

THE UNIVERSITY OF CHICAGO

CAN ACCEPTANCE REDUCE ANTICIPATED DISCRIMINATION? EVIDENCE
FROM SECOND-GENERATION IMMIGRANTS

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To my wife, Jubilee, who is the sunshine of my life

To my children, Jasper and Emma, who remind me of the joy of learning

To my parents, Chi Hing Kwok and Pui Wa Li, who always put their family first

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ABSTRACT

I study how the perception of native-born attitudes shapes the anticipated discrimination among the Hispanic second-generation immigrants in the United States. First, I document that the native-born population widely accepted second-generation immigrants as Americans, but the vast majority of the second-generation immigrants underestimated this acceptance. Using an information provision experiment, I causally identify that perceiving increased acceptance lowered the level of anticipated discrimination. When playing a dictator game as recipients, individuals in the treatment group predicted a significant reduction in the payoff gap between signaling their ethnicity as Hispanics compared to Whites. Moreover, perceiving more favorable attitudes also increased the likelihood of individuals signaling as Hispanic. These results suggest that existing anticipated discrimination in society may be reduced by making information on intergroup attitudes more widely known.

CHAPTER 1

INTRODUCTION

Individuals belonging to minority groups in society often have concerns about the potential discrimination they might encounter from members of the majority group. These concerns can influence a variety of economic decisions, as they hold certain beliefs about the extent of discrimination they could face in different situations. Existing literature indicates that anticipated discrimination leads to strategic responses among minority groups to mitigate the impact of actual discrimination they may encounter (Aksoy et al., 2023; Antman and Duncan, 2015; Kang et al., 2016; Kudashvili and Lergetporer, 2022; Lepage et al., 2022). Nevertheless, it remains uncertain how accurately the disadvantaged group anticipates the level of actual discrimination and what determine such anticipated discrimination. In fact, recent papers have shown that individuals around the world have inaccurate group meta-perception and overestimate the extent of out-group negativity in the context of political polarization (Ruggeri et al., 2021; Lees and Cikara, 2020). Although there may not be distinct minority and majority groups in the political settings, similar misperceptions could exist in other intergroup settings where the minority group has biased beliefs about the attitudes held by the majority group. These misperceptions may then influence the extent of anticipated discrimination. In this paper, I ask whether minority groups accurately perceive acceptance or hostility from the majority group and whether such (mis)perception shapes the level of anticipated discrimination.

To answer these research questions, I chose to study the population of second-generation immigrants in the United States, who were born in the country with parents that are foreign-born immigrants. This demographic group presents an ideal situation for a case study because it is quite unique that they could be considered members of either in-group or out-group by the native-born population. On one hand, since they were born and grew up in the U.S., it is common for them to hold a strong American identity and for others to see

them naturally as Americans. In fact, every second-generation immigrant is an American by legal definition due to their birthright citizenship. On the other hand, as children of immigrant parents, they are exposed to foreign cultures and customs from their parents' home countries. They may inherit a strong sense of belonging to the ethnic identity shared by their parents. As a result, other Americans may perceive them differently. In the current heated political climate regarding immigration policy, second-generation immigrants may be even more uncertain about how much they are accepted by other Americans. In discussions about immigrants nationwide, the focus is often on first-generation immigrants coming from foreign countries. While there are many surveys and studies capturing the national sentiment towards first-generation immigrants, measures of attitudes towards their U.S.-born children are comparatively scarce. The uncertainty is further compounded by the fact that second-generation immigrants are often indistinguishable from the first-generation immigrants in appearance. As a result, they might anticipate and encounter similar discrimination faced by other immigrants in certain situations. Therefore, all of these factors provide an excellent opportunity to investigate how accurately second-generation immigrants perceive native-born acceptance and to study its causal effect on anticipated discrimination by correcting any misperception that may exist.

In addition, second-generation immigrants is becoming a demographic group of significant importance. Currently, they make up about 12-13 percent of the U.S. population. With the foreign born population projected to increase and the higher birth rates among immigrants compared to the native-born population, the share of second-generation immigrants is expected to continue growing in the U.S. As a result, they will play an increasingly vital role in shaping the future ethnic demographics and landscape of the nation. In this study, I specifically target Hispanic second-generation immigrants since Hispanics constitute the largest ethnic group of immigrants in the U.S. and are often the focus of debates regarding immigration policy.

I begin by documenting the level of native-born acceptance towards second-generation immigrants in the U.S. through a nationally representative online survey. The U.S.-born respondents provided their perspectives and views on second-generation immigrants, answering a set of questions about how they would categorize falling under this definition, namely those born in the U.S. with at least one foreign-born immigrant parent. The survey findings revealed that about a vast majority (87 percent) of Americans perceive second-generation immigrants more as Americans rather than foreigners. This result was consistently observed consistent across various measures of native-born acceptance. When considering second-generation immigrants with either a Hispanic or an Asian ethnicity, U.S.-born respondents reported a similar level of acceptance as Americans.

I then conducted a separate online study among Hispanic second-generation immigrants. After collecting basic demographic questions, I informed them about the previous national survey conducted among U.S.-born individuals. They were incentivized to make guesses regarding how the native-born respondents answered specific questions about their attitudes towards second-generation immigrants. The results revealed a significant underestimation of native-born acceptance among Hispanic second-generation immigrants. On average, participants guessed that only 67 percent of Americans viewed second-generation immigrants as Americans rather than foreigners, which contrasts with the actual percentage found in the national survey. Notably, 85 percent of the participants underestimated the actual level of native-born acceptance towards the second-generation immigrant population as Americans. These findings indicate a prevalent misperception of native-born acceptance among second-generation immigrants in the U.S., presenting an opportunity for researchers to correct this misperception.

To identify the causal effect of the perception of native-born acceptance on anticipated discrimination, I used an information provision experimental design (Haaland et al., 2020) to generate exogenous variation in the level of perceived acceptance. After the prior belief

elicitation, participants were randomly assigned to either the control group or the treatment group. Those in the treatment group received the actual findings from the national survey regarding the native-born attitude towards second-generation immigrants. Specifically, they were shown the following statement: “ *In the nationally representative survey, 87% of the U.S.-born respondents think of second generation immigrants more as Americans rather than foreigners.*”. To further illustrate this finding, a pie chart representing the stated statistics was shown to participants as well. On the other hand, participants in the control group received no information and proceeded directly to the next stage of the survey, where outcomes were measured.

In order to measure the anticipated discrimination in an incentivized setting, I invited the participants to play a dictator game in the role of the recipients. Dictator games are commonly used to identify potential discriminatory behaviors by the dictator. However, instead of capturing the actual discrimination, I focus on how the participants anticipated discrimination from the dictator in their role as recipients. To achieve this, I adopted a variation of the standard dictator game that includes a signaling component (Aksoy et al., 2023; Kudashvili and Lergetporer, 2022). Participants were first informed that they were matched with another person, who is an American respondent in a separate survey, who would decide how to split \$10 between them. They were then given the options to signal to this person some personal characteristics about themselves to this person. Regarding their ethnicities, they could choose to send a signal as Hispanic/Latino, signals of another ethnicity such as White/Caucasian, or send no signal at all. Additionally, I elicited participants’ predictions about the payoffs associated with these ethnic signals. By collecting these predictions, I could compute a measure of anticipated discrimination, defined as the predicted payoff of signaling as Hispanic minus the predicted payoff of signaling as White. This measure can be interpreted as the discrimination these Hispanic second-generation immigrant participants expect they may face when interacting with other native-born individuals, in comparison to

how a white individual may be treated.

The main outcome of interest is the level of anticipated discrimination perceived by second-generation immigrants as members of an ethnic minority. I report that increasing the sense of acceptance by the native-born population successfully reduces the anticipated discrimination among the participants in the treatment group. Specifically, they reported a shrinkage of the predicted payoff gap between signaling as Hispanic and signaling as White by \$0.046, equivalent to a 45 percent reduction of anticipated discrimination, in comparison to the control group. This finding suggests that feeling of being accepted by members of a (mistakenly) perceived out-group plays a key role in determining the magnitude of anticipated discrimination individuals perceive. It further suggests that significant reduction in anticipated discrimination is feasible by making information of this acceptance more accessible and correcting any misperception individuals may have.

In addition, I observed that updating the beliefs about native-born acceptance changed the participants' signaling behavior of their ethnicity in the dictator game. In particular, in the treatment group, the proportions of participants who chose to signal their ethnicity was higher by 5.6 percentage points compared to the control group. The effect size is quite substantial as it leads to a 34-percent reduction in the proportion of participants who chose not to signal as Hispanics. Further heterogeneity analysis shows that this effect was primarily driven by participants who initially underestimated the level of native-born acceptance, rather than those who overestimated it. This result suggests that second-generation immigrants exhibit strategic consideration when interacting with other native-born Americans, and that the knowledge of being more favorably accepted by others increases their willingness to more openly share their identity as an ethnic minority.

This paper is related to several strands of literature. First, it contributes to the literature on anticipated discrimination and its impact on economic decisions among various minority groups. Several papers have examined the strategic signaling of identity in interac-

tions where discrimination may presents a disadvantage to the minority population based on race (Antman and Duncan, 2015; Kang et al., 2016), ethnicity (Kudashvili and Lergetporer, 2022), sexual orientation (Aksoy et al., 2023). For instance, Lepage et al. (2022) documents how the anticipation of gender discrimination influences the differential behavior of grade disclosure between male and female students. My paper adds to this literature by identifying a determinant of anticipated discrimination. It provides evidence that perceptions of acceptance by the majority group can be a factor that influences anticipated discrimination. Moreover, it contributes to existing findings by demonstrating that anticipated discrimination can influence how minorities choose to signal their identity.

In addition, this paper is related to the literature that studies the relationship between native-born attitudes and immigrants' assimilation. Several studies have examined how immigrants increase their integration efforts in response to increased hostility from the native-born community in various historical settings (Abdelgadir and Fouka, 2020; Fouka et al., 2022; Jaschke et al., 2022; Saavedra, 2021). In the context of contemporary immigrants in the U.S, this paper allows for the direct elicitation of perceptions and identity. Unlike previous studies that rely on general hostility demonstrated by the host community, I delve into the decision-making process by studying the perceived hostility rather than the actual hostility, which could be different as documented in this paper. While past research often leverages historical events where hostility increased, I generate exogenous variation in perceived acceptance to identify the effects when perceived hostility decreases. Descriptive findings presented by Jones-Correa et al. (2018) through survey and interviews show that perceptions of U.S.-born receptivity correlates with immigrants' identification as Americans. Additionally, Candelo et al. (2017) demonstrates that immigrants' contribution in public good games correlates positively with the strength of identity and negatively with the perception of social exclusion. I complement these papers by adopting an experimental design to estimate the causal relationship. More broadly, this paper contributes to the rich literature

on immigrants assimilation in the U.S. Abramitzky et al. (2020) by specifically focusing on the population of second-generation immigrants, which has been relatively understudied in the economic literature.

This paper also adds to a growing body of literature on misperception (Bursztyn and Yang, 2022) by documenting the underestimation of native-born acceptance among Hispanic second-generation immigrants in the U.S. In the field of immigration, most papers have focused on the misperception the native-born population may hold about the immigrant population and how it may influence their attitudes towards immigrants (Alesina et al., 2018; Bursztyn et al., 2021). To the best of my knowledge, this paper is the first to show that misperception also exists in the other direction, where the immigrant population holds biased beliefs about how the native-born population views them. This finding is closely related to studies that document inaccurate meta-perceptions of out-group negativity and its impact on intergroup relations (Ruggeri et al., 2021; Lees and Cikara, 2020). While these studies primarily focus on the context of political polarization, my research demonstrates that such inaccurate group meta-perceptions can also exist in settings where there are distinct minority and majority groups. Moreover, Haaland and Roth (2021) provides representative evidence of biased beliefs about the levels of racial discrimination against the black. This paper complements their findings by identifying misperceptions of intergroup attitudes as a source of variations in beliefs about the extent of discrimination. Lastly, I demonstrate that misperception of native-born acceptance can be corrected by providing accurate information, leading to changes in actual behaviors and beliefs.

The remainder of this paper proceeds as follows. I present findings on U.S-born attitude towards second-generation immigrants from a national survey in Chapter 2. In Chapter 3, I introduce the online study with second-generation immigrants and outline the experiment design. In Chapter 4, I report and discuss the main results from the second-generation immigrant study. Chapter 5 concludes.

CHAPTER 2

DESCRIPTIVE STUDY WITH THE NATIVE-BORN

2.1 Recruitment and Survey Sample

I conducted a survey among native-born individuals in May 2022 in the U.S. The main purpose of this survey was to find out the native-born attitudes towards second-generation immigrants. I sampled 562 individuals from a nationally representative sample pool through an online survey company, Lucid. The sample was restricted to native-born citizens in the U.S. who were at least 18 years of age. Respondents were each compensated with \$1 upon completion of the survey. To ensure that the respondents paid attention and read the instructions carefully during the survey, I included a question that explicitly instructed respondents to give predetermined answers. Out of the 562 respondents recruited, 411 (73%) passed the attention check. I also offered the respondents an opportunity midway through the survey to indicate whether they had devoted full attention to the questions. One respondent acknowledged their inattention and subsequently dropped out of the study. The remaining 410 respondents formed the main analysis sample for this survey study. The average time to complete the survey was 8.3 minutes and the median time was 5.8 minutes.

Given some attrition due to participants failing the attention checks, it is important to verify that the resulting sample continues to represent the U.S.-born population in the country. Across all the demographic variables collected, I found that only the college dummy is positively correlated with passing the attention checks at the conventional significance level. In comparison to the native-born adult sample from the 2021 American Community Survey conducted by the U.S. Census Bureau, the sample in this study was slightly younger, and contained more Asians, more Hispanics, fewer married individuals, significantly fewer individuals with household income over 70k, and fewer employed individuals. Table B.1 presents the summary statistics of all demographic variables in the final sample.

2.2 Survey Design

After being recruited on Lucid, respondents were redirected to complete a Qualtrics survey online. The wording of the survey questions and the instructions given to the respondents are presented in Appendix C.1. After giving consent to participate in the study, respondents proceeded to answer several basic demographic questions and a couple attention check questions as described previously.

Next, the respondents were asked to answer a set of questions about their acceptance towards second-generation immigrants. Since the term “second-generation immigrants” may be somewhat ambiguous, I adopt the definition provided by the U.S. Census Bureau. In particular, I define second-generation immigrants as people who were born in the U.S. with at least one foreign-born immigrant parent. The respondents were given this definition before answering the attitude questions.

To measure acceptance, the central concept is to assess whether the native-born population perceives second-generation immigrants as part of their in-group or out-group. Within this framework, I define the in-group/out-group boundary as whether a second-generation immigrant is seen as an American or a foreigner. I created three variations of wording to capture this categorization. The inclusion of these three variations served as a robustness check for consistency, and ensured that the results are not dependent on or sensitive to the specific phrasing of the questions.

In the first and main variation, respondents were presented with two statements and asked to choose which one they agreed with more: whether they think of second-generation immigrants more as Americans or more as foreigners. In the second variation, respondents were asked directly whether they consider second-generation immigrants to be their fellow Americans. In the third variation, they were asked to indicate how much they agree with the statement “a second-generation immigrant is as much an American as someone else born in the U.S.” Additionally, I included two more questions using the first variation to inquire about

how natives would categorize Hispanic and Asian second-generation immigrants, as these two ethnic groups represent the largest immigrant groups in the U.S. Each participant answered a total of five questions, with the order of the questions randomized at the individual level.

At the end of the survey, to verify that there was minimal experimenter demand effects, I elicited participants' perceptions of whether they felt the survey was biased, and if perceived bias, whether it was left-wing biased or right-wing biased. This step was taken to ensure that participants' responses were not influenced by potential biases they perceived in the survey itself, and to assess the neutrality and objectivity of the study.

2.3 Results

Table 2.1 reports the descriptive statistics of the U.S.-born attitudes towards the immigrant population. Under the first (and main) measure of acceptance, I document that 87 percent of U.S.-born respondents think of second-generation immigrants more as Americans rather than foreigners. Similar results are obtained using other measures. Specifically, I found that 90 percent of respondents indicated that they definitely or probably consider second-generation immigrants as their fellow Americans, and that 82 percent answered "strongly agree" or "somewhat agree" to the statement that second-generation immigrants are as much an American as another native-born individual. Across questions based on different ethnicities, I did not find significant variation in the participants' responses. I observe that 84 percent of respondents think of Hispanic second-generation immigrants more as Americans. This percentage is similar at 83 percent for Asian second-generation immigrants. Although one might expect that second-generation immigrants should be universally considered Americans by other Americans due to their birthright citizenship, these statistics demonstrate that they are widely accepted by the vast majority of the native-born population as members of their American identity group.

Table 2.1: Native-Born Acceptance

| | % of respondents who ... |
|---|--------------------------|
| Think of second-gen as Americans (%) | 87.07 |
| Consider second-gen as fellow Americans (%) | 90.00 |
| Agree that second-gen is as American as other natives (%) | 82.20 |
| Think of Hispanic second-gen as Americans (%) | 84.39 |
| Think of Asian second-gen as Americans (%) | 82.93 |
| Observations | 410 |

CHAPTER 3

EXPERIMENTAL STUDY WITH SECOND-GENERATION IMMIGRANTS

3.1 Sample

3.1.1 Recruitment

I conducted a separate survey in July 2023 among Hispanic second-generation immigrants in the U.S. who were at least 18 years of age. I recruited the sample through the online survey company, Prolific. In order to recruit participants of Hispanic ethnicity, I employed two strategies. First, I used the prescreening data provided by Prolific to only allow prospective participants who have selected "Latino/Hispanic", or " White Mexican". I consider all participants meeting this criterion to be Hispanic. In addition, I recruited participants who have selected "Caribbean" or "Mixed" as their ethnicity in the prescreening data and only included in the study those who also indicated "Hispanic/Latino" in my own demographic question about ethnicity. Since there was no specific prescreening question on Prolific to identify second-generation immigrants, I included an additional screening question in the survey. I asked participants whether both of their parents were born in the U.S. Only those who had at least one foreign-born parent were allowed to continue in the study, ensuring that the sample was limited to second-generation immigrants. To verify that the respondents were paying attention and reading the instructions carefully during the survey, I implemented the same attention check question as in the national survey and only included those who passed the test. In total, I recruited a sample of 427 participants who met all the criteria for this study. Each participants was compensated with \$1 upon completion of the survey. The survey took an average of 7.9 minutes to complete, with a median completion time of 6.7 minutes.

3.1.2 Covariate balance

Participants were randomly assigned to the control group (214 individuals) or the treatment group (213 individuals). Table B.2 reports the descriptive statistics of this sample. Additionally, it shows that the covariates are well-balanced where no covariate is significantly different across the two groups. Therefore, I conclude that the randomization process into the control and the treatment groups was successful.

3.2 Study Flow

The participants recruited on Prolific were redirected to complete the consent form and answer a Qualtrics survey online. Figure A.1 provides an illustration of the study flow. The wording of the survey questions and the instructions given to the participants are presented in Appendix C.2.

3.2.1 Prior belief elicitation

After answering a set of demographic questions, verifying that they were second-generation immigrants, and passing an attention check question, participants proceeded to the first block of the main study, where I elicited prior beliefs from participants regarding their perception about Americans' attitude towards second-generation immigrants. They were informed that a nationally representative survey was conducted previously, where the U.S.-born respondents answered a series of questions about how they viewed various demographic groups within the country. They were then asked to make a guess about the percentage of U.S.-born respondents who think of second-generation immigrants more as Americans rather than foreigners in this national survey. Before making their guess, participants were provided with the same definition of second-generation immigrants as presented to the U.S.-born respondents. To encourage participants to give their best effort in making an accurate

guess, I offered a \$5 bonus payment as incentive to the participant whose guess was closest to the actual finding in the national survey. At the end of this block, I also included a question where participants could indicate their confidence level in their guess on a 5-point Likert scale. This allowed me to understand the relationship between their confidence and the accuracy of their prior beliefs.

3.2.2 Treatment

Participants in the treatment group were informed about the actual finding in the nationally representative survey regarding the native-born attitude towards second-generation immigrants in the U.S. Figure C.1 demonstrates what these participants saw in the survey. They were presented with a direct statement indicating that 87 percent of the U.S.-born respondents think of second-generation immigrants more as Americans rather than foreigners. This statement was accompanied by a pie chart that represents the statistics. They were also reminded of the guess they made previously during the belief elicitation block regarding the native-born acceptance. To ensure that participants were sufficiently attentive to the information presented, a 10-second delay was implemented before the next button appeared.

In contrast, participants in the control group received no information about the native-born attitudes and proceeded directly to the outcome block.

3.2.3 Outcomes

Dictator game is a widely-used design in the literature to measure altruism and discrimination. When the dictator exhibits differential payments to different recipients, the difference is interpreted as discrimination, as it reflects differential treatment based on some characteristics. Therefore, in order to study anticipated discrimination, I asked the participants to play the dictator game as recipients and examined what they expected the discrimination to be from the dictator.

The participants were first instructed that they were matched with Person A who is an American participant in a separate survey. Person A was asked to split \$10 between him and the participant. The amount Person A chose to give to the participants would become part of their bonus payments. I consider the amount at stake here to be quite substantial for the participants. The \$10 to be split was close to the hourly pay of a typical Prolific respondent and it was ten times of the baseline compensation for this survey.

The dictator game in this study deviated from the standard version of the dictator game by consisting of an additional component of identity signaling. Participants were informed that before Person A made the decisions, they had the options to share some personal characteristics about themselves. These characteristics include age, gender, and ethnicity. For each characteristic, the participants may choose what to share or not to share at all. Person A is aware that the participants have the options to share something about themselves but he is unaware of what specific characteristics the participants can signal. As a result, if the participants chose not to share a particular characteristic, Person A would not know that it has been hidden from him. Person A would receive a table containing only the characteristics the participants agreed to share. To ensure that the participants understood the structure of the game accurately, I also provided them with the exact instructions Person A would see as the dictator in this game. They also had to spend at least 15 seconds on reading the instructions of this game before they could move to the next page.

The first outcome I measured is what the participants chose to signal to Person A in terms of ethnicity. They were given all the choices offered in the ethnicity question they answered previously in the demographic block, with an added option of preferring not to share anything at all. Since all participants either have answered that they identified most with Hispanic/Latino previously in the survey, or have indicated Latino/Hispanic as their ethnicity in the Prolific prescreening data, it would be interesting to see whether the participants chose to signal their ethnicity as Hispanic/Latino in this version of the dictator game.

This outcome can be informative on how participants may change their actual behaviors when interacting with Americans after perceiving greater acceptance from the treatment information.

The second outcome I measured is the discrimination the Hispanic participants anticipated due to their ethnicity. I adopted a within-subject design to measure this. I asked the participants to make predictions about the payoffs for each of the following signals of ethnicities, in randomized order: (1) White/Caucasian, (2) Black/African American, (3) Hispanic/Latino, (4) Asian, and (5) No signal. In each question, participants used a slider from \$0 to \$10 to indicate their predicted payoffs. In order to incentivize efforts, each participant could get a \$1 bonus payment if their prediction fell within the $\pm\$0.5$ range of the actual payoff for a randomly chosen signal. This bonus amount was quite substantial as it was equivalent to the compensation they would receive upon completing the survey. Therefore, I assume the elicited payoff predictions truly reflected what they believed they might receive for each of the given signals. With the predicted payoffs, I then calculated the Hispanic-White payoff gap, defined as the predicted payoff of signaling Hispanic/Latino minus the predicted payoff of signaling as White/Caucasian. In cases where the Hispanic-White payoff gap shows a negative value, I interpret this difference as the level of discrimination that participants anticipated against Hispanics compared to Whites. In the main analysis, I test whether anticipated discrimination existed (i.e. the payoff gap is negative), and whether the perception of higher acceptance by the native-born population could reduce the level of anticipated discrimination.

To verify that the treatment info had the intended effect to update participants' belief about the native-born acceptance, I also created a measure to elicit their posterior belief in order to evaluate the first-stage effect after measuring the outcomes. In particular, I asked them to make a guess about the percentage of Americans who would see them personally as American as well. This question was different from the measure used to elicit the prior

belief. Previously, the participants were asked to guess how Americans view the second-generation immigrant population generally. In this question, it assessed how participants may internalize the treatment information into their beliefs of how they were personally perceived.

For each of the outcomes described above, the main analysis would be based on the simple bivariate regressions of the outcome on the treatment dummy indicator without any controls. Nevertheless, as a robustness check, I also report results from the specifications that include background controls that measures participants' sense of national and ethnic identity and their day-to-day living experience as a second-generation immigrant (as described in Section 3.2.4). In some specifications, I also include demographic controls for age, gender, race, marital status, regions, household income, education, employment status, and political affiliation.

3.2.4 Additional questions

In this last part of the survey, I asked the participants additional background questions about their American and ethnic identity. Specifically, I elicited measures on how American they felt, how proud they were as an American, and how important their ethnicity was to them. I also asked them about their experiences as a second-generation immigrant living in the U.S. In particular, they were asked to report their perception of the proportion of people walking past them on the street who would view them as foreigners, the proportion of their friends who were the same ethnicity as them, and whether they had hidden a part of their heritage from people who were not their ethnicity. All of these background variables were measured using a 5-point Likert scale.

At the end of the survey, I elicited participants' perceptions on the biasedness of the study in the same way I did in the national study among the native-born. In addition, I asked the treatment group to provide their assessment of the credibility of the information

pertaining to the actual findings in the national survey, on a 5-point Likert scale. I would use this as one of the measures to evaluate the effectiveness of the treatment information.

CHAPTER 4

RESULTS

4.1 Perception of Native-born Acceptance

The first set of results I show is that misperception about native-born acceptance exists among the participants who are second-generation immigrants. Table B.3 reports the immigrants' prior belief of the U.S.-born attitudes towards second-generation immigrants. The average (median) guess is that 67 percent (70 percent) of U.S.-born respondents see second-generation immigrants as Americans. The finding in the national survey is 87 percent, which is larger than the average guess by 20 percentage points or close to 1 standard deviation of the guesses. Figure 4.1 illustrates the distribution of the participants' wedges between the guess percentage and the actual percentage. It suggest that this misperception is quite widespread among the participants. In fact, I found that 85 percent of participants underestimate the actual percentage of natives who accept second-generation immigrants as Americans, with an average guess of 62 percent (see Figure A.2).

To further understand the nature of this misperception, I look at the subjective confidence participants reported in their guesses. It is worth noting that 50 percent of participants reported that they were either slightly confident or not confident at all, which were the two lowest options in the 5-point Likert scale. In addition, I found that while participants who had higher levels of confidence also had (slightly) more accurate guesses, this correlation is not significant. These results suggest that participants were generally uncertain about the attitudes held by the native-born towards second generation immigrants, and that those in the treatment group might find the actual findings in the treatment as informative. In fact, 80 percent of the treatment group indicated that the treatment information is either moderately credible, very credible, or extremely credible.

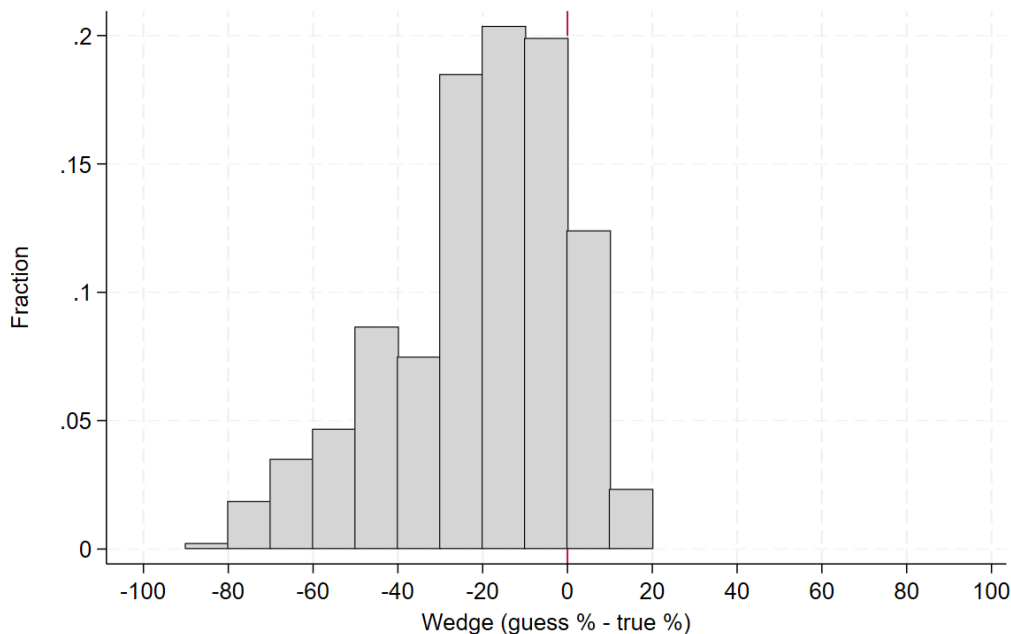


Figure 4.1: Prior Beliefs of Native-Born Acceptance

4.2 First-Stage Effect on Posterior Belief

Before reporting any effect on the main outcomes, I first examine whether the information treatment successfully affects participants' posterior beliefs about native-born attitudes as a first-stage effect. I found that receiving information of findings from the nationally representative survey improves participants' perception of native-born attitudes. As a baseline, the control group believes that 68 percent of Americans would see them personally more as Americans rather than foreigners, whereas this belief is 76 percent in the treatment group. Table B.4 reports the regression analyses associated with posterior beliefs. In contrast to participants in the control group, those in the treatment group believe that 8.03 percentage points ($p = 0.001$), or 0.33 s.d., more Americans would perceive them personally as Americans. This finding is robust to including the background controls (7.14 pp.) and other demographic controls (7.22 pp.) in the specification.

As shown in Table B.5, the direction of this updating of the posterior belief also aligns

with whether participants underestimated or overestimated the native-born attitudes in their prior beliefs. For participants whose initial guesses were below the actual percentage, the treatment information presented a more favorable view of native-born attitudes. In fact, I found that those who received the information reported 9.44 percentage points ($p < 0.001$) higher posterior belief relative to those who did not. For participants whose initial guesses were above the actual percentage, the information presented a less favorable view instead. Those who received the information reported 1.96 percentage points lower posterior belief relative to those in the control group, but this treatment effect is no longer significant. Figure A.3 provides a scatter plot of posterior beliefs on prior beliefs with the lines of best fit by treatment status and the dotted line representing the true share of native-born acceptance. We could see that there was a convergence of posterior beliefs for the treatment group, in comparison to the control group, meaning that those who underestimated in the prior beliefs (those on the left of the dotted line) had higher posterior beliefs and those who overestimated (those on the right of the dotted line) had lower posterior beliefs after receiving the treatment. Therefore, I conclude that the information provision intervention was effective in creating exogenous variation in the perceived acceptance by the native-born among the second-generation immigrant participants.

4.3 Anticipated Discrimination

Did the participants anticipate discrimination from another American who was the dictator in this dictator game if they shared that they were Hispanics or Latinos? Through the elicitation of the predicted payoffs based on different ethnicity signals, I found that the Hispanic participants in the control group predicted that the payoff would be \$1.02 ($p < 0.001$) lower on average if they signaled their ethnicity as Hispanic/Latino, in comparison to signaling as White/Caucasian. This payoff gap is non-trivial and in fact quite substantial in proportion to the predicted payoff to Whites. As shown in Figure A.4, the participants

predicted that signaling as White would earn them \$4.80 as bonus payment while they would only get \$3.79 if they signaled as Hispanics, which is equivalently to 21 percent decrease in bonus, or a loss in bonus that is equivalent to the base compensation for participating in this study.

Can improving the perception of acceptance by native-born reduce the anticipated discrimination the participants face as Hispanic second-generation immigrants in the U.S.? Figure 4.2 presents the treatment effect on the anticipated discrimination against signaling the Hispanic/Latino ethnicity using the White/Caucasian signal as the benchmark. Participants in the treatment group predicted that signaling as Hispanic would yield \$0.56 lower in payoffs than signaling as White, which is much smaller in size as compared to the \$1.02 payoff gap predicted by the control group. The average treatment effect of shrinking the predicted payoff gap by \$0.46 ($p = 0.045$), or 0.19 s.d., is substantial in magnitude. This is equivalent to reducing the anticipated discrimination by 45%. This suggests that when second-generation immigrants perceived a higher level of acceptance by the native-born population, they believed that the level of discrimination against expressing their ethnicity was lower. Table 4.1 also reports the estimates after adding background variables and other demographic variables as controls, in addition to the simple bivariate estimate. The results show that the treatment effect is robust under different specifications.

As a way to explore who drove the changes in anticipated discrimination, I analyze the heterogeneous effects of shifting perception of acceptance on the predicted payoff gaps based on whether they initially underestimated or overestimated the actual level of acceptance. Figure 4.3 shows that the treatment effect found in the full sample is primarily driven by the participants who originally underestimated in their prior beliefs of native-born acceptance. Feeling of greater acceptance by the native-born leads to a larger and more significant reduction of the predicted payoff gap by \$0.055 ($p = 0.028$), or a 52% decrease of anticipated discrimination, among these participants. The treatment effect among the participants who

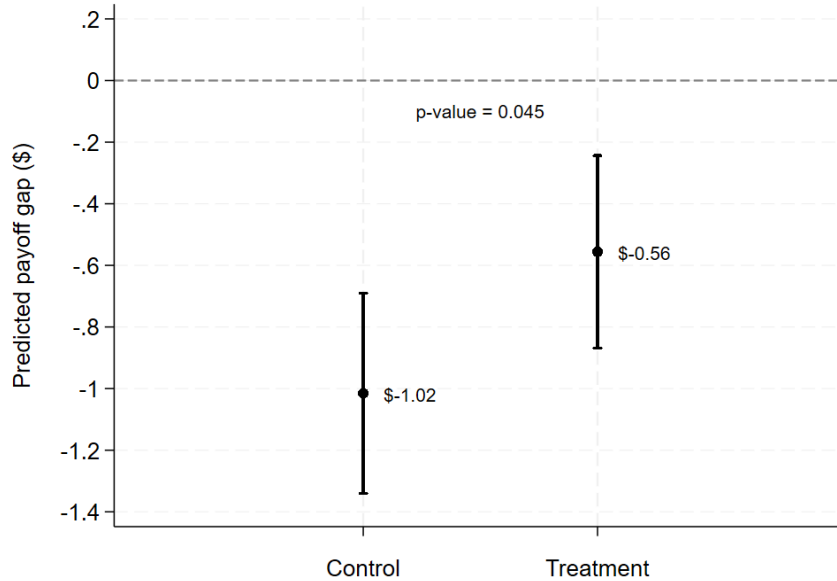


Figure 4.2: Predicted Payoff Gap between Hispanics and Whites

overestimated is negative in direction, meaning that there was an increase in the level of anticipated discrimination. However, the effect size is much smaller and it is not significantly different from zero ($-\$0.12$, with $p = 0.82$). Table B.6 reports estimates from the heterogeneity analysis. Column 1 reports the estimation that includes a treatment dummy, a dummy for overestimating in the prior beliefs, and an interaction term of both dummies, using the full sample without controls. The coefficient on the treatment dummy represents the treatment effect for those who underestimated in their prior beliefs. I found that this specification yields a similar effect size of $\$0.56$ ($p = 0.028$). Column 2 and 3 each uses only a subsample of those who underestimated or overestimated the native-born acceptance and each reports similar results as shown in 4.3.

In order to understand what contributes to the changes in anticipated discrimination, I decompose the reduction in the Hispanic-White predicted payoff gaps into changes in the predicted payoff of signaling as Hispanic and changes in the predicted payoff of signaling as White. Figures A.5 and A.6 summarize how the treatment information affected the predicted

Table 4.1: Predicted Payoff Gap between Hispanics and Whites

| | (1) | (2) | (3) |
|----------------------|----------------------|--------------------|-------------------|
| Treatment | 0.459** (0.229) | 0.479** (0.229) | 0.414* (0.230) |
| Constant | -1.015*** (0.165) | -1.259 (0.907) | -0.029 (1.059) |
| Observations | 427 | 427 | 427 |
| Background controls | | ✓ | ✓ |
| Demographic controls | | | ✓ |
| R^2 | 0.009 | 0.025 | 0.078 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

payoff for each signal. Though the treatment effect is not significant for each of these payoffs, the directions of the effects suggest that the lower level of anticipated discrimination is driven by both an increase in the predicted payoff of signaling as Hispanic (by \$0.18) and a decrease in the predicted payoff of signaling as White (by \$0.27), meaning that the treated participants perceived that Americans were more favorable to Hispanics and less favorable to Whites than they may initially believe.

4.4 Signaling of Ethnicity

Given that the increase in the perception of acceptance led to reduction in anticipated discrimination, did it also change the the signaling behavior of ethnicity in the dictator game? To begin, I first present the summary statistics of the signal choices in the control group. I found that 83.6 percent of participants signaled their ethnicity as Hispanic/Latino, 8.9 percent preferred not to signal their ethnicity, and 7.5 percent chose some other ethnicities.

First, I start by reporting the effects on participants' signaling of their Hispanic ethnicity. Figure 4.4 illustrates the proportions of participants in each of the treatment and control

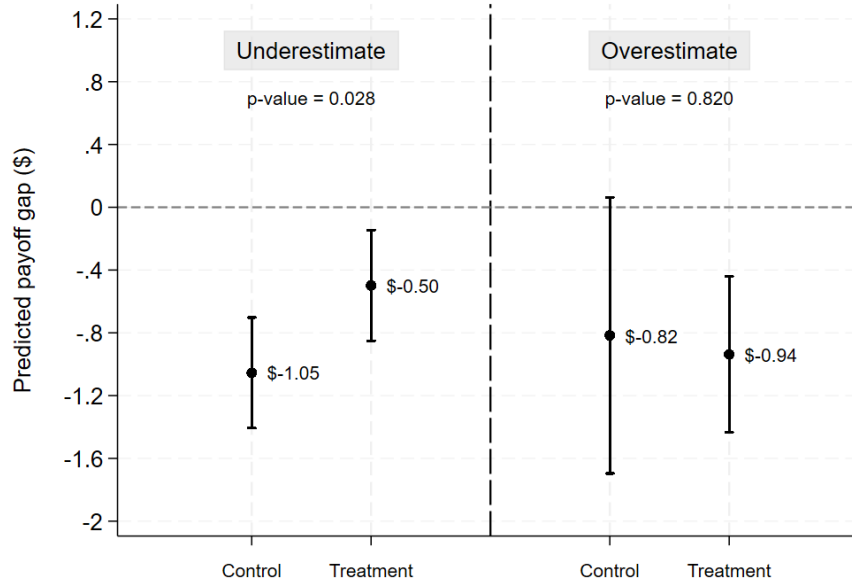


Figure 4.3: Predicted Payoff Gap between Hispanics and Whites: Heterogeneity Analysis

groups and the resulting treatment effect. I found that the information treatment has a modest but marginally significant effect on the signaling of ethnicity in the dictator game. I found that the proportion of participants who signaled their ethnicity as Hispanic/Latino increases by 5.6 percentage points ($p = 0.094$), or 0.16 s.d., from 83.6 percent in the control group to 89.2 percent in the treatment group. Table 4.2 summarizes the regression results under various specifications. The estimates of the treatment effect is robust and consistent after controlling for background variables and other demographic variables. To further understand the underlying changes in the signaling behavior, I examine the heterogeneity of the treatment effects by the sign of prior belief wedge. As shown in Figure A.7, the treatment effect is mostly driven by those who underestimated the true native-born attitudes. The treatment effect (5.9 pp., with $p = 0.085$) is similar to the treatment effect estimated with the whole sample. On the other hand, among those who overestimated, the treatment effect is very close to zero and not significant (1.4 pp., with $p = 0.892$). Table B.7 reports the heterogeneous treatment effects under additional specifications as a robustness check.

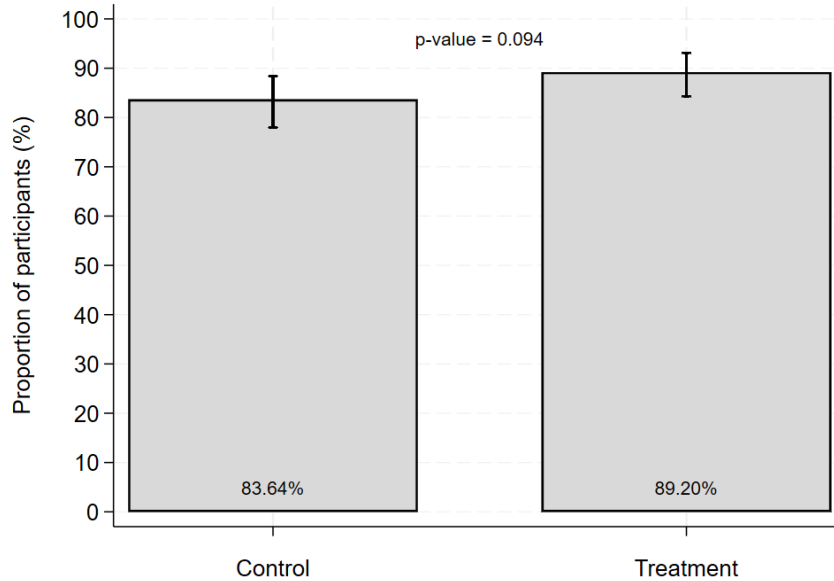


Figure 4.4: Signaling Ethnicity as Hispanic

After showing that the treatment increased the signaling behavior of the Hispanic ethnicity, the natural question that follows is to ask what signaling behavior the treatment may have decreased. Figure A.8 illustrates how the behavior of choosing not to share any ethnicity varied across the control and the treatment group. The baseline proportion of choosing not to signal ethnicities is 8.9 percent as shown in the control group. The information treatment reduced the proportion by 4.2 percentage points ($p = 0.086$), or 0.17 s.d., to 4.7 percent in the treatment group. This estimates is robust and consistent after adding background and demographic controls as shown in Table B.8.

Since the participants had the options to signal age and gender in addition to ethnicity, it would be interesting to compare the signaling behavior of ethnicity to the signaling behavior of these two other personal characteristics. First, I note that a lower percentage (87.4 percent) of people signaled ethnicity truthfully than signaling age or gender truthfully (96.3 percent and 94.9 percent, respectively). This suggests that participants seemed to be more concerned about ethnicity as a characteristics that may lead to potential discrimination, in

Table 4.2: Signaling Hispanic Ethnicity

| | (1) | (2) | (3) |
|----------------------|---------------------|---------------------|---------------------|
| Treatment | 0.056* (0.033) | 0.066** (0.032) | 0.056* (0.029) |
| Constant | 0.836*** (0.025) | 0.806*** (0.115) | 0.823*** (0.126) |
| Observations | 427 | 427 | 427 |
| Background controls | | ✓ | ✓ |
| Demographic controls | | | ✓ |
| R^2 | 0.007 | 0.065 | 0.274 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

comparison to age or gender. As a robustness check, we can look at how the treatment effect on the behaviors of signaling age and gender compared to that of ethnicity. The hypothesis is that the treatment information about the native-born acceptance of second-generation immigrants should have no effects on how participants wanted to signal their age or gender. I verify that this hypothesis is true. The treatment effect on signaling age truthfully is minimal and not significant at 0.9 percentage points ($p = 0.594$), or 0.05 s.d. The same is observed for the treatment effect on signaling gender truthfully, which is -0.5 percentage points ($p = 0.822$), or -0.02 s.d.

CHAPTER 5

CONCLUSION

In this paper, I conducted a national survey among the native-born population and measured their attitudes and views towards second-generation immigrants in the U.S. I found that the vast majority of U.S.-born respondents consider second-generation immigrants as Americans rather than foreigners. However, in another survey study involving Hispanic second-generation immigrants, I found that they significantly underestimated this acceptance and this misperception was very prevalent among this group. I then employed an information provision intervention in an experiment and studied how shifting the perception of native-born acceptance may influence participants' anticipated discrimination against them as a ethnic minority. I showed that participants reported a substantial reduction (45 percent) in the predicted payoff gap between signaling as Hispanic compared to signaling as Whites when playing as recipients in a dictator game after receiving updates about the actual level of acceptance. This effect was primarily driven by individuals who had underestimated the level of native-born acceptance in their prior beliefs. Furthermore, the information treatment increased the signaling behavior of Hispanic ethnicity among the participants, all of whom belong to the Hispanic ethnic group. These findings suggest that projecting a warmer attitude by the native-born can influence the anticipated discrimination and other strategic behaviors of second-generation immigrants.

This study aims to investigate the determinants of the level of anticipated discrimination among second-generation immigrants, who often find themselves as minorities in U.S. society. I propose in this paper that acquiring an accurate perception of native-born acceptance may be challenging, and biased beliefs about how one is received by the majority group can significantly influence how much discrimination one may anticipate. Existing literature has shown that disadvantaged groups often exhibit strategic considerations in social and economic decisions when interacting with the majority group or more advantaged groups.

Consequently, inaccurate meta-perceptions of intergroup relations may lead to self-imposed behavioral restrictions and sub-optimal decision-making. Accurately measuring inter-group attitudes and making them widely known could have a meaningful impact on the lived experience of minorities. Similar misperception may also exist in other identity groups across dimensions such as gender, sexual orientation, religion, physical and mental disability, or socioeconomic status. While this study presents results from a controlled setting of an online experiment, the insights gained here may have broader implications for real-world settings, such as job and career choices, college applications, housing and neighborhood selection, or casual social interactions. I leave the extension of this inquiry to future research.

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APPENDIX A

FIGURES

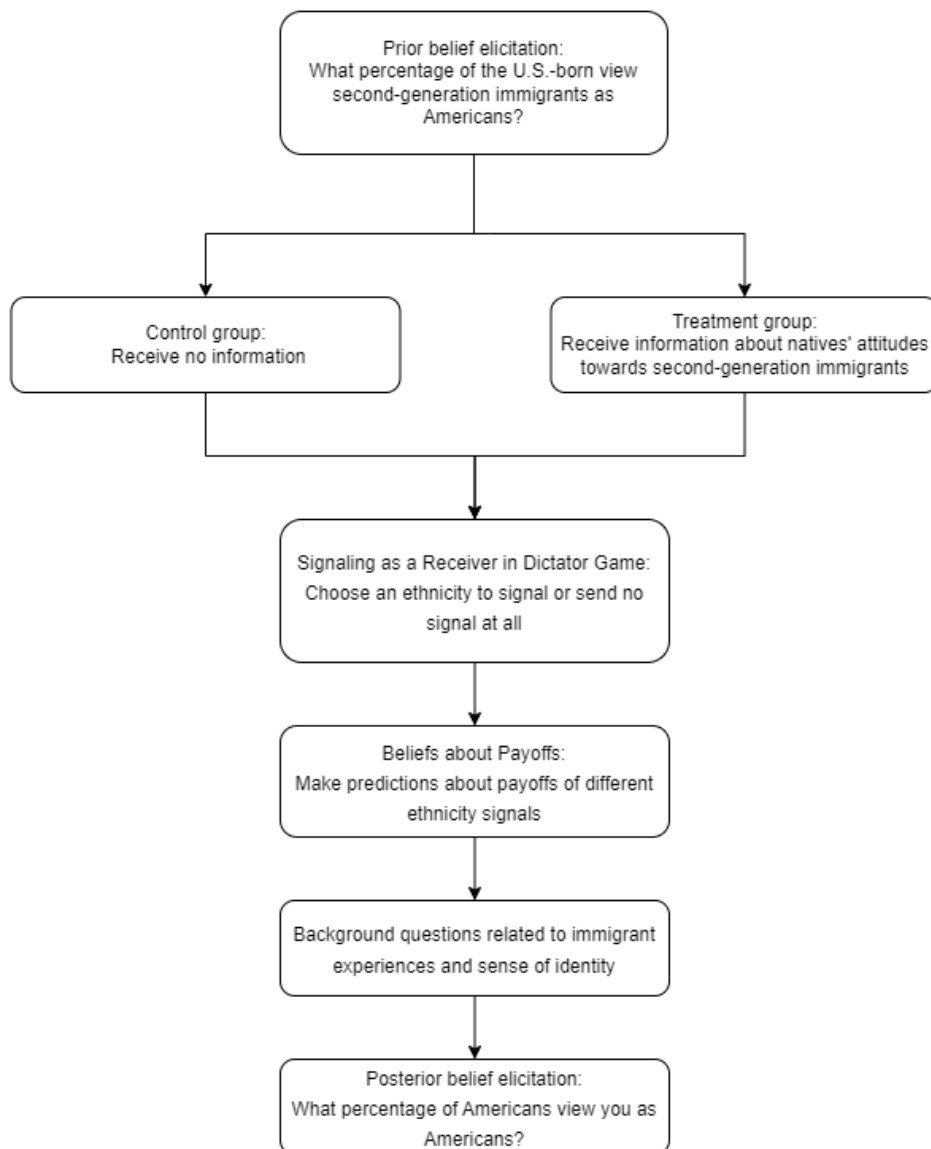


Figure A.1: The Study Flow

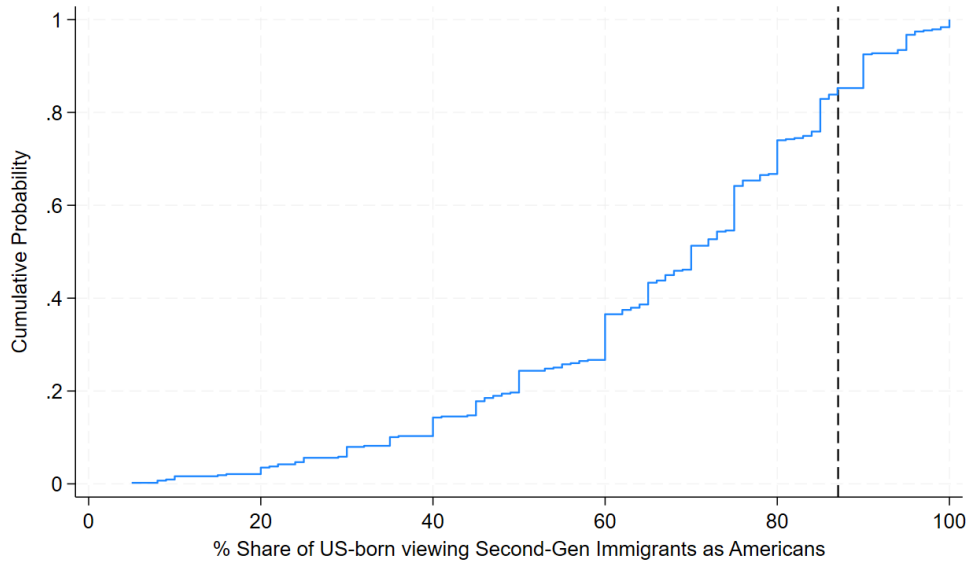


Figure A.2: Prior Beliefs of Native-born Attitudes (CDF)

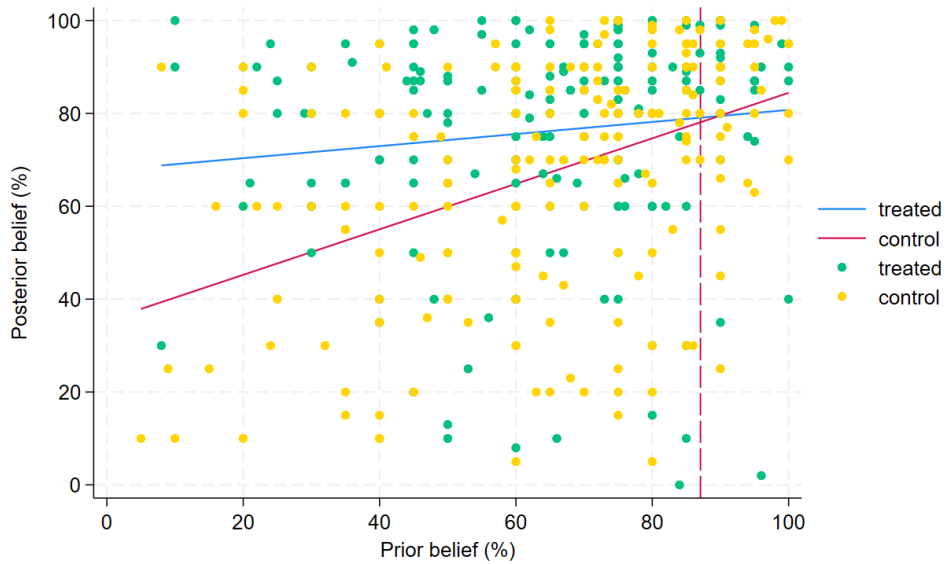


Figure A.3: Updating of Posterior Beliefs

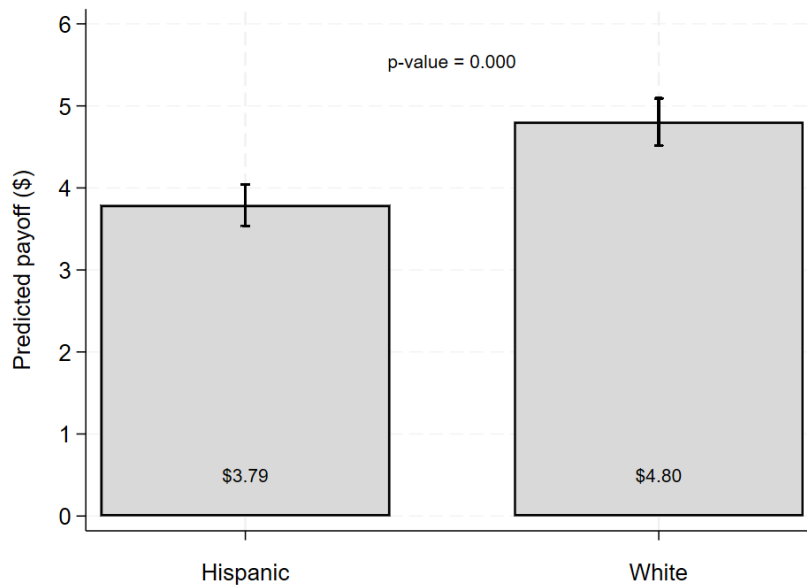


Figure A.4: Anticipated Discrimination in the Control Group: Hispanics versus Whites

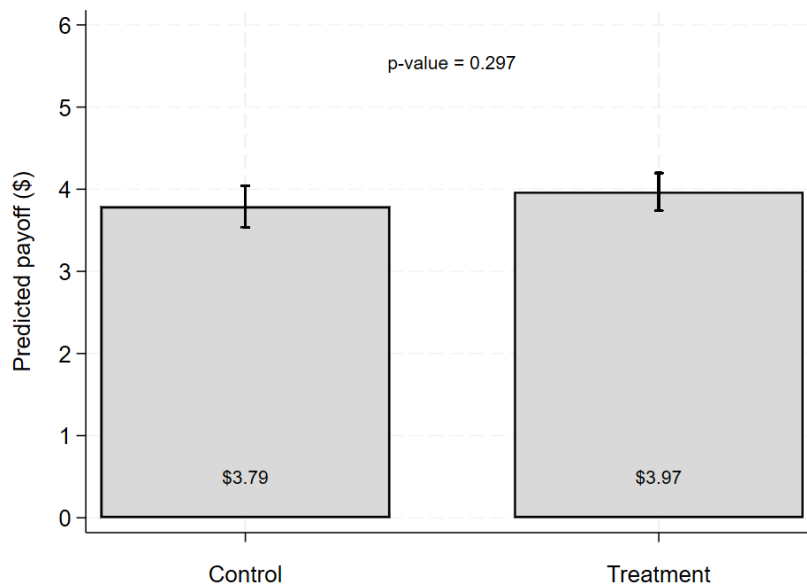


Figure A.5: Predicted Payoff of Signaling as Hispanic

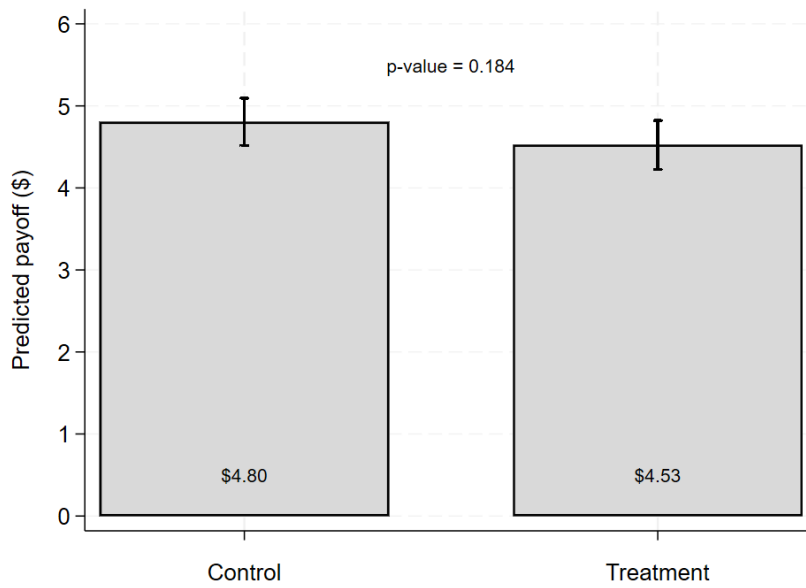


Figure A.6: Predicted Payoff of Signaling as White

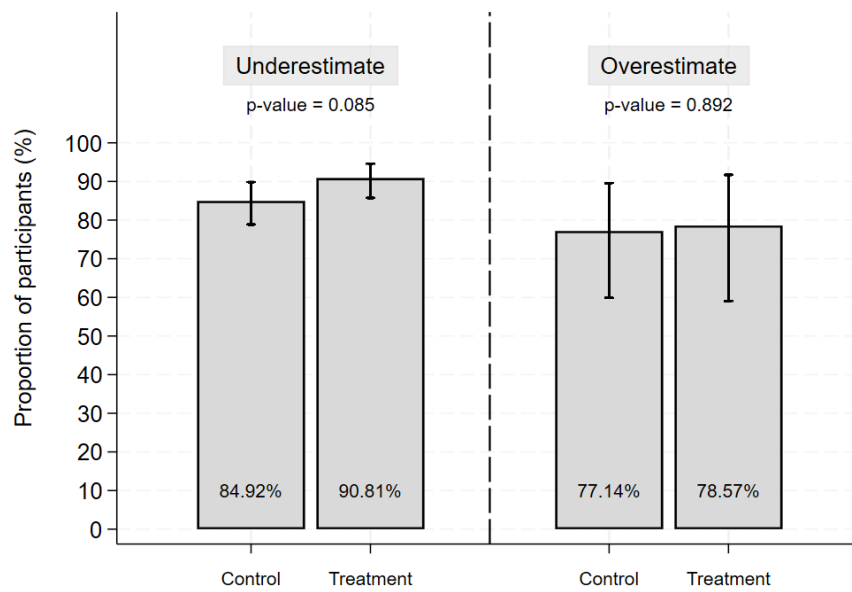


Figure A.7: Signaling Ethnicity as Hispanic: Heterogeneity Analysis

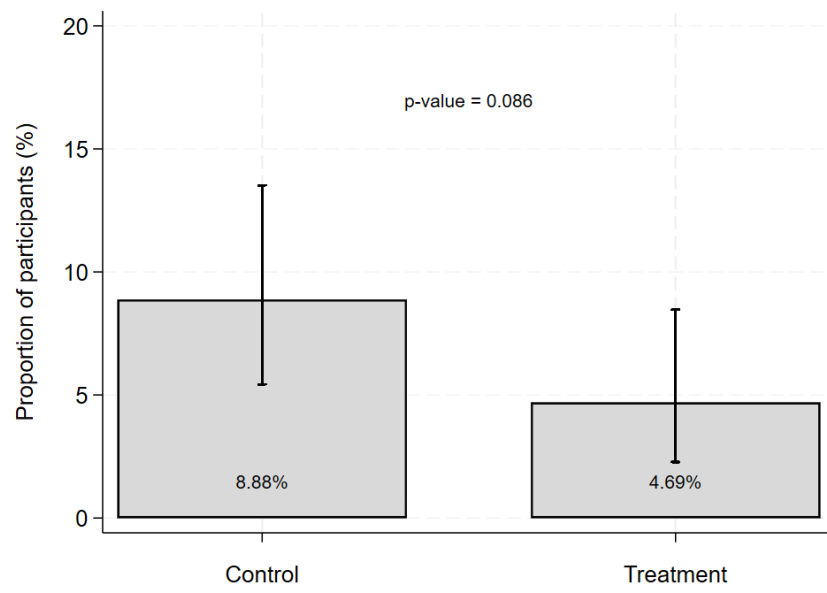


Figure A.8: Signaling No Ethnicity

APPENDIX B

TABLES

Table B.1: Descriptive Statistics of Native-Born Sample

| | Sample | 2021 ACS |
|--------------|--------|----------|
| Age | 47.91 | 50.75 |
| Male | 0.498 | 0.489 |
| White | 0.807 | 0.766 |
| Black | 0.102 | 0.098 |
| Asian | 0.042 | 0.018 |
| Hispanic | 0.115 | 0.088 |
| Married | 0.383 | 0.493 |
| Income >70k | 0.283 | 0.561 |
| College | 0.354 | 0.326 |
| Employed | 0.498 | 0.549 |
| Republican | 0.315 | - |
| Democrat | 0.307 | - |
| Observations | 410 | - |

Table B.2: Balance Table

| | All | Control | Treatment | Difference |
|--------------|-----------------|-----------------|-----------------|------------|
| Observations | 427 | 214 | 213 | |
| Age | 29.36 (8.66) | 29.78 (9.26) | 28.95 (8.01) | 0.83 |
| Male | 0.520 | 0.537 | 0.502 | 0.035 |
| Married | 0.225 | 0.234 | 0.216 | 0.018 |
| Northeast | 0.122 | 0.098 | 0.146 | -0.048 |
| Midwest | 0.115 | 0.098 | 0.131 | -0.033 |
| South | 0.389 | 0.402 | 0.376 | 0.026 |
| West | 0.375 | 0.402 | 0.347 | 0.055 |
| Income > 70k | 0.358 | 0.346 | 0.371 | -0.025 |
| College | 0.433 | 0.430 | 0.437 | -0.007 |
| Employed | 0.660 | 0.654 | 0.667 | -0.013 |
| Republican | 0.124 | 0.126 | 0.122 | 0.004 |
| Democrat | 0.567 | 0.561 | 0.573 | -0.012 |

Notes: Column 1 reports summary statistics of the whole sample. Column 2 reports summary statistics of the control group. Column 3 reports summary statistics of the treatment group. Column 4 reports the difference between the control and treatment group. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B.3: Prior Beliefs of Native-Born Attitudes

| | (1) Prior belief | (2) Actual finding |
|---|---------------------|-----------------------|
| % of US-born who think of second-gen as Americans | 66.65 (20.87) | 87.07 |
| Observations | 427 | |

Notes: Column 1 reports the mean of prior beliefs among the second-generation respondents. Standard deviations are reported in parentheses. Column 2 displays the actual findings of native-born attitudes measured in the preceding national survey.

Table B.4: Posterior Beliefs

| | (1) | (2) | (3) |
|----------------------|--------------------|--------------------|---------------------|
| Treatment | 8.03*** (2.30) | 7.14*** (1.97) | 7.22*** (1.99) |
| Constant | 68.33*** (1.73) | 59.91*** (8.67) | 60.93*** (10.08) |
| Observations | 427 | 427 | 427 |
| Background controls | | ✓ | ✓ |
| Demographic controls | | | ✓ |
| R^2 | 0.03 | 0.31 | 0.34 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B.5: Posterior Beliefs: Heterogeneity Analysis

| | (1) | (2) | (3) |
|---------------------------------|--------------------|---------------------|------------------|
| Treatment | 9.93*** (2.52) | 9.44*** (2.20) | -1.81 (5.17) |
| Overestimate | 16.92*** (3.41) | | |
| Treatment \times Overestimate | -10.31* (5.59) | | |
| Constant | 65.56*** (1.93) | 52.82*** (10.86) | 95.38 (70.03) |
| Observations | 427 | 364 | 63 |
| Sample | All | Underestimate | Overestimate |
| Background controls | | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ |
| R^2 | 0.07 | 0.33 | 0.58 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B.6: Predicted Payoff Gap between Hispanics and Whites: Heterogeneity Analysis

| | (1) | (2) | (3) |
|---------------------------------|----------------------|--------------------|-------------------|
| Treatment | 0.556** (0.253) | 0.535** (0.257) | -0.324 (0.568) |
| Overestimate | 0.238 (0.464) | | |
| Treatment \times Overestimate | -0.677 (0.552) | | |
| Constant | -1.054*** (0.179) | -0.337 (1.181) | -4.495 (7.676) |
| Observations | 427 | 364 | 63 |
| Sample | All | Underestimate | Overestimate |
| Background controls | | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ |
| R^2 | 0.012 | 0.093 | 0.394 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B.7: Signaling Hispanic Ethnicity: Heterogeneity Analysis

| | (1) | (2) | (3) |
|---------------------------------|---------------------|---------------------|------------------|
| Treatment | 0.059* (0.034) | 0.051* (0.029) | 0.093 (0.106) |
| Overestimate | -0.078 (0.076) | | |
| Treatment \times Overestimate | -0.045 (0.111) | | |
| Constant | 0.849*** (0.027) | 0.969*** (0.110) | 2.479 (1.633) |
| Observations | 427 | 364 | 63 |
| Sample | All | Underestimate | Overestimate |
| Background controls | | ✓ | ✓ |
| Demographic controls | | ✓ | ✓ |
| R^2 | 0.017 | 0.332 | 0.408 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B.8: Signaling No Ethnicity

| | (1) | (2) | (3) |
|----------------------|---------------------|---------------------|--------------------|
| Treatment | -0.042* (0.024) | -0.046** (0.023) | -0.048* (0.025) |
| Constant | 0.089*** (0.019) | 0.151* (0.080) | 0.121 (0.108) |
| Observations | 427 | 427 | 427 |
| Background controls | | ✓ | ✓ |
| Demographic controls | | | ✓ |
| R^2 | 0.007 | 0.048 | 0.070 |

Notes: Robust standard errors are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

APPENDIX C

SURVEYS

C.1 Survey with the Native-Born

C.1.1 Attention check 1

1. In survey research, sometimes participants just quickly click through the survey. **To show that you read our questions carefully, please select both "Very interested" and "Extremely interested" as your answer in the next question.**

How interested are you in sports?

- Not interested at all
- Slightly interested
- Moderately interested
- Very interested
- Extremely interested

Note: Participants who failed the attention check were redirected to exit the survey.

C.1.2 Demographics

1. What is your age?

Note: Text entry question.

2. What is your gender?

- Male
- Female

3. What is your race/ethnicity? (Select all that apply)

- African American/ Black
- American Indian or Alaska Native
- Asian American/ Asian
- Hispanic/ Latino
- Middle Eastern, Arab, or Arab American
- Native Hawaiian or Pacific Islander
- White
- Other

4. What is your marital status?

- Married
- Separated/ Divorced
- Widowed
- Never married

5. What was your family's gross household income in 2021 in US dollars?

- Less than \$10,000
- \$10,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999

- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 to \$89,999
- \$90,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 or more

6. What is your highest level of education?

- 8th grade or less
- Some high school but no degree
- High school graduate/ GED
- Some college but no degree
- Associate degree (2-year college)
- Bachelor's degree (4-year college)
- Master's degree
- Doctorate degree
- Professional degree (JD, MD, MBA)

7. What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed
- Unemployed and looking for work
- Student

- Not working and not looking for work
- Retiree

8. What is your ZIP code?

Note: Text entry question.

9. When it comes to politics, where do you see yourself on the liberal/conservative spectrum?

- Very liberal
- Liberal
- Moderate
- Conservative
- Very conservative

10. In politics, as of today, do you consider yourself as a Republican, a Democrat, or an Independent?

- Republican
- Democrat
- Independent

11. Who did you vote for in the 2020 presidential election?

- Donald Trump
- Joe Biden
- Other
- I did not vote

12. Were you born in the U.S.?

- Yes
- No

C.1.3 Attention check 2

1. Before proceeding to the next set of questions, we want to ask for your feedback about the responses you have provided so far. It is vital to our study that we only include responses from people who devoted their full attention to this study. This will not affect in any way the payment you will receive for taking this survey. In your honest opinion, should we use your responses, or should we discard your responses since you did not devote your full attention to the questions so far?

- Yes, I have devoted full attention to the questions so far and I think you should use my responses for your study
- No, I have not devoted full attention to the questions so far and I think you should not use my responses for your study

Note: Participants who answered no were redirected to exit the survey.

C.1.4 Attitudes towards second-generation immigrants

In what follows, we refer to **second-generation immigrants** as people who were **born in the U.S. with at least one foreign-born immigrant parent**.

1. Which of the following statements better describes how you think of **second-generation immigrants**?
- I think of second-generation immigrants **more as Americans**
 - I think of second-generation immigrants **more as foreigners**

2. Do you consider **second-generation immigrants** to be your fellow Americans?

- Definitely yes
- Probably yes
- Probably no
- Definitely no

3. How much do you agree with the following statement?:

A **second-generation immigrants** is as much an American as someone else born in the U.S.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

4. Which of the following statements better describes how you think of **second-generation Hispanic immigrants**?

- I think of second-generation Hispanic immigrants **more as Americans**
- I think of second-generation Hispanic immigrants **more as foreigners**

5. Which of the following statements better describes how you think of **second-generation Asian immigrants**?

- I think of second-generation Asian immigrants **more as Americans**
- I think of second-generation Asian immigrants **more as foreigners**

Note: The order of the first three questions were randomized. The order of the last two questions with specific race/ethnicity were randomized also.

C.1.5 Open-ended question

1. Earlier, you stated that you think of **second-generation immigrants** more as Americans than foreigners. In what ways are they more like Americans than foreigners?

Note: This question was shown only to participants who answered that they think of second-generation immigrants more as Americans previously.

2. Earlier, you stated that you think of **second-generation immigrants** more as foreigners than Americans. In what ways are they more like foreigners than Americans?

Note: This question was shown only to participants who answered that they think of second-generation immigrants more as foreigners previously.

C.1.6 Debrief

1. Do you feel that this survey was biased?

- Yes, left-wing bias
- Yes, right-wing bias
- No, it did not feel biased

2. Do you have any comments or suggestions about this survey?

Note: Open-ended question.

C.2 Survey with Second-Generation Immigrants

C.2.1 Demographics

1. What is your age?

Note: Text entry question.

2. What is your gender?

- Male
- Female

3. What of the following ethnicities do you identify with most?

- White/Caucasian
- Black/African American
- Hispanic/Latino
- Asian

4. What is your marital status?

- Married
- Separated/ Divorced
- Widowed
- Never married

5. What is your state of residence?

Note: Participants had to choose one value from a drop-down list. The options included 50 U.S. states and District of Columbia.

6. What was your family's gross household income in 2022 in US dollars?

- Less than \$10,000
- \$10,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999

- \$50,000 to \$59,999
- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 to \$89,999
- \$90,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 or more

7. What is your highest level of education?

- 8th grade or less
- Some high school but no degree
- High school graduate/ GED
- Some college but no degree
- Associate degree (2-year college)
- Bachelor's degree (4-year college)
- Master's degree
- Doctorate degree
- Professional degree (JD, MD, MBA)

8. What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed
- Unemployed and looking for work

- Student
- Not working and not looking for work
- Retiree

9. What is your ZIP code?

Note: Text entry question.

10. When it comes to politics, where do you see yourself on the liberal/conservative spectrum?

- Very liberal
- Liberal
- Moderate
- Conservative
- Very conservative

11. In politics, as of today, do you consider yourself as a Republican, a Democrat, or an Independent?

- Republican
- Democrat
- Independent

C.2.2 Attention check

1. In survey research, sometimes participants just quickly click through the survey. **To show that you read our questions carefully, please select both "Very interested" and "Extremely interested" as your answer in the next question.** How interested are you in sports?

- Not interested at all
- Slightly interested
- Moderately interested
- Very interested
- Extremely interested

Note: Participants who failed the attention check were redirected to exit the survey.

C.2.3 Second-generation immigrants

1. What is your country of birth?

- United States
- Some other foreign countries

2. Was your father born in the U.S.?

- Yes
- No
- I prefer not to answer

3. Was your mother born in the U.S.?

- Yes
- No
- I prefer not to answer

4. Which country/territory was your father born in?

Note: Participants had to choose one value from a drop-down list. The options included

195 countries or territories, an option for other, and an option to indicate that they do not know. If they select “other” they can specify the country in a text entry box.

5. Which country/territory was your mother born in?

Note: Participants had to choose one value from a drop-down list. The options included 195 countries or territories, an option for other, and an option to indicate that they do not know. If they select “other”, they can specify the country in a text entry box.

Note: Participants with both parents born in the U.S. were not second-generation immigrants. They were redirected to exit the survey.

C.2.4 Belief elicitation about perceived native-born attitudes

Please read the following carefully, since it would affect the amount of your bonus payment.

Last year, we conducted a comprehensive survey with 410 participants. These participants were recruited from diverse regions across the U.S. to form **a representative sample of all individuals born in the U.S.** They answered a series of questions regarding their perspectives on various demographic groups within the country. Next, you will be asked to make some guesses about how these U.S.-born participants answered the questions.

After this survey ends, we will compare your guesses to their actual responses. **For each question, the participant who guesses most accurately can receive a \$5 bonus payment.**

Let's begin!

1. In this question, please note that we refer to **second-generation immigrants** as people who were **born in the U.S. with at least one foreign-born immigrant parent**.

Please make a guess. What percentage of the **U.S.-born respondents** think of **second-generation immigrants** more as Americans rather than foreigners?

Please enter an integer between 0 to 100.

Note: Text entry question.

2. Thank you for making these guesses!

How confident are you about your guesses?

- Not confident at all
- Slightly confident
- Fairly confident
- Confident
- Very confident

C.2.5 Information provision treatment

In the next page, you will be presented with a result found in the in the nationally representative survey mentioned earlier.

Please carefully review all the information displayed before answering the questions that follow.

In the nationally representative survey, **87% of the U.S.-born respondents think of second generation immigrants more as Americans rather than foreigners.**

Your previous guess is _____ %.

(Note: Participants' prior belief was shown here.)

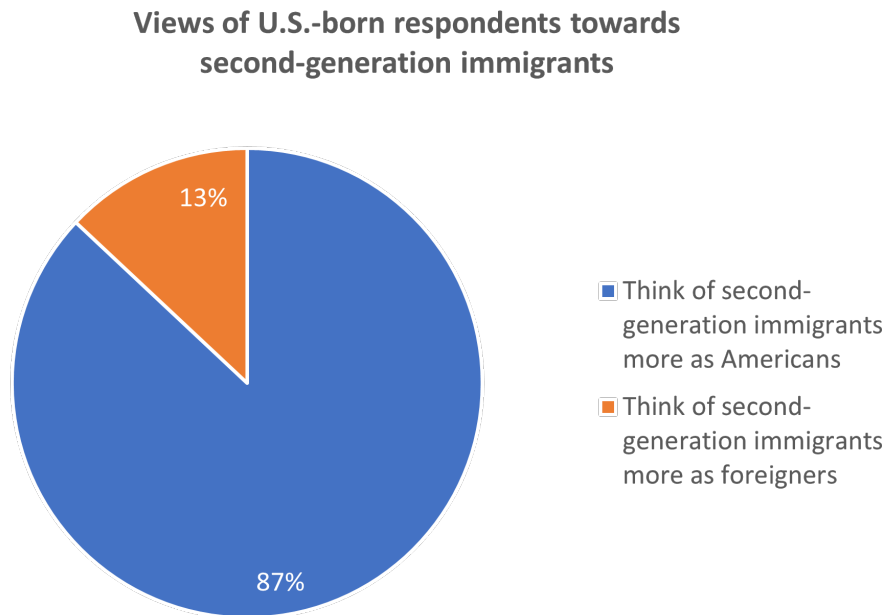


Figure C.1: Infographic shown to the treatment group

The next button will appear after 10 seconds.

C.2.6 Signaling game

Next, you will participate in a short game. Your answers may affect your bonus payment, so **please read the instructions carefully.** The next button will appear after 15 seconds.

As Person B, you will be matched with Person A, who is an American participant in a separate survey.

Person A will be asked to split \$10 between both of you. **The amount Person A decides to give you will be added to your bonus payment.**

Before Person A makes their decision, **you have the opportunity to share some characteristics about yourself.** Person A would receive a table displaying only what you choose to share.

The figure below contains the instructions Person A will see. A table containing your chosen characteristics will also be added.

You are matched with another individual, Person B. You have \$10 and you can choose to split the money between you and Person B in any way you like.

Person B has the options to share with you some personal characteristics. The table below is what Person B wants to share.

[The table of characteristics would be inserted here]

Please enter the amount you would give to yourself and to Person B. Note that the total must sum up to \$10.

| | |
|-----------------------|-----------------------------------|
| I would give myself | \$ <input type="text" value="0"/> |
| I would give Person B | \$ <input type="text" value="0"/> |
| Total | \$ <input type="text" value="0"/> |

Figure C.2: Instructions Person A would receive

Now, please select what you want to share with Person A.

1. Age

- 18-29
- 30-39
- 40-49
- 50-59
- 60 or above
- Prefer not to share

2. Gender

- Male
- Female
- Prefer not to share

3. Ethnicity

- White/Caucasian
- Black/African American
- Hispanic/Latino
- Asian
- Prefer not to share

C.2.7 Beliefs about payoffs

In the next section, you can earn additional bonus. You will be asked to make several predictions on how much Person A would give you if you were to choose different ethnicities to share. **Your predictions should reflect how you think this amount would vary based on different ethnicities.**

To determine your bonus payment, one of the prediction questions would be randomly selected. If your prediction in that question falls within the ± 0.5 range of what Person A would actually give, you receive that amount as bonus.

The next button will appear after 20 seconds. So please take your time, give your best effort, and make each prediction as close as possible!

1. Suppose if you chose to **share your ethnicity as White/Caucasian**, how much do you think Person A would give you? Please make a prediction using the slider below.
2. Suppose if you chose to **share your ethnicity as Black/African American**, how much do you think Person A would give you? Please make a prediction using the slider below.
3. Suppose if you chose to **share your ethnicity as Hispanic/Latino**, how much do you think Person A would give you? Please make a prediction using the slider below.
4. Suppose if you chose to **share your ethnicity as Asian**, how much do you think Person A would give you? Please make a prediction using the slider below.
5. Suppose if you chose to **not to share your ethnicity**, how much do you think Person A would give you? Please make a prediction using the slider below.

Note: For each of the four questions above, participants were required to choose an amount between \$0 and \$1 using a slider, with precision up to two decimal places. The slider was labeled "Person A would give you (\$)" on the left hand side.

C.2.8 Endline questions

1. How do you see yourself in terms of your identity?

- Do not feel American at all
- Mostly something else and partially American
- Equally American and something else
- Mostly American and partially something else
- Completely American

2. How proud are you to be an American?

- Not at all proud
- Slightly proud
- Moderately proud
- Very proud
- Extremely proud

3. How important is your ethnicity to you?

- Not at all important
- Slightly important
- Moderately important
- Very important
- Extremely important

4. What portion of people would assume you were from somewhere outside the U.S. if, for example, they walked past you on the street?

- None of them
- Hardly any of them

- Some of them
- Most of them
- All of them

5. How many of your friends in the U.S. are the same ethnicity as you?

- None of them
- Hardly any of them
- Some of them
- Most of them
- All of them

6. Have you ever hidden a part of your heritage from people who are of your ethnicity?
(for example: food, cultural practices, clothing or religious practices)

- Yes
- No

7. Out of every 100 Americans, how many do you think would view you more as an American rather than a foreigner? *Note: Text entry question. Participants were required to enter a number between 0 and 100.*

C.2.9 Debrief

1. Do you find this result credible?

- Not credible at all
- Slightly credible
- Moderately credible

- Very credible
- Extremely credible

2. Do you feel that this survey was biased?

- Yes, left-wing bias
- Yes, right-wing bias
- No, it did not feel biased

3. Do you have any comments or suggestions about this survey?

Note: Open-ended question.

Thank you for taking part in this study! The bonus payment, if applicable, will be paid out within 20 days. Please click the button below to be redirected back to Prolific and register your submission.