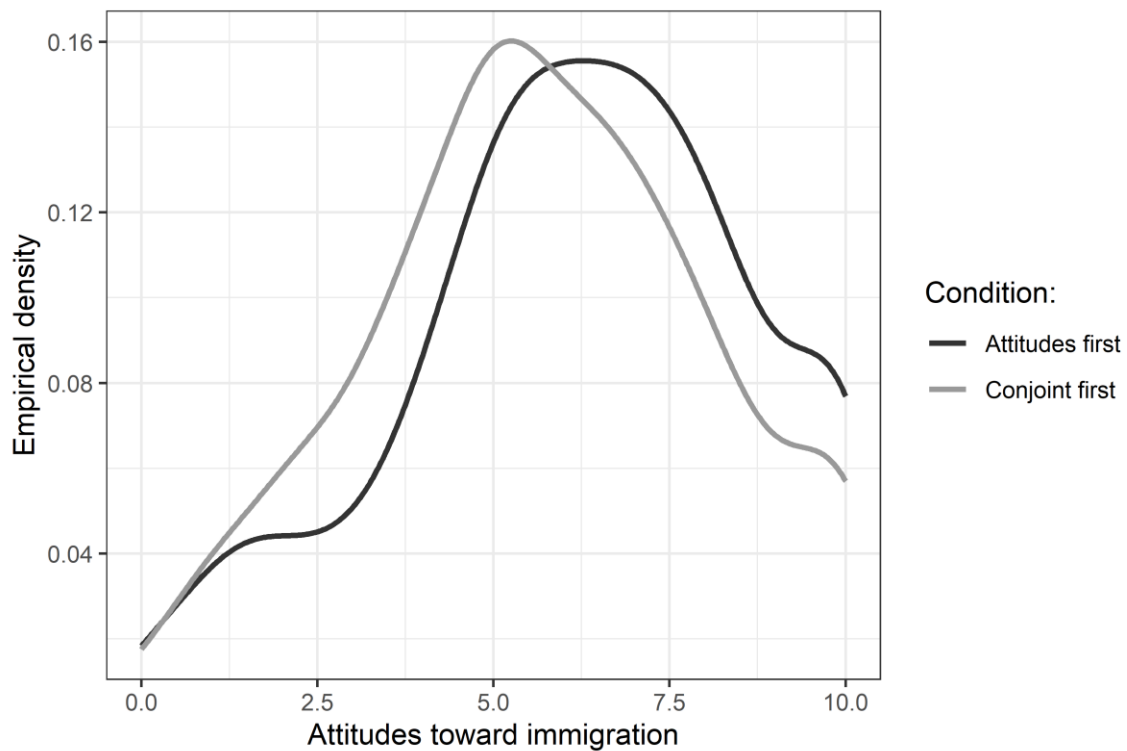
Figure 4. Distribution of attitudes toward immigration by priming condition, U.S. sample

Note that the task order effect can work in the opposite direction: priming attitudes toward immigration can impact estimates of stereotypes about immigrants. To check whether such a reverse effect is indeed found in the data, I re-analyze the conjoint experiment using a simple comparison across the two conditions. Results show that respondents' stereotypes about immigrants are not significantly affected by whether they are measured before or after attitudes toward immigration ($F_{8, 996} = 1.28$, $p = .248$). This means that the causal direction likely goes from stereotypes to attitudes and not the other way around.

Study 2: Britain

Data and Measures

Study 2 was carried out in Britain in September 2019.[7] 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 politics (Adida, Laitin, and Valfort 2016; Claassen and McLaren

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[7]   Sampling frame did not include Northern Ireland.

19

2021a). 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.[8]

Table 2. Attributes for profiles in British conjoint experiment

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

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 Online Appendix for questions and response options.

The British study also included a priming experiment that, however, was designed differently from the U.S. one. Its goal was to compare how making various dimensions of stereotypes about immigrants salient might impact attitudes toward immigration. To achieve this goal, respondents were randomly exposed to one dimension of stereotypes about immigrants immediately before reporting their immigration attitudes. Specifically, respondents were asked to estimate the percentage of immigrants in Britain that had one of the following attributes:

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[8]   Due to randomization, 56 respondents never saw a profile with at least one specific attribute value and were excluded from the analysis

Muslims, Hindus, those with university education, recipients of government benefits, or those with criminal history. The format of questions and responses was similar to the explicit stereotype battery from Study 1. In the control condition, no such question was asked.
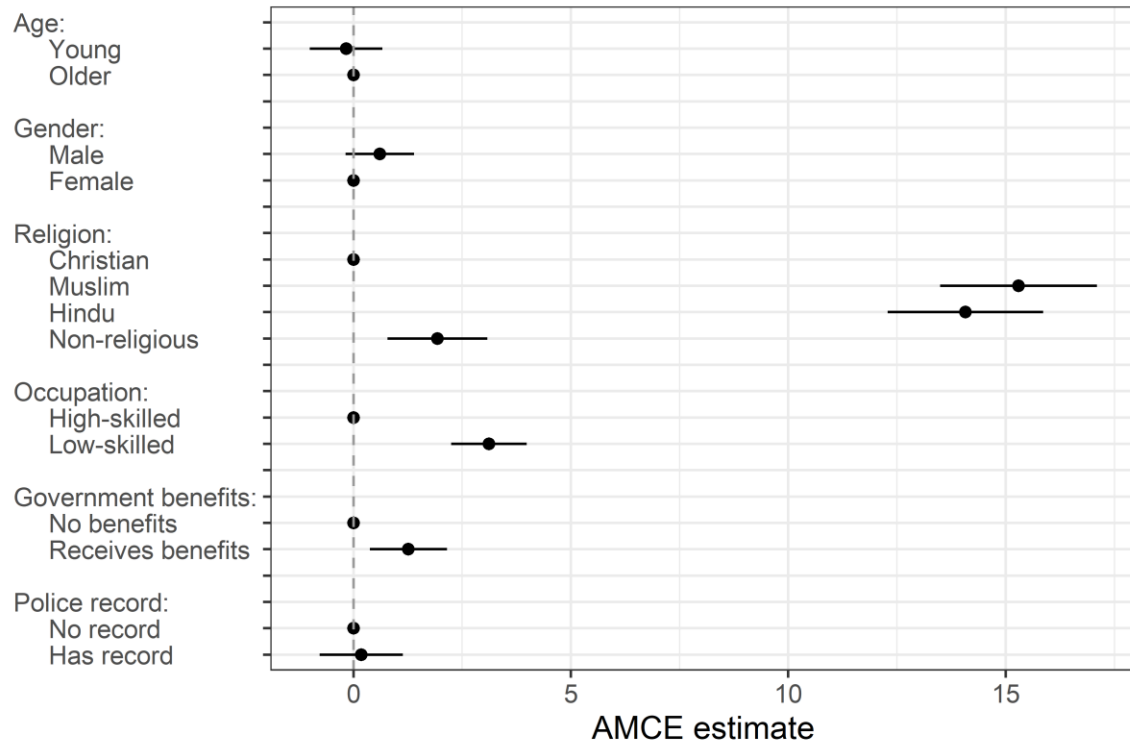
Results

Figure 5 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 5. 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 anti-immigration attitudes.[9] Results are presented in Figure 6. 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 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.

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9   IMCEs were successfully estimated for 623 respondents.
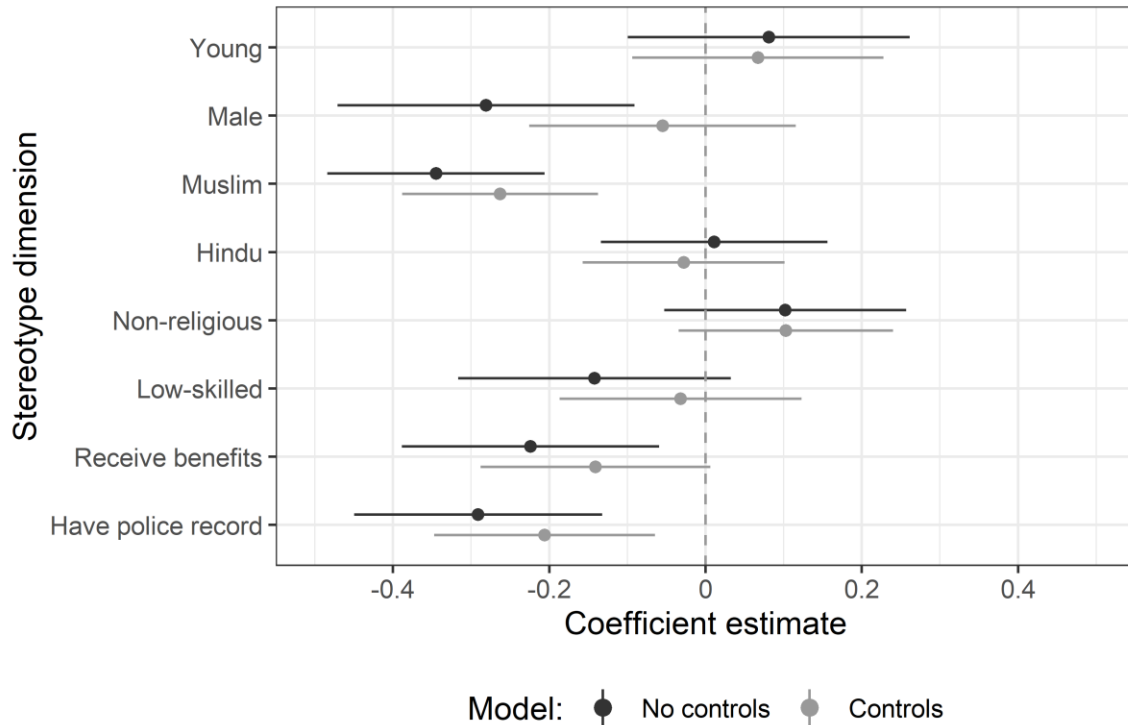
Figure 6. OLS regression results predicting attitudes toward immigration using different dimensions of stereotypes about immigrants, British sample
Note. Controls: respondents' age, gender, income, race/ethnicity, education, ideology

Finally, I turn to the priming experiment that manipulated salience of different stereotype dimensions by asking respondents to estimate percentages of immigrants with certain attributes before reporting their immigration attitudes. Results are presented in Figure 7. Estimates for all stereotype dimensions other than receiving government benefits are significant and negative.[10] Effect magnitudes across different dimensions, however, are not jointly different from one another ($F_{8, 996} = 0.28$, $p = .889$). The average effect across all treatment conditions vs. control is -0.6 on the 0–10 scale ($p = .001$).

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[10]   Note that the numbers of observations per experimental cells were relatively low, with between 70 and 80 respondents per treatment condition and 303 respondents in the control condition.
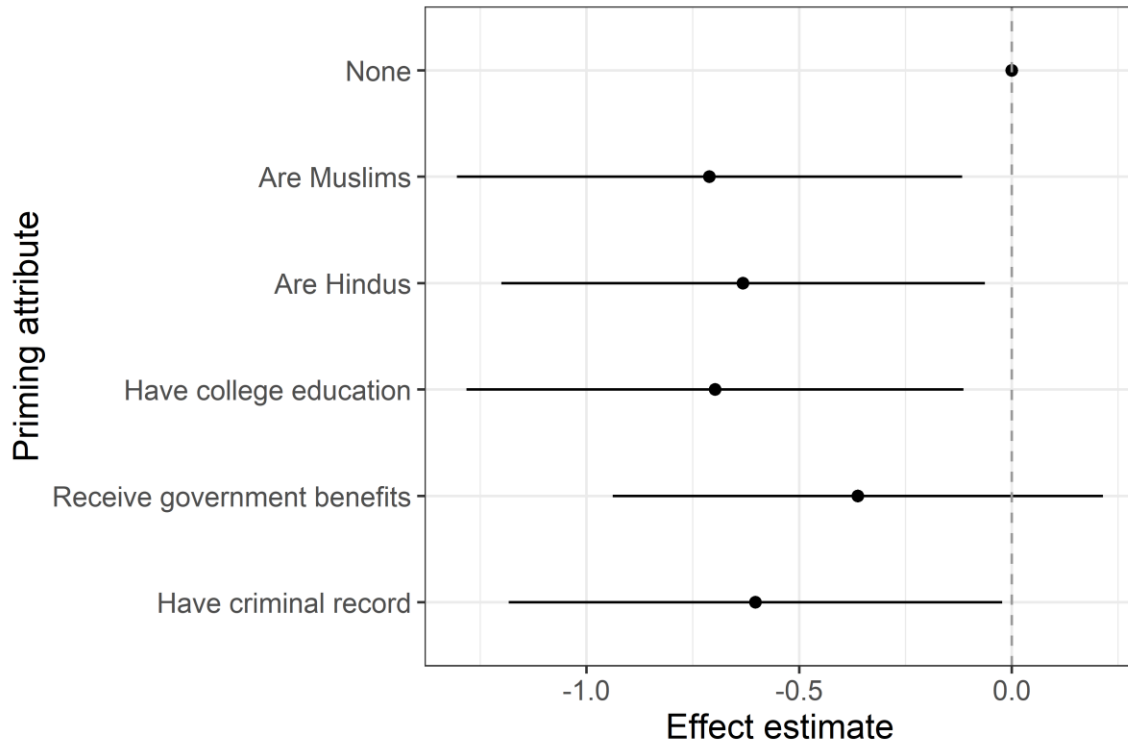
Figure 7. Experimental results: average treatment effects of priming different stereotypes dimensions on attitudes toward immigration, British sample

Discussion and Conclusion

This study has started from an observation: voters in industrial democracies agree to admit individual immigrants on the basis of potential economic contributions (Hainmueller and Hopkins 2015; Naumann, Stoetzer, and Pietrantuono 2018; Valentino et al. 2019), but diverge in attitudes toward immigration. To explain this seeming contradiction, I have put forward a cognitive-psychological model of immigration opinion formation that emphasizes the role of stereotypes about immigrants. Citizens who agree on admitting high-skilled and law-abiding immigrants can view immigration favorably or unfavorably depending on whether they see actual immigrant populations as possessing these qualities or not.

To test this conjecture, I have run survey-experimental studies on diverse samples 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 rely almost exclusively on ascriptive identities stereotyped as foreign-born. 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 predict attitudes toward immigration only when measured explicitly but not when measured indirectly via conjoint categorization tasks. This might mean that effects usually attributed to skill premium can be rationalizations of pre-existing attitudes masking other dimensions of stereotypes (also see Newman and Malhotra 2018). The same seems to be 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 political conservatism (Levy 2021).

The question order experiments show that priming stereotypes about immigrants shifts attitudes toward immigration in the negative direction. There is no corresponding reverse effect of priming attitudes on stereotypes content, thus suggesting that stereotypes about immigrants are causally prior with respect to attitudes toward immigration. A closer investigation of the experimental effect also reveals the likely mechanism at work: making the stereotypes salient overrides the normative tendency to give pro-immigration answers among some respondents.

Overall, my results are in line with studies that emphasize the role of concerns related to cultural cohesion and national identity in opposition to immigration (Ostfeld 2017; Sides and Citrin 2007; Sniderman, Hagendoorn, and Prior 2004). This conclusion is in contrast to recent survey experiments on immigrant admission that identify sociotropic economic considerations as the most important component of respondents' preferences on immigration (Hainmueller and Hopkins 2015; Valentino et al. 2019). The explanation for this discrepancy most likely lies in the interplay between research design and the cognitive nature of social categorization. Stereotypes are formed with respect to immigrants as a category, not with respect to individual immigrants featured in admission experiments. Moreover, categorical thinking is most cognitively powerful under incomplete information (Moskowitz 2005), whereas admission experiments provide extensive lists of immigrants' attributes leaving no space for stereotypes to operate.

Therefore, ethnicity and religion play the central role in stereotypes about immigrants but treatments used in admission experiments are unable to evoke them. If anything, focusing on individual immigrants suppresses the operation of categorical thinking while providing enough relevant information makes the application of stereotypes unnecessary. However, individual

citizens do not decide the fate of individual immigrants—except for the unique case of now-discontinued citizenship referenda in Switzerland (Hainmueller and Hangartner 2013, 2019). Instead, people vote for governments that implement immigration policies—and those who hold anti-immigration attitudes are more likely to cast ballots for populist right candidates and parties, both in the United States and in Western Europe (Reny, Collingwood, and Valenzuela 2019; Zhirkov 2014). As demonstrated in this paper, attitudes toward immigration are predicted by stereotypes about immigrants—meaning that the content and potential causes of these stereotypes are of interest to political science.

Reported results from the conjoint experiments show that immigration in the United States and Britain is generally associated with nonwhite and non-Christian groups. However, only some of these groups face strong opposition: examples include Hispanics in the United States and Muslims in Britain. This study cannot answer why exactly some stereotypically immigrant groups are more opposed than others. For instance, opposition to Hispanic immigration among Anglos in the United States can be understood through the lens of cultural threat (Branton et al. 2011; Newman, Hartman, and Taber 2012), or prevalence (Malhotra and Newman 2017). The salience of Muslims in debates over immigration at least in part stems from racial prejudice (Jardina and Stephens-Dougan 2021; Lajevardi and Oskooii 2018), although uneasiness with fundamentalist forms of religiosity often attributed to Islam plays a role as well, especially among those on the political left (Choi, Poertner, and Sambanis 2021; Helbling and Traunmueller 2018). Overall, understanding why certain ethnic and religious groups become central to stereotypes about immigrants—and why only a subset of these groups cause backlash against immigration—can be a promising direction for future research.

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Online Appendix

Study 1: United States

Conjoint: preamble

"In the following questions, you will be presented with pairs of profiles describing different people living in the United States. For each pair of profiles, please look at the information carefully, and then indicate which person is more likely to be an immigrant. Even if you aren't entirely sure, please indicate your best guess."

Explicit stereotypes

"Please indicate the percentages of the U.S. immigrant population that, in your opinion, have each of the listed characteristics. Of course, nobody knows exact numbers so just give your best estimates."

- are white
- are Hispanic
- are Asian
- are younger than 40
- are women
- are high-skilled workers
- receive government benefits
- have police record

Question order randomized.

Attitudes toward immigration

"There are different opinions about immigration from other countries to the United States. For each of the following statements, please choose the position that is closest to yours."

- Would you say immigration is generally bad or good for the U.S. economy? (0 = *Bad for the economy*, 10 = *Good for the economy*)

- Would you say that U.S. cultural life is generally undermined or enriched by immigration? (0 = *Cultural life undermined*, 10 = *Cultural life enriched*)

- Does immigration make the U.S. a worse or a better place to live? (0 = *Worse place to live*, 10 = *Better place to live*)

Statement order randomized.

Study 2: Britain

Composition primes

1. Please indicate the percentage of the British immigrant population that, in your opinion, are Muslims. Enter a number from 0 to 100 as your response.

2. Please indicate the percentage of the British immigrant population that, in your opinion, are Hindus. Enter a number from 0 to 100 as your response.

3. Please indicate the percentage of the British immigrant population that, in your opinion, have university education. Enter a number from 0 to 100 as your response.

4. Please indicate the percentage of the British immigrant population that, in your opinion, receive government benefits (welfare). Enter a number from 0 to 100 as your response.

5. Please indicate the percentage of the British immigrant population that, in your opinion, have criminal history. Enter a number from 0 to 100 as your response.

Respondents were randomly presented with one of these questions or no question.

Attitudes toward immigration

"There are different opinions about immigration from other countries to Britain. For each of the following statements, please choose the position that is closest to yours."

- Would you say immigration is generally bad or good for British economy? (0 = *Bad for the economy*, 10 = *Good for the economy*)

- Would you say that Britain's cultural life is generally undermined or enriched by immigration? (0 = *Cultural life undermined*, 10 = *Cultural life enriched*)

- Does immigration make Britain a worse or a better place to live? (0 = *Worse place to live*, 10 = *Better place to live*)

Statement order randomized.

Conjoint preamble

"In the following questions, you will be presented with pairs of profiles describing different people living in Britain. For each pair of profiles, please look at the information carefully, and then indicate which person is more likely to be an immigrant. Even if you aren't entirely sure, please indicate your best guess."