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Searching for a Roommate: A Correspondence Audit Examining Racial/Ethnic and Immigrant Discrimination among Millennials

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Abstract

Survey research finds that millennials have less prejudiced views of racial/ethnic minorities than other generations, leading some to label millennials as postracial. However, attitudinal survey research may be subject to social desirability bias because it documents statements or beliefs instead of actions. Moreover, most audit studies focus on people who make hiring decisions or own rental property and are therefore often older than millennials. This study uses a correspondence audit to investigate discrimination among millennials via “roommate wanted” advertisements. We sent over 4,000 emails and found a tiered pattern of discrimination against Asian (Indian and Chinese), Hispanic, and Black room-seekers. However, whether Asian and Hispanic room-seekers face significant discrimination varies based on whether they use predominantly White first names or traditional first names. Our findings shed light on the future of our racial system, expand our knowledge of discrimination beyond the traditional Black/White binary, and illustrate the persistence of anti-Blackness.

Keywords

race/ethnicity; immigration; inequality; correspondence audit; discrimination

Introduction

Recent media discussions and some survey research suggest that millennials are postracial and hold less prejudiced views of racial/ethnic minorities than other generations (Dalton 2016; Davis 2019; Pew Research Center 2010a, 2011; Rouse and Ross 2018). However, as social scientists note, stated attitudes do not always align with actions, particularly when it comes to racial issues (Gaddis 2018b, 2019b; Pager and Quillian 2005). Social desirability bias may lead respondents, especially younger respondents, to answer survey questions in an artificially race-neutral manner. Whether millennials report less racial bias than older

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generations on surveys is an important line of inquiry, but it does not address whether millennials engage in racial/ethnic discrimination in real-world contexts.

To examine the actions, rather than attitudes, of millennials, we fielded a large-scale correspondence audit. Researchers have used the audit method with increasing frequency to covertly capture racial/ethnic discrimination across a number of domains (Gaddis 2018b; Oh and Yinger 2015; Quillian et al. 2017). Correspondence audits came to prominence in the 2010s as more economic and social interactions moved online and computer scripts or macros allowed researchers to conduct audits of higher sample sizes with fewer resources (Gaddis 2018b). However, this method is not without its flaws; in particular, researchers must choose names carefully to appropriately separate signals of race, ethnicity, social class, and as we argue, immigrant generational status or other markers of cultural assimilation (Gaddis 2017a, 2017b).

Our first goal in this research is to investigate discrimination among millennials to test whether the postracial claim based in attitudinal surveys holds up when we covertly record millennials' actions. Our second and third goals are to capture the experience of a wide array of racial/ethnic groups (not just White/Black or White/Black/Hispanic) and to begin to disentangle the effects of race "itself" from those of immigrant generational status or perceived assimilation, two overlapping but distinct factors that prior research has, at times, conflated. These goals represent innovations in the racial/ethnic discrimination literature and the audit method.

Using a correspondence audit to investigate discrimination among millennials, we sent over 4,000 emails of inquiry to "roommate wanted" advertisements in three major U.S. metropolitan areas. We found evidence that millennials discriminate against Asian, Hispanic, and Black room-seekers. However, Asians' and Hispanics' response rates vary greatly depending on the first names they employ, which we show are read as signals of immigrant generational status, perhaps especially connected to assimilation or "Americanization." Our results suggest that as millennials continue to gain access to positions of power, they are likely to perpetuate racial inequality rather than enact a postracial system. Additionally, although some Asian and Hispanic-origin individuals are offered greater opportunity for incorporation than in prior eras (Lee and Bean 2007), this incorporation is incomplete and conditional, and anti-Blackness remains a fundamental feature of the emerging racial landscape.

Literature Review

The Puzzle of Millennials' Racial/Ethnic Attitudes and Behavior

The current youngest generation of adults—millennials—are the most racially and ethnically diverse as well as the most educated generation in the history of the United States (Fry and Parker 2018). Some research paints an optimistic picture of millennials and racial/ethnic relations in the United States. Survey data mostly show lower levels of prejudice among millennials than older generations (Dalton 2016; Davis 2019; Pew Research Center 2010a, 2011; Rouse and Ross 2018; although see Clement 2015). Potentially consistent with this image, millennials voted for the country's first African American presidential candidate at a

higher rate and have regarded the most explicitly anti-immigration president in recent history more negatively than other generations (Pew Research Center 2011; Richmond, Zinshteyn, and Gross 2016; Rouse and Ross 2018). Similarly, millennials participate in interracial marriages and friendships more often than prior cohorts (Pew Research Center 2010b, 2017).

However, millennials' real-world behavior sometimes contradicts claims of "colorblindness." Studies of online dating (Feliciano, Lee, and Robnett 2011; Feliciano, Robnett, and Komaie 2009; Fisman et al. 2008; Robnett and Feliciano 2011) and social network friendship request acceptance (Hebl et al. 2012) show that participants, who are mostly part of the millennial generation, engage in social racial profiling. Moreover, real-life social networks among younger Americans remain heavily segregated by race (Mouw and Entwisle 2006). In many instances, these inconsistencies have led scholars and the media to question the postracial paradigm of millennials (Bonilla-Silva 2018; Capehart 2017; Clement 2015; Cohen et al. 2017; DeSante and Smith 2020; Milkman 2017).

Social desirability bias is one potential reason for this inconsistent picture of racial/ethnic relations among millennials. In the post-Civil Rights era, interviews and survey questions asking sensitive questions about racial attitudes and discrimination are unlikely to elicit truthful responses (Bonilla-Silva 2018; Krysan 1998; Pager and Quillian 2005; Schuman et al. 1997). This occurs because surveys and interviews do not document actions but rather, self-reported beliefs and attitudes, recollections of past actions, or predictions of future actions. If racial bias or animus operates at an unconscious level, respondents may not be able to report realities. Additionally, respondents may lie because they fear litigation for engaging in discrimination or simply prefer to not acknowledge discriminatory actions. Millennials may be especially susceptible to social desirability bias on race because they have grown up in an era when open expression of racial stereotypes is largely frowned on. Therefore, they may be less likely than older generations to honestly disclose their views on race. This makes it difficult, if not impossible, for researchers to document and examine discrimination using surveys and interviews.

Using the Audit Method to Examine the Behavior of Millennials

How can these contradictory perspectives on millennials and race be reconciled? Traditionally, audit studies have been championed as the methodological tool to expose such inconsistencies (Gaddis 2018b, 2019b; Pager 2007). Audit studies generally refer to a specific type of field experiment in which a researcher randomizes one or more characteristics about individuals (real or hypothetical) and sends these individuals out into the field to test the effect of those characteristics on some outcome. The "individuals" sent into the field may be actual people in an in-person audit or simply applicants or emails from hypothetical people in a correspondence audit. The audit method permits researchers to examine behavior that is difficult to detect (e.g., racial/ethnic discrimination) by randomly assigning a treatment condition (e.g., race or ethnicity) and then recording an outcome (e.g., a callback for an interview) from a real-world scenario (e.g., the hiring process).

Millennials do not yet make many hiring decisions or own large amounts of rental property, so there are few realistic contexts in which audits can be deployed to study their behavior.

For this reason, no experimental work has tested whether millennials' greater racial openness in surveys translates into real-world action. Therefore, scholarship that addresses the future of racial stratification remains partially speculative, usually based on extrapolation of present trends (Bonilla-Silva 2018; Gans 2012) or inference from the behavior of older individuals, whose power to shape the racial order may already be in decline.

Our study fills this gap in the literature by using an experiment to examine millennials' real-world decision-making around race, ethnicity, and immigrant generational status in the context of roommate selection. Whom one is willing to live with as a roommate is a seemingly personal decision that carries significant social and economic implications. More than 15 million people currently live with unrelated roommates who are not a romantic partner (U.S. Census Bureau 2017), and many more will live with a roommate at some point in their lives. Even into their mid to late 20s, 16 percent of individuals with a bachelor's degree or more continue to live with a roommate (Lauff and Ingels 2013). About 66 percent of all individuals currently living with a roommate are classified as millennials (U.S. Census Bureau 2017). Roommate searches are especially salient to young, geographically mobile, and highly educated but not wealthy millennials who move to costly urban areas as they enter the labor market and often cannot rent, much less purchase, housing units on their own (Olsen 2014). Room-seekers typically search for housemates within their own age bracket. Thus, examining the process of roommate searches provides us with a context in which millennials have decision-making power to test for racial/ethnic discrimination.

Researchers and fair housing agencies have a long tradition of testing for discrimination in both housing sales and rentals markets (Quillian, Lee, and Honoré 2020). The U.S. Department of Housing and Urban Development (HUD) has conducted a number of large-scale audits on housing discrimination since the late 1970s (Turner et al. 2002, 2013; Turner and Ross 2003a, 2003b; Turner, Struyk, and Yinger 1991; Wienk et al. 1979; Yinger 1991, 1993). Over five decades, the HUD audits consistently found discrimination against African Americans and Hispanics in reported housing availability, treatment by real estate agents, reported terms and conditions, and the types and levels of information requested by real estate agents, among other outcomes. Beyond the large-scale HUD audits, numerous researchers have documented racial/ethnic discrimination in housing across many U.S. and Canadian cities (Carpusor and Loges 2006; Ewens, Tomlin, and Wang 2014; Hanson and Hawley 2011; Hanson and Santas 2014; Hogan and Berry 2011; for a review, also see Oh and Yinger 2015). To date, only one study in the United States has focused on examining racial/ethnic discrimination in roommate selection (Gaddis and Ghoshal 2015).

Expanding the View of Racial/Ethnic Discrimination

Most experimental research on racial/ethnic discrimination in the United States has focused on differences between Whites and Blacks (Bertrand and Mullainathan 2004; Gaddis 2015; Pager 2003). Some notable early exceptions are HUD's commissioned Housing Market Practices Survey and Housing Discrimination Studies (Choi, Ondrich, and Yinger 2005; Hakken 1979; Page 1995), which examined housing discrimination against Hispanics. The HUD audits began including Asian Americans, Pacific Islanders, and Native Americans in tests of discrimination in the early 2000s (Turner and Ross 2003a, 2003b). Only during the

past decade have researchers started to examine discrimination against Hispanics using correspondence audits with any regularity (Gaddis 2017b; Quillian et al. 2017), and few studies have tested for discrimination against additional racial/ethnic groups. In housing, this line of research consistently finds evidence of discrimination against Hispanics by landlords (Feldman and Weseley 2013; Friedman, Squires, and Galvan 2010; Hanson and Santas 2014).

One potential issue plaguing the expansion of correspondence audits to examine discrimination against Hispanics and Asian Americans is the use of names to signal race/ethnicity. Some recent articles have used names similar to “Jimena Garcia,” where both the first and last name carry a racial/ethnic signal in the U.S. context (Einstein and Glick 2017; Friedman et al. 2010; Hogan and Berry 2011; Milkman, Akinola, and Chugh 2012, 2015; White, Nathan, and Faller 2015). Other studies have used a mix of fully traditional names alongside White or Anglo first names and ethnically distinctive last names, for example, “Jennifer Garcia” (Deming et al. 2016; Gell-Redman et al. 2018; Hanson and Santas 2014; Hughes et al. 2017; Oreopoulos 2011; Oreopoulos and Dechief 2012). However, the first names that researchers select to signal race/ethnicity, especially for Hispanics and Asians, may also carry other signals. Given the greater tendency of later immigrant generations to Anglicize first names, the first names of Hispanics and Asians may suggest immigrant generational status. Immigrant generational status itself may provide cues of cultural assimilation or “Americanization,” as well as English proficiency.

Unfortunately, no prior study discusses the possibility that the names used may simultaneously signal race/ethnicity *and* immigrant generational status or other aspects of cultural assimilation. Therefore, prior work cannot disentangle whether the discrimination uncovered is due to one or both of these characteristics. Resolving this conflation may offer clues as to whether discrimination against Hispanics and Asians is more like anti-Black discrimination (which has persisted for many generations), more like early 1900s discrimination against Italian and Irish Americans (which declined as those groups’ typical recency of immigration declined and cultural assimilation increased), or is different than either process. Researchers seeking to understand discrimination beyond the White/Black binary must adopt a more scientific process of using names, one that considers both racial/ethnic signals and immigrant generation or cultural assimilation signals.

Research Questions

Our understanding of the racial/ethnic dynamics among millennials is limited by the knowledge produced via survey methods. The covert actions of millennials may not align with their self-reports of racial attitudes in surveys. We conducted a correspondence audit study of roommate-seekers on Craigslist to address two research questions.

Research Question 1: Does race/ethnicity affect millennials’ response rates to roommate requests from White, Black, Hispanic, Indian, and Chinese-origin room-seekers?

Research Question 2: Among Hispanic, Chinese, and Indian-origin room-seekers, how does perceived nativity influence responses rates?

Data and Methods

Between June 2013 and August 2014, we conducted a correspondence audit to examine how race, ethnicity, and immigrant generational status influence finding a roommate on Craigslist. A correspondence audit is a field experiment that matches two or more individuals to test the isolated effects of variations in signaled characteristics—often race and gender—in processes involving correspondence or online communication (Gaddis 2018a). In recent years, sociologists, economists, and political scientists have implemented creative and influential correspondence audits to examine several domains, including housing and employment applications, appointment scheduling, internet marketplace and sharing economy transactions, and communication with information brokers (e.g., Butler and Broockman 2011; Doleac and Stein 2013; Edelman, Luca, and Svirsky 2017; Einstein and Glick 2017; Gaddis 2015; Kugelmass 2016; Milkman et al. 2012; Pedulla 2016; Tilcsik 2011). The growing number of reviews, meta-analyses, and methodological examinations of correspondence audits makes it clear this method is popular and appropriate to study discrimination (Baert 2018; Gaddis 2018b; Lahey and Beasley 2018; Larsen 2020; Oh and Yinger 2015; Pager 2007; Quillian et al. 2017; Vuolo, Uggen, and Lageson 2018; Zschirnt and Ruedin 2016).

To conduct this experiment, we first created fictitious room-seekers with names that signaled different racial/ethnic/immigrant generational status characteristics. We then sampled “roommate wanted” advertisements from Craigslist and responded via email to over 1,500 ads in three major U.S. metropolitan areas: Boston, Chicago, and Philadelphia. We monitored response rates by room-seekers’ signaled racial/ethnic/immigrant generational status characteristics and recorded information on the advertisements and any responses we received. We then coded ads for age criteria to limit our sample to those ads capturing only millennial households (i.e., individuals between the ages of 18 and 34 at the time of data collection). In the following sections, we explain our room-seeker creation process, sample selection and inquiry procedure, response recording procedure, and methods of analysis.

Creating Room-Seeker Identities

In a pilot study, we found that roommate wanted ads are often restricted by gender: Women frequently look only for other women as roommates (excluding men), but men often look for either gender in their search. Thus, to ensure comparability across our cases, we created only female profiles but emailed both men and women who posted ads. Although this limits the generalizability of our findings somewhat, the tradeoff is that we have access to a much larger sample of ads for the entire pool of our room-seekers and a lower probability of errors or inappropriate data (e.g., women seeking only women but not advertising as so) during the data collection process. Additionally, prior research finds larger discrimination against minority men rather than minority women (Arai, Bursell, and Nekby 2016; Feldman and Weseley 2013; Gaddis 2013), suggesting that our effects may be a conservative estimate of discrimination compared to a population that includes both women and men.¹

¹In a supplemental analysis using survey experiment data (available from authors on request), we found that our substantive findings would likely hold but that non-White men would face higher levels of discrimination than women.

Similar to previous correspondence audits on racial discrimination, we chose to use names to signal race and ethnicity. We carefully selected each first name by examining populated-based race/ethnicity and social class naming patterns from New York State Department of Health birth records spanning 1994 to 2012. These records list the total number of births in New York by (1) name and race/ethnicity (White, Black, Asian, and other) and (2) name and mother's education.² For White, Black, Indian, and Chinese room-seekers, we chose first names of children born predominantly to mothers of the corresponding race/ethnicity. The New York data do not record Hispanic ethnicity, so we chose first names that appeared on the 1990 census list of common names that clearly corresponded with Hispanic names (U.S. Census 1990). We then used census data on the most common last names by race to choose last names (U.S. Census Bureau 2012, 2016).³ All first and last names selected were both racially distinctive and relatively common. Appendix Tables A1 and A2 provide information on the census data for last names and New York data for first names, respectively.

Prior work suggests that names may also signal social class and that these signals may have a distinct influence on outcomes (Figlio 2005; Gaddis 2013, 2015; Kirschenman and Neckerman 1991). Because the New York State data also contain information on mother's average educational attainment for each first name, we control for educational background when possible. We selected White, Black, and Hispanic names with similar average mother's educational attainment, allowing us to isolate the impact of race from social class origins. For each of these three types of racial/ethnic names, we selected two names that were on the lower end of educational attainment (between 0 percent and 25 percent of mothers reported some college or more) and two names that were in the middle portion of educational attainment (between 25 percent and 50 percent of mothers reported some college or more). We did not, however, control for education among Asian names because nearly all common Chinese first names had low maternal education, whereas nearly all common Indian first names had high maternal education. We attempted to further neutralize potential social class bias by including information on the room-seeker's educational attainment and occupational status within their email inquiry (more in the following).

To date, few studies have directly examined discrimination based on perceived immigrant generational status or cultural assimilation using the audit method. Some prior work has signaled immigrant generational status (Auer et al. 2019; Corrigan, Hafeez, and Alkhouja 2018; Gell-Redman et al. 2018; Maxwell and House 2018), often through explicit statements (e.g., "I was born in Algeria and came to France six years ago.") and mostly in non-U.S. contexts. However, research suggests that immigrants and racial/ethnic minorities may go to great lengths to scrub their resumes of signals that may lead to discrimination (Arai and Skogman Thoursie 2009; Bursell 2012; Kang et al. 2016). Thus, an explicit statement about immigrant generational status likely presents an unrealistic scenario because nonnative applicants might not volunteer these details immediately. However, in the U.S. context, Asians and Hispanics who wish to proactively signal assimilation or cultural integration may adopt Americanized first names, whereas others retain first names traditional to their

²A subset of years also separates Asian names into more specific categories such as Chinese and Indian.

³Since the initial design of this study, the Census Bureau released a data file for frequently occurring surnames from the 2010 census (U.S. Census Bureau 2016). We present those data in Appendix Table A1.

family's country of origin. Anglicization of first names is correlated with immigrant generational status and may be read as such; it may also be seen as marking familiarity with American culture, English proficiency, or other traits.

We therefore chose different combinations of first and last names to signal race/ethnicity and immigrant generational status or cultural assimilation at the same time. First, we paired traditionally White or Anglo first names with Hispanic, Indian, and Chinese last names (e.g., Wendy Velasquez) in an effort to signal later immigrant generational status. We refer to these mixed names as “2+ generation” for shorthand (further explanation in the following). Then, we paired Hispanic, Indian, and Chinese first and last names (e.g., Alejandra Macias) in an effort to signal more recent immigrant generational status. We refer to these racially/ethnically matched names as “1-1.5 generation” for shorthand (further explanation in the following).

Following prior methodological work on signaling race and ethnicity through names (Gaddis 2017a, 2017b), we conducted survey experiments to check the validity of our signals. For the White, Black, and 1-1.5-generation Hispanic names we chose, prior survey experiment data already provide the robustness checks we need (Gaddis 2017a, 2017b). The findings suggest that individuals see these names as racially/ethnically correct (as signaled) between 89 percent and 98 percent of the time (see Appendix Table A2, column 8). For the Indian and Chinese names of both generation types, we had to conduct our own survey experiment to examine individuals' racial/ethnic identification of these names. We created a survey experiment that asked respondents to identify the race/ethnicity they associate with each name and provided multiple choice options. For the 1-1.5-generation Indian and Chinese names, respondents identified them as any type of Asian or Asian American between 85 percent and 90 percent of the time except in the case of Riya (69 percent).⁴ For the 2+-generation Hispanic, Indian, and Chinese names, respondents correctly identified them at somewhat lower rates (Hispanic: 64 percent to 71 percent; Indian: 61 percent to 77 percent; Chinese: 82 percent to 85 percent).

Beyond examining how respondents view the race/ethnicity of our names, we needed to know whether individuals read our cues of immigrant generational status or cultural assimilation as intended. As previously stated, the use of mixed types of names could signal multiple concepts that are interrelated (e.g., immigrant generational status, cultural assimilation, English proficiency, etc.). Although we acknowledge that some individuals may read a name like Alejandra Macias and make inferences about cultural assimilation, we consider that concept to be under the larger umbrella concept of immigrant generational status. Thus, immigrant generational status is a proxy for many potential characteristics that may invoke different stereotypes, just as race/ethnicity is also a proxy concept. Furthermore, it was easier to create a simple survey question about immigrant generational status with clear indicators than it was to create a similar question about cultural assimilation—a more complex concept with multiple dimensions.

⁴Removing Riya from our analyses does not change the substantive findings.

Therefore, we conducted additional survey experiments in which we asked respondents to identify whether they thought each name belonged to a person who (1) was born in the United States and whose parents were born in the United States, (2) was born in the United States but whose parents were not born in the United States (those whom we call 2+ generation), or (3) was not born in the United States and whose parents were not born in the United States (1-1.5 generation, or the newest group of immigrants). For the White and Black names, the modal response was category 1, which respondents chose between 79 percent and 89 percent of the time depending on the name (see Appendix Table A2, column 9). Respondents similarly read predominantly White first names combined with Hispanic, Chinese, and Indian last names (e.g., Sarah Singh) as belonging to 2+-generation individuals, albeit with some variation; the modal response category was 2 for all three subgroups, although the proportion choosing category 2 ranged between 42 percent and 62 percent depending on the name. Finally, respondents also saw fully ethnic names as demarcating more recent immigrant generational status. The modal response category for fully ethnic Indian and Chinese names (e.g., Mei Zhang) was category 3, or 1-1.5 generation, which respondents chose between 44 percent and 59 percent of the time. Respondents' modal view of the generational status signaled by fully ethnic Hispanic names such as Jimena Garcia was split between categories 2 and 3 (37 percent to 47 percent), but these names were seen as indicating greater recency of immigration and a lower likelihood of being U.S.-born than names like Wendy Velasquez in all cases. Overall, these results suggest respondents see Anglicization of names as a cue about nativity: White and Black names are mostly considered native-born Americans whose parents were born here as well; 2+-generation Hispanic, Chinese, and Indian names are often considered natives whose parents were not born here; and 1-1.5-generation Hispanic, Chinese, and Indian names are often considered nonnatives.⁵ Of course, this is not exclusive of the possibility that Anglicized versus non-Anglicized first names can signal traits beyond nativity or that these other factors may play important roles in reactions.

In total, we selected four White identities (Brenda Olson, Heidi Wood, Joan Peterson, and Melany McGrath), four Black identities (Ebony Washington, Tyra Booker, Shanice Jackson, and Unique Jefferson), four 1-1.5-generation Hispanic identities (Jimena Garcia, Alejandra Macias, Camila Vasquez, and Esmeralda Hernandez), three 1-1.5-generation Indian identities (Anjali Patel, Neha Shah, and Riya Patel), three 1-1.5-generation Chinese identities (Mei Zhang, Jia Chang, and Jian Chen), four 2+-generation Hispanic identities (Wendy Velasquez, Hilary Martinez, Erica Vasquez, and Melissa Hernandez), three 2+-generation Indian identities (Sarah Singh, Lesly Agarwal, and Mindy Patil), and three 2+-generation Chinese identities (Michelle Huang, Winnie Chen, and Jenny Li). After selecting these names, we created a Gmail account to use for correspondence that included each identity's first and last name as well as a random number.

Selecting and Replying to "Roommate Wanted" Advertisements

We chose to use Craigslist for this research because it represents one of the largest marketplaces for roommate searches and is the only large marketplace that is totally free.

⁵More details about this research are available in Gaddis (2019a).

This gave us access to the widest array of advertisements and simplified the research process because we did not need to create a complicated matrix of paid accounts on another website. Prior research has used Craigslist to conduct similar field experiments on housing and economic transactions (e.g., Besbris et al. 2015, 2018; Carpusor and Loges 2006; Doleac and Stein 2013; Gaddis and Ghoshal 2015; Hanson and Hawley 2011; Hogan and Berry 2011). Our use of Craigslist as a sampling frame has implications for both the external validity of this research and broader knowledge of discrimination. We discuss these issues in more detail later in this section and in the conclusion.

The “rooms & shares” section on Craigslist is intended for people to post advertisements offering a spot in a shared living arrangement, separate from the “apts/housing for rent” section for individuals offering full apartments. Nonetheless, some ads for full units are posted in the “rooms & shares” section. Additionally, some ads in the roommates section are posted by nonoccupant landlords or rental agencies who rent out individual rooms within a shared unit, which has little relevance to our question of how the residents themselves react to racial/ethnic/immigrant generational status cues. We therefore selected and replied to ads only if the listing suggested that the person posting the ad would be living in the unit, if the ad was not one of several ads for different units listing the same contact information, and if the ad clearly mentioned cooccupancy. We also excluded ads that were “by the week” rentals, hinted at discounted or free rent in exchange for romantic involvement, or contained very little information (e.g., lacking a picture) to realistically simulate the contact decisions a college-educated, employed person might make. Because we were fairly stringent in ruling out uncertain cases, we replied to approximately one out of every three ads sampled.

We created three textually different but substantively identical and same-length messages that were written in standard English, free of grammatical errors, and friendly in tone. All three messages (see Appendix B for message texts) mentioned being college-educated and employed full-time. We rotated through our purported senders, so each email address/name sent each message text one-third of the time. We varied the sending order so that each name sent first one-third of the time, second one-third of the time, and last one-third of the time. We waited an average of three to five hours between sending each email within each city and wave.

We replied to ads that had been posted within the previous 72 hours on Craigslist, with most ads posted within the previous 36 hours. In Wave 1, we used White, Black, and 1-1.5-generation Hispanic names and replied to approximately 120 ads in each of three urban areas, for a total of approximately 1,080 data points (3 applicants \times 3 cities \times 120 ads). In Wave 2, we used White names and a combination of 1-1.5-generation and 2+-generation versions of Indian and Chinese names and again replied to approximately 120 ads in each of the three cities, for approximately 1,080 additional data points. In Wave 3, we tested a mix of White, 2+-generation Hispanic, and 1-1.5- and 2+-generation Indian and Chinese names. In Wave 4, we returned to White, Black, and 1-1.5-generation Hispanic names, ultimately yielding over 4,500 total emails sent.

We drew on advertisements from three major U.S. metropolitan areas: Boston, Chicago, and Philadelphia. Given that sampling across all metro areas is not feasible in any audit study,⁶

we sought locations that were large enough to be important in their own right and that would also merit examination as a group. We considered dozens of possible combinations and found that at the time of data collection, the unweighted average racial demographics of these three metropolitan areas near perfectly matched the U.S. population, more so than any other trio of large metro areas. Although the choice of three locations means that our research might not generalize to all millennials in the United States, the racial demographics and sheer size and importance of these locations makes them worthy of study. Furthermore, external validity may be reduced if millennials living in other areas would respond differently to the treatment (i.e., names signaling race/ethnicity/immigrant generational status). A difference here is likely, but in a direction that bolsters any finding of discrimination: Individuals living in large metropolitan areas tend to be more liberal than those living in smaller metro or rural areas (Pew Research Center 2018). Therefore, if anything, our findings based on three large metro areas are conservative estimates compared to the levels of racial/ethnic discrimination that might be found in a broader population of millennials. Finally, it is possible that millennials in urban areas who do not post ads looking for roommates (or who do not live with roommates at all) would respond differently to the treatment than those looking for a roommate, but it is unclear how this might impact our results. It is likely this segment of the population is higher socioeconomic status and represents a small portion of the millennial population.

In this article, we remove from our analysis any advertisements that indicate the current residents are older individuals outside the millennial demographic age range and any advertisements from which we cannot discern the age range of the current residents. We define millennials as Americans born between 1980 and 1995⁷ (Rouse and Ross 2018)—individuals in their 20s and early 30s during our data collection period. Two research assistants coded each ad for age criteria (i.e., explicitly stated ages, or ranges, of current roommates or desired age ranges of prospective roommates). This reduced our initial analysis sample by 12.3 percent (576 ads)—7.9 percent of our sample did not include any information that would indicate age, and 4.4 percent indicated they were born prior to 1980. Although there are no substantive differences in our findings between analysis samples, we believe this process allows us to more clearly speak to the population of millennial roommate-seekers on Craigslist. Table 1 shows the total number of emails sent by each racial/ethnic/immigrant generation group for each city and wave in our revised analysis sample.

Recording Responses

We monitored response rates as our main dependent variable of interest. We coded this variable as 1 if we received a response that showed interest in renting or showing the room, discussing the room more, meeting in person, speaking by phone, or any other kind of positive reply. We coded this variable as 0 for nonreplies or clear “no” replies (e.g., “room is already taken”). We calculated that over 98 percent of replies were positive responses; the

⁶Devah Pager’s 2003 landmark audit on race and criminal record in the labor market, for example, only sampled job advertisements in the Milwaukee, Wisconsin, area.

⁷We stop at 1995 because ad posters must be at least 18 years of age at the time of data collection. However, the overwhelming majority of ads used in this study come from individuals between the ages of 21 and 30.

majority of ad posters not interested in our room-seekers simply did not reply. In total, we received a response rate of approximately 45 percent.

Methods of Analysis

We conducted logistic regression analyses predicting odds ratios for our main results. These regressions control for all observed characteristics, return estimates that are weighted based on the sample size difference across metropolitan statistical areas (MSAs) and waves, and allow for cluster-corrected standard errors at the roommate advertisement level:

$$\ln(\hat{p}_{ijk} / [1 - \hat{p}_{ijk}]) = \alpha_{ijk} + \beta_1 R_{ijk} + \beta_2 E_{ijk} + \beta_3 SO_{ijk} + \beta_4 RP_{ijk} + \gamma_k \quad (1)$$

In Equation 1, α is the intercept for individual respondent i for advertisement j in MSA-by-wave k . The β coefficients 1 through 4 represent the coefficients for race, email version, submission order, and rental price, respectively. The γ coefficient represents a MSA-by-wave fixed effect.

Results

Our first research question asks if the sender's race/ethnicity affects response rates to roommate requests. Table 1 shows positive roommate response rates by race/ethnicity/immigrant generational status and metropolitan area. For each wave, we calculated every group's number of responses as a share of the number the White names received. For example, as the final column shows, in Wave 1, Black senders received only 66 percent as many responses as White senders, whereas 1-1.5-generation Hispanic senders received 71 percent as many responses as White senders. Although response rates are lower in the Boston area than elsewhere, White senders consistently have an advantage over one or more other groups within all cities. Some waves include different numbers of names, and average response rates vary across waves. Therefore, Figure 1 presents weighted response ratios that adjust for these differences. White room-seekers stand at the top of the response hierarchy. Setting aside 2+ generation variants of names until the following section, Indian room-seekers fare second best after Whites, with a .83 response ratio (or 83 responses for every 100 responses to Whites). Chinese and Hispanic applicants follow with response ratios of .76 and .74, respectively. Black room-seekers fare the worst: Their response ratio of .63 indicates a Black room-seeker would need to send about 50 percent more inquiries to receive the same number of responses as a White room-seeker.

Table 2 presents regression estimates for the effect of race/ethnicity/immigrant generational status net of fixed effects for city-by-wave, submission order, message version, and price. We present odds ratios from a logistic regression model that show that Black, 1-1.5-generation Hispanic, 1-1.5-generation Indian, and 1-1.5-generation Chinese senders are statistically less likely than Whites to receive a response. Compared to Whites, 1-1.5-generation Indian room-seekers fare the best, followed by 1-1.5-generation Hispanic, 1-1.5-generation Chinese, and then Black room-seekers.

Next, we consider how signals of immigrant generational status influence responses rates to roommate requests among Hispanics and Asians. Results from our analyses again appear in Figure 1 and Table 2. As Figure 1 shows, 2+-generation Indian and Chinese room-seekers will fare about as well as White room-seekers (1.01 and .94 response ratios). Although 2+-generation Hispanics have a lower response ratio (.89), it is still not significantly different from Whites. Table 2's regression estimates with a full set of controls confirm this story; whereas 2+-generation Hispanic and Chinese room-seekers have odds ratios < 1.0, they are not statistically significant. Moreover, each of the coefficients for 1-1.5-generation Hispanic, Indian, and Chinese are significantly different ($p < .05$) than their respective 2+-generation counterparts.

Discussion and Conclusion

Although some evidence suggests that millennials are postracial and hold less prejudiced views of racial/ethnic minorities than other generations, no work prior to ours has tested how this might translate into action. Using a correspondence audit to investigate discrimination among millennials, we sent over 4,000 emails using names to signal individuals of different racial/ethnic and immigrant generational status backgrounds. We found evidence that millennials discriminate against Indian, Chinese, Hispanic, and Black room-seekers. Among Asians and Hispanics, those with fully ethnic or traditional names faced significant discrimination, whereas those with Anglicized variants were treated more closely to Whites. We believe these findings convey a number of important implications for future research.

First, our study documents a tiered pattern of discrimination among millennials. This pattern bears both similarities and differences to patterns enacted by decision-makers from previous generations. Our finding of substantial anti-Black bias is consistent with much prior experimental research across various domains (Bertrand and Mullainathan 2004; Gaddis 2015; Hebl et al. 2012; Pager 2003). Additionally, our finding that traditionally named Hispanic and Asian room-seekers face discrimination is consistent with some prior research on discrimination in housing, employment, and social situations (Gaddis and Ghoshal 2015; Gell-Redman et al. 2018; Hogan and Berry 2011; Milkman et al. 2015; Quillian et al. 2019). However, that the use of Anglo first names reduced discrimination for members of groups in the "racial middle" (O'Brien 2008) provides insight on the potential future shape of the racial/ethnic hierarchy. If later-generation Hispanic and Asian immigrants are allotted status in closer proximity to Whites, as our study suggests, the future racial order may indeed see these groups move closer to "becoming White" along with the persistence of a Black/non-Black color line (Lee and Bean 2007; Yancey 2003).

Second, our research tests for a wider array of racial/ethnic discrimination than many prior studies and advances an existing line of work that finds that signaling race and ethnicity in correspondence audits and other experiments is a difficult balancing act (Crabtree and Chykina 2018; Gaddis 2017a, 2017b; Ghoshal 2019). By testing our selected names first through survey experiments and then in the correspondence audit, we show that not only do respondents detect differences in immigrant generational status on the basis of names but also that these differences may have real world consequences. Our work shows that other researchers can and should broaden their examinations of racial/ethnic discrimination but

must be cautious when choosing signals for race and ethnicity. This research is one of the first to directly test the impact of perceived immigrant generational status in a field experiment in the United States on discrimination. Demographic and social science research has traditionally incorporated generational status as an important predictor of economic and social outcomes (Brown 2018; Melzer et al. 2018; Portes and Rumbaut 2001; Zhou 1997), but discrimination by immigrant generational status and perceived assimilation is one area of inquiry that has received significantly less attention in the American context. Our research, which provides suggestive evidence that signals of immigrant generational status or other aspects of assimilation may shape discrimination, provides a model for future research.

Third, researchers should be cautious in interpreting the results of survey research that may be subject to social desirability bias. Although there is much to be gained from research on racial/ethnic attitudes and prejudice, correspondence audits remain the gold standard for documenting discrimination (Gaddis 2019b; Pedulla 2018; Quillian 2006). Our research shows that leveraging different and new contexts beyond the traditional domains where certain groups may hold decision-making power can provide powerful evidence to confirm or contradict the alignment of words with actions. For decades, scholars mostly concentrated field experiments examining discrimination on employers, real estate agents, and landlords (Gaddis 2018b). Although these contexts continue to provide knowledge regarding the current state of racial/ethnic discrimination in mostly economic interactions, scholars should continue to think creatively about leveraging different contexts to uncover new knowledge of racial/ethnic discrimination in social interactions. The expansion of experimental studies in this manner may highlight the prevalence of discrimination and mechanisms through which discrimination creates cumulative disadvantage. Our research shows that racial/ethnic discrimination can occur during the initial stages of social interaction, even when the stakes are low. How much racial/ethnic discrimination occurs in other venues for social interactions that take place online, such as gaming, discussion boards, and social media? Future research should also examine how seemingly minor decisions that result in racial/ethnic discrimination (e.g., choosing to respond to an email request) might result in additional inequalities downstream (e.g., limitation of choice sets).

There are two important areas that our research does not address. First, our research does not examine levels of racial/ethnic discrimination among nonmillennials, so we cannot make claims about whether millennials engage in more or less discrimination than previous generations. Whereas attitudinal surveys provide evidence that millennials *state* they are less prejudiced than previous generations, there may or may not be differences in *actions*. Moreover, although the difference between attitudinal surveys and our findings suggest that surveys of millennials may be subject to social desirability bias, we cannot be certain. Only research that finds these discrepancies between statements and actions among the same respondents can be definitive (see Pager and Quillian 2005). Thus, although our research is motivated by the ideas of generational differences and social desirability bias, additional research is needed in these areas.

These findings also pave the way for additional research questions and improvements. First, although our field experiment captures the real experience of individuals, for research purposes, it would be useful to discern the racial/ethnic identity of the decision-makers. Our

research is no different than other correspondence audits in which details about the decision-makers are unknown, but scholars should work toward a solution to this “Black-box” problem. Second, due to our gender restriction in sending inquiries only from women, we do not know fully how discrimination might differ among men. Findings from prior research (Arai et al. 2016; Feldman and Weseley 2013; Gaddis 2013) and a separate survey experiment we conducted (Gaddis and Ghoshal 2020) suggest that this methodological decision likely contributes to more conservative estimates of racial/ethnic discrimination without altering the substantive findings. Still, future research should work to confirm our field experiment findings for both men and women. Finally, an additional broadly important question remains from this research: Why do these young people discriminate against certain racial/ethnic groups? We are currently working on additional research using survey experiments that will shed some light on this question and perhaps provide advice as to how we might reduce racial/ethnic discrimination.

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Appendix

Appendix A: Additional Tables

Appendix Table A1.

Last Names by Rank, Frequency, and Racial Composition.

Race ^a	Last Name	Rank	Frequency per 100,000	% White	% Black	% Hispanic	% Asian
W	Olson	157	55.6	94.8	.4	2.0	.7
W	Wood	84	88.7	88.7	5.6	2.4	.7
W	Peterson	71	94.3	84.4	10.1	2.4	.7
W	McGrath ^b	943	12.6	95.9	.6	1.6	.5
B	Washington	145	60.1	5.2	87.5	2.5	.3
B	Booker	941	12.5	28.0	65.2	2.3	.3
B	Jackson	19	240.1	39.9	53.0	2.5	.4
B	Jefferson	615	18.7	17.5	74.2	2.5	.4
H	Garcia	6	395.3	5.4	.5	92.0	1.4
H	Macias	538	21.1	4.9	.2	94.1	.4
H	Vasquez	113	72.1	5.1	.5	93.2	.7
H	Hernandez	11	353.7	3.8	.4	94.9	.6
H	Velasquez	398	27.2	4.8	.7	92.2	1.7
H	Martinez	10	359.4	5.3	.5	92.9	.6
I	Patel	95	78.0	2.1	.4	.4	94.8
I	Shah	573	19.8	3.6	.9	.7	91.7
I	Singh	260	39.6	4.3	4.5	2.5	82.8

Race ^a	Last Name	Rank	Frequency per 100,000	% White	% Black	% Hispanic	% Asian
I	Agarwal ^c	x	x	x	x	x	x
I	Patil ^c	x	x	x	x	x	x
C	Zhang	472	23.8	1.0	.2	.2	98.1
C	Chang	391	27.8	2.4	.9	3.7	88.8
C	Chen	150	57.5	1.4	.3	.5	96.1
C	Huang	456	24.5	.9	.1	.4	97.1
C	Li	273	37.9	1.5	.2	.6	96.8

Note: Data from the 2010 census (U.S. Census Bureau 2016), unless otherwise noted.

^aRace/ethnicity is based on our categorization in the present article (W = White, B = Black, H = Hispanic, I = Indian, C = Chinese).

^bData from the 2000 census (U.S. Census Bureau 2012) because this name fell out of the top 1,000 last names between 2000 and 2010.

^cAgarwal and Patil are not listed in the top 1,000 last names in either 2000 or 2010.

Appendix Table A2.

First Names by Mother's Race and Mother's Education.

Race ^c	Name	New York State Birth Record Data ^a					Survey Experiment Data ^b	
		% White	% Black	% Asian	% High School Degree	% Some College	Accurate ID with Racialized Last Name ^d	Immigrant Generational Status ^e
W	Brenda	80.1	8.9	4.4	85.8	14.2	90.5%	USI 87.0%
W	Heidi	85.2	2.9	5.2	54.5	45.5	94.7%	USI 84.7%
W	Joan	65.6	14.8	14.8	64.2	35.8	91.2%	USI 89.2%
W	Melany	74.3	9.7	.2	86.7	13.3	88.5%	USI 84.8%
B	Ebony	22.2	76.4	.0	71.3	28.7	92.9%	USI 85.6%
B	Tyra	21.4	76.3	.8	62.0	38.0	90.9%	USI 84.7%
B	Shanice	12.0	85.9	.7	75.1	24.9	91.7%	USI 86.1%
B	Unique	17.2	80.4	.2	85.3	14.7	90.0%	USI 78.9%
L	Jimena	73.7	.4	.0	87.4	12.6	97.2%	IM3 34.4%
L	Alejandra	82.4	5.7	.1	70.4	29.6	97.1%	IM3 36.6%
L	Camila	71.0	8.5	.4	55.2	44.8	96.0%	IM3 22.2%
L	Esmeralda	77.3	10.0	.1	87.6	12.4	97.5%	IM3 35.1%
I	Anjali	18.0	14.9	58.5	26.8	73.2	84.7%	IM3 53.1%
I	Neha	5.2	.9	90.1	22.7	77.3	84.7%	IM3 57.8%
I	Riya	4.3	3.9	90.2	14.4	85.6	68.7%	IM3 43.9%
C	Mei	6.7	1.0	91.4	74.5	25.5	88.6%	IM3 59.4%
C	Jia	4.3	5.7	88.3	81.5	18.5	87.1%	IM3 53.1%
C	Jian	19.8	8.6	65.4	77.6	22.4	90.0%	IM3 56.2%
2+ H	Wendy	61.6	4.1	29.8	90.1	9.9	65.5%	US2 52.4%
2+ H	Hillary	58.3	20.3	13.9	61.9	38.1	64.2%	US2 43.4%
2+ H	Erica	73.6	13.9	10.2	52.3	47.7	69.3%	US2 56.2%
2+ H	Melissa	80.0	10.5	4.0	56.8	43.2	70.8%	US2 50.1%

Race ^c	Name	New York State Birth Record Data ^a					Survey Experiment Data ^b	
		% White	% Black	% Asian	% High School Degree	% Some College	Accurate ID with Racialized Last Name ^d	Immigrant Generational Status ^e
2+ I	Sarah	83.7	6.4	6.7	34.9	65.1	76.8%	US2 57.5%
2+ I	Lesly	79.4	8.7	.0	90.2	9.8	61.1%	US2 42.1%
2+ I	Mindy	88.7	2.1	8.3	78.0	22.0	62.1%	US2 52.2%
2+ C	Michelle	69.5	7.4	16.5	59.7	40.3	82.3%	US2 59.4%
2+ C	Winnie	2.2	3.1	94.1	87.8	12.2	84.4%	US2 59.4%
2+ C	Jenny	32.6	5.0	59.2	84.6	15.4	84.9%	US2 62.4%

^aAuthors' calculations from New York State Department of Health birth records, 1994–2012.

^bSource: Gaddis (2017a, 2017b, 2019a).

^cRace is based on our categorization in the present article (W = White, B = Black, H = 1-1.5-generation Hispanic, I = 1-1.5-generation Indian, C = 1-1.5-generation Chinese, 2+ L = 2+-generation Hispanic, 2+ I = 2+-generation Indian, and 2+ C = 2+-generation Chinese).

^dThe percentage of respondents who correctly classified the name with the race listed in the first column when also given a racialized matching last name. For 2+-generation Asian (Indian and Chinese) names, the figure represents the percentage of responses that classified that full name (e.g., Michelle Huang) as any type of Asian. All 2+-generation Asian names except Mindy Patil were identified by fewer than 20 percent as White. Mindy Patil was identified as White in 30.1 percent of responses.

^eUS1 = the percentage of respondents who classified the name as belonging to an individual who was born in the United States and whose parents were born in the United States; US2 = the percentage of respondents who classified the name as belonging to an individual who was born in the United States and whose parents were not born in the United States; IM3 = the percentage of respondents who classified the name as belonging to an individual who was not born in the United States and whose parents were not born in the United States.

Appendix B: Email Texts

Email texts and sending order were rotated through the different names. Each ad-poster received all three emails, with several hours between contacts. Email headers show first and last name of sender identity. Regressions control for email version and sending order.

Message 1

Subject: Your room for rent

Hello,

I'm responding to your ad on Craigslist about the room. I'm a mid-twenties female, a recent college graduate, and am employed full-time. I'd love to come have a look at the place and meet you. Please let me know if the room is still available.

Thank you!

(Name)

Message 2

Subject: Your room available ad

Hello! Is your room on Craigslist still available for rent?

I'm in my 20s, female, and looking for a new place now that I've graduated and work full time. If it's possible for us to meet and for me to see the room, please be in touch.

Thanks!

(Name)

Message 3

Subject: Your open room

Hi there. Could you please let me know if your open room posted on Craigslist is still available?

I'm female and 25 years old. I recently finished college and work full time. It would be great to meet and see the place.

Just let me know. Thank you!

(Name)

Biography

S. Michael Gaddis is an assistant professor of sociology at UCLA whose research focuses on racial discrimination, educational inequality, and mental health. He often uses experiments to examine levels of discrimination in employment and housing as well as the conditions under which racial discrimination occurs. He recently published a book on the experimental method used to investigate discrimination titled *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*. His work has appeared in the *American Journal of Sociology*, *Social Forces*, *Sociological Science*, and elsewhere. Website: www.stevenmichaelgaddis.com.

Raj Ghoshal is an assistant professor of sociology at Elon University in North Carolina. He studies race, politics, and culture in the United States. His main strands of research address racial inequality and discrimination, collective memory of past racial violence, audit studies, and pedagogy. He is currently conducting survey-based work on what Americans think race is and on how people resolve conflicting cues when attributing race to others. His work has appeared in *The American Sociological Review*, *Cultural Sociology*, *Annals of the American Academy of Political and Social Science*, *Theory & Society*, *Teaching Sociology*, *Sociation*, and elsewhere. Website: www.rajghoshal.com.

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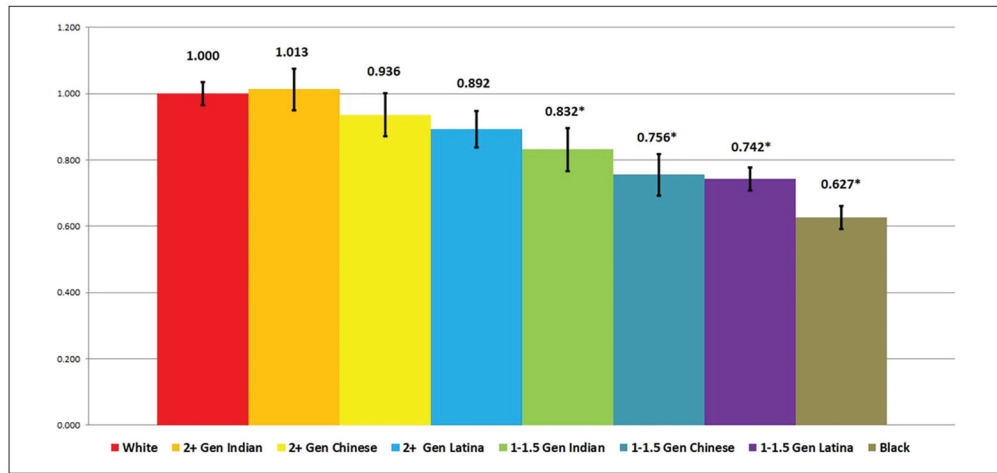


Figure 1.
Weighted roommate response ratios by racial/ethnic/immigrant generation.

Table 1. Positive Roommate Response Rates and Number of Valid Emails Sent by Race and Metropolitan Area.

	Boston	Chicago	Philadelphia	Total	% of White Response
Wave 1					
White (4)	51.9%	55.6%	63.5%	57.0%	100%
	104	99	104	307	
Black (4)	34.6%	34.3%	44.2%	37.8%	66.3%
	104	99	104	307	
1-1.5-generation Hispanic (4)	38.5%	45.5%	37.5%	40.4%	70.9%
	104	99	104	307	
Wave 2					
White (4)	51.0%	57.1%	68.3%	58.8%	100%
	104	98	104	306	
1-1.5-generation Chinese (2)	35.2%	43.1%	49.1%	42.5%	72.3%
	54	51	55	160	
1-1.5-generation Indian (3)	42.3%	47.9%	56.6%	48.9%	83.2%
	78	71	76	225	
2+-generation Chinese (2)	54.0%	59.6%	67.4%	60.3%	102.6%
	50	47	49	146	
2+-generation Indian (1)	50.0%	48.2%	78.6%	59.3%	100.9%
	26	27	28	81	
Wave 3					
White (4)	49.5%	50.0%	58.2%	52.7%	100%
	105	102	110	317	
1-1.5-generation Chinese (1)	29.6%	48.2%	51.9%	43.2%	82.0%
	27	27	27	81	
2+-generation Chinese (1)	37.0%	56.5%	29.6%	40.3%	76.5%
	27	23	27	77	
2+-generation Indian (2)	54.9%	44.2%	60.7%	53.5%	101.5%
	51	52	56	159	
2+-generation Hispanic (4)	37.1%	39.2%	63.6%	47.0%	89.2%

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	Boston	Chicago	Philadelphia	Total	% of White Response
Wave 4	105	102	110	317	
White (4)	46.9%	44.4%	47.2%	46.2%	100%
	147	144	144	435	
Black (4)	30.6%	27.8%	25.0%	27.8%	60.2%
	147	144	144	435	
1-1.5-generation Hispanic (4)	35.4%	40.3%	30.6%	35.4%	76.6%
	147	144	144	435	
All waves	41.9%	44.3%	49.4%	45.2%	
	1,380	1,329	1,386	4,095	

Note: Numbers in parenthesis are the number of names used per wave for each race/ethnicity/immigrant generation.

Table 2.

Logistic Regressions Predicting Email Response.

Black (reference: White)	.451 ^{***} (.035)
1-1.5-generation Hispanic	.575 ^{***} (.040)
1-1.5-generation Indian	.657 ^{***} (.086)
1-1.5-generation Chinese	.552 ^{***} (.072)
2+-generation Hispanic	.807 (.089)
2+-generation Indian	1.015 (.122)
2+-generation Chinese	.876 (.118)
Submission order: second	.869 ^{**} (.049)
Submission order: third	.738 ^{***} (.041)
Price	1.0006 ^{**} (.0002)
Constant	.789
<i>N</i>	4,095

Note: All completed cases are included. Odds ratios shown. Regression also controls for message version and a city-by-wave fixed effect. Cluster-corrected (roommate advertisement level) standard errors in parenthesis.

^{**}
 $p < .01$.

^{***}
 $p < .001$.