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Out of context: the absence of geographic variation in US immigrants’ perceptions of discrimination

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\textbf{ABSTRACT}

Immigrants’ perceptions of discrimination (PD) correlate strongly with various political outcomes, including group consciousness and partisan identity. Here, we examine the hypothesis that immigrants’ PD vary across US localities, as threatened responses by native-born residents may increase perceived discrimination among neighboring immigrants. We also consider the alternative hypothesis that barriers to the expression and detection of discrimination decouple native-born attitudes from immigrants’ perceptions about their treatment. We test these claims by analyzing three national surveys of almost 11,000 first-generation Latino, Asian, and Muslim immigrants. The results indicate that immigrants’ PD hardly vary across localities. While anti-immigrant attitudes are known to be geographically clustered, immigrants’ PD prove not to be. This mismatch helps us narrow the potential causes of perceived discrimination, and it suggests the value of further research into perceived discrimination’s consequences for immigrants’ social and political incorporation.

\textbf{ARTICLE HISTORY}

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\textbf{KEYWORDS}

Immigration; prejudice; methods; public opinion

\textbf{Introduction}

Today’s immigrants to the US are increasingly settling in “new immigrant destinations” far from traditional gateway cities such as Los Angeles or New York (Frey 2006; Marrow 2011). As a consequence, contemporary immigrants are exposed to a wider variety of social and political climates than their predecessors a generation ago. Consider Alabama, which is one such new immigrant destination. Its 2011 immigration law included a variety of measures designed to identify unauthorized immigrants and prevent them from working or living in the state. The law might have influenced inter-group relations within the state as well. In the aftermath of its passage, one Latino reported that while in a Wal-Mart with his three-year-old daughter, non-Hispanic white customers had asked him where his daughter was born, implying that she did not belong in the US (National Immigration Law Center 2012). A life-long US citizen, Carmen Gonzalez nonetheless felt the
impact of Alabama’s law, too. “It has affected everyone,” she explained. “It doesn’t matter if you have residency or not. Even my son came home and asked if we are going back to Mexico” (Southern Poverty Law Center 2012). Such stories capture the common view that place matters, both for immigrants and for immigrants’ native-born co-ethnics.

America’s receiving communities have been shown to vary widely in the extent to which they welcome immigrants (Portes and Rumbaut 2014; Lewis and Ramakrishnan 2007; Hopkins 2010; Ramakrishnan and Wong 2010; Marrow 2011; Gulasekaram and Ramakrishnan 2012; Newman 2012; Pastor and Mollenkopf 2012). In the period since 2001, US states and localities have responded to immigration in strikingly different ways, with some passing policies like Alabama’s which raise the threat of deportation while others have declared themselves “sanctuary cities” or issued drivers’ licenses to unauthorized immigrants. A separate thread of scholarship illustrates that members of certain social groups are responsive to the climate of their communities (Hunt et al. 2007; Miller et al. 2011; Barron and Hebl 2012). Here, we investigate whether contemporary immigrants are similarly influenced by their localities, a question with implications for our understanding of immigrants’ social and political incorporation. Specifically, we examine whether immigrants in certain US communities are more or less likely to perceive discrimination, and we focus on discrimination perceived to target immigrants as individuals.

The observation of significant spatial and contextual variation in native-born white Americans’ attitudes toward various out-groups is grounded in decades of social science. The racial threat hypothesis was developed to explain local variation in whites’ attitudes toward blacks (Key 1949), and it has given rise to a rich set of empirical tests (Glaser 1994; Carsey 1995; Taylor 1998; Oliver and Mendelberg 2000; Oliver and Wong 2003; Wong 2007; Wong et al. 2012; Enos 2014; Enos 2015). Scholars have also examined whether there is similar variation in whites’ attitudes toward immigrants and their co-ethnics (Hood and Morris 1997; Burns and Gimpel 2000; Oliver and Wong 2003; Campbell, Wong and Citrin 2006; Gay 2006; Lewis and Ramakrishnan 2007; Ha 2010; Hopkins 2010; Ramakrishnan and Wong 2010; Hajnal and Abrajano 2012; Pastor and Mollenkopf 2012; Newman et al. 2014). Yet to date, this scholarship has focused almost exclusively on how local demographics shape the attitudes of the “threatened” group, which is most commonly the non-Hispanic whites who constitute a nationwide majority. Indeed, the racial threat literature has developed in isolation from research on perceptions of discrimination (PD) among African-Americans, Latinos, Asian Americans, and other minority groups (Dawson 1994; Schildkraut 2005; Chong and Kim 2006; Nteta 2006; Sanchez 2006; Hunt et al. 2007; Kasinitz et al. 2008; Sanchez 2008; Maxwell 2009; Fraga et al. 2010; Lavariega Monforti and Sanchez 2010). This isolation is counterproductive, given that PD are a central correlate of partisan identity, group consciousness, trust in government, and various other political outcomes among non-white groups (Tate 1993; Dawson 1994; Lien, Conway and Wong 2004; García Bedolla 2005; Schildkraut 2005; South, Crowder and Chavez 2005; Chong and Kim 2006; Sanchez 2006; Citrin et al. 2007; Sanchez 2008; Maxwell 2009; Fraga et al. 2010; Craig and Richeson 2011; Marrow 2011; Hajnal and Lee 2011). PD also correlate with a range of other critical outcomes, from physical and mental health (Pascoe and Smart Richman 2009; Dong et al. 2012; Schmitt et al. 2014) to educational outcomes (Benner and Graham 2011), housing mobility (South, Crowder and Chavez 2005), healthcare access and utilization (Pollock et al. 2012), and attitudes toward work (Ragins and Cornwell 2001).
By investigating the extent to which immigrants’ PD varies across space, this paper also contributes to our understanding of varied outcomes beyond politics.

In this study, we provide the first systematic analysis of the spatial patterning of perceived discrimination among immigrants in the US. Taking advantage of the geographic dispersion of today’s immigrants, we draw on three national telephone surveys – the 2005–2006 Latino National Survey (LNS), the 2007 Pew Survey of American Muslims, and the 2008 National Asian American Survey (NAAS) – to analyze the spatial clustering in first-generation immigrants’ PD. This analysis of Latino, Asian, and Muslim immigrants uncovers an important asymmetry. While native-born attitudes toward immigrants have been shown to vary across localities, immigrants’ PD do not.

The failure to detect spatial variation is not due to a lack of statistical power, given that these three surveys include 10,959 first-generation respondents from communities throughout the US. Nor is it due to geographic clustering on the part of the respondents: the LNS and NAAS provide substantial geographic variation, with 2350 foreign-born respondents living in counties where immigrants constitute less than 10% of the population and another 2235 living in counties where immigrants account for at least 30% of the population. Moreover, the lack of spatial patterning in immigrants’ PD extends to the state level as well. We validate our measure by showing that it does detect substantial clustering in immigrants’ places of origin, and that alternative approaches testing coefficients’ joint significance return similar results. In Appendix 1, we offer further validation by using the same methods to confirm the existence of spatial patterning in native-born whites’ attitudes toward immigrants using five separate national telephone surveys. In the conclusion, we discuss the implications of our findings for current theorizing on the development of PD among immigrants. We also consider their implications for immigrants’ political and social incorporation into American society.

**Hypotheses**

This section aims to connect disparate research literatures on inter-group threat, PD, and the role of space in attitude formation. To date, they have developed separately despite their overlapping subject matter. Throughout, “discrimination” refers to a negative statement or action which is based on a target individual’s membership in a group. While the incidence of actual discrimination is a critical social question (Bertrand and Mullainathan 2004), people differ widely in how they perceive specific actions or behaviors (Roth 2008; Cainkar 2009). Indeed, discriminatory actions are frequently ambiguous, especially since identifying an action as discriminatory implies an attribution that treatment would have been different for members of other social groups. As a consequence, it is critical to understand those perceptual processes. Following an extensive body of research in social psychology, we focus on discrimination as it is perceived by individuals (see also Major, Quinton and McCoy 2002).

Perceiving discrimination requires noticing unfair treatment and relating that treatment to one’s membership in a group (Major, Quinton and McCoy 2002). As such, any individual’s perception of discrimination involves inherent overlap between the individual self and the collective, group-level self. That is, perceiving discrimination moves the individual from thinking about “me” to thinking about “us” (Tajfel and Turner 1979). Nonetheless, we can distinguish between acts of perceived discrimination which target the
group and those that target the individual. When doing so, researchers commonly find that individuals perceive their group to be targeted more than themselves individually (Taylor et al. 1990).

There is already a rich literature on inter-group threat (Key 1949; Blalock 1967; Glaser 1994; Carsey 1995; Voss 1996; Oliver and Mendelberg 2000; Stein, Post and Riden 2000; Leighley 2001; Esses et al. 2005; Dancygier 2010; Enos 2014; Enos 2015), including substantial research on contextual variation in non-Hispanic whites’ attitudes toward immigrants and heavily immigrant ethnic groups (Hood and Morris 1997; Burns and Gimpel 2000; Oliver and Wong 2003; Gay 2006; Putnam 2007; Lewis and Ramakrishnan 2007; Ha 2010; Hopkins 2010; Ramakrishnan and Wong 2010; Hajnal and Abrajano 2012; Newman 2012; Newman et al. 2014). However, theories of inter-group threat have been tested primarily among the “threatened” group, with little attention to the impacts of threat on the target (or “threatening”) group. Even so, these various strands of prior research lead to the expectation that PD among ethnic or racial minority groups will vary geographically, as discriminatory attitudes themselves are known to vary across space. Yet there are also barriers that reduce the probability that immigrants or other stigmatized groups will recognize and acknowledge discriminatory behavior against them, barriers which might make discrimination appear to be low or uniform across space.

**Geography and PD**

It is important to define geographic/spatial patterning, and how that concept relates to contextual effects. We employ “geographic patterning” and “spatial patterning” as synonyms, and take them to mean variation in the distribution of a given attribute across geography/space. Attributes which are found disproportionately in certain neighborhoods, cities, states, or regions are said to be geographically patterned, or to vary across space. By contrast, the phrase “contextual effects” refers to the influence of group-level factors on individuals’ attitudes or behavior when the relevant groups are defined in spatial terms (see also Wong et al. 2012). Attributes can be spatially patterned without exhibiting contextual effects, as is the case when the spatial patterning results from the uneven distribution of some individual-level correlate. Contextual effects indicate a spatial influence on attitudes – but only in very limited circumstances would such an effect occur without spatial patterning. In short, the presence of spatial patterning does not imply contextual effects, but its absence makes contextual effects quite unlikely.

If some communities are more likely to harbor anti-immigrant attitudes than others, we might expect immigrants in those communities to perceive more discrimination. For researchers to confirm that intuition, three additional claims need to hold. First, the prejudicial attitudes among the native-born must be related to inter-personal behavior in their day-to-day lives (but see Shelton et al. 2005). Second, immigrants must perceive discriminatory behavior as such (but see Cainkar 2009). Finally, scholars must be able to measure those PD. Exploring the spatial patterning of PD among various target groups allows us to measure the degree to which discrimination and hostility are transmitted between spatially proximate groups.

In studying African-American opinion, Dawson (1994) provides a mechanism through which PD can become politically consequential. His research contends that due to the high
levels of discrimination against African-Americans, any one African-American’s opportunities are bound up with the status of the group as a whole. For that reason, African-Americans form opinions through a “black utility heuristic,” a hypothesis that explains the unusual homogeneity of black public opinion. Pervasive discrimination encourages an orientation toward the group and an adoption of group-centric political attitudes, which themselves influence political participation (see also Jones-Correa and Leal 1996; Chong and Rogers 2005).

As Lavariega Monforti and Sanchez (2010, 246) summarize, there is substantial evidence that PD influences a variety of political outcomes among Latinos and Asian Americans as well. Specifically, social scientists have explored PD as a potential cause of group consciousness and identity (Uhlainer 1991a; Lien, Conway and Wong 2004; Masuoka 2006; Citrin et al. 2007; Schildkraut 2011), political participation (De la Garza and Vaughan 1984; Uhlainer 1991b; Stokes 2003; Wong 2003; Schildkraut 2005), trust in government (Schildkraut 2005), coalition formation (Uhlainer 1991a; Garcia 2000; Kaufmann 2003; Sanchez 2008), minority group opinion (Uhlainer 1991a; Tate 1993; Dawson 1994; Sanchez 2006), national identity (Lien, Conway and Wong 2004; Schildkraut 2011), and housing mobility (South, Crowder and Chavez 2005). Prior surveys indicate that Latinos are twice as likely to report discrimination targeting the group versus discrimination against themselves personally (Hero 1992, 50; see also Taylor et al. 1990; Garcia 2000, 269–270; Kasinitz et al. 2008; Barreto 2010, 28; Fraga et al. 2010, Chapter 4). Yet social scientists have focused on PD primarily as an explanatory variable, with less attention to its antecedents. Moreover, few studies have examined the geographic patterning of PD (but see South, Crowder and Chavez 2005; Hunt et al. 2007; Miller et al. 2011).

When studying PD among minority groups, the prior research that does examine space reaches mixed conclusions. For example, McDermott (2011) finds “little independent effect at the city level of racial context on … perceptions of discrimination” (162). Using tract-level data from Detroit, Welch et al. (2001) observe the highest levels of PD among African-Americans living in roughly equally mixed (e.g., 50% black, 50% non-black) racial contexts. However, Hunt et al. (2007) use national data to show that African-American women in more black neighborhoods report less discrimination. Tropp et al. (2011) adopt a longitudinal approach to the study of PD, finding that “greater friendships with Whites predict both lower PD and less support for ethnic activism among African-Americans and Latino Americans, but not for Asian Americans” (1). If we assume that friendship is in part a spatial process, space matters in each of these studies, albeit in different ways.

One barrier to the identification of spatial variation in PD is the possibility that discrimination is not always reported as such. For instance, Roth (2008) shows that Latino immigrants consistently report low levels of discrimination in more than 100 in-depth interviews, a pattern the author attributes to “cultural narratives in sending societies” which “create obstacles to recognizing discrimination” (205). Being a victim of discrimination in the home countries of some immigrants is a source of shame, making admitting discrimination something to avoid. Also, a victim might not know that her treatment was different from others, especially if she does not speak English well. Such ambiguity could have increased in recent years, as more subtle forms of prejudice replace more overt expressions (Mendelberg 2001). This ambiguity might also be especially pronounced in the day-to-day discrimination of interest here. There are barriers to recognizing and
reporting discrimination, a fact which might make it difficult to detect spatial variation in PD. This alternate hypothesis gains support from Cohen and Dawson (1993), which finds no meaningful geographic variation in African-Americans’ racial attitudes (but see Gay 2004).

Overall, the literature on attitude formation is skeptical of the claim that spatial contexts are likely to shape attitudes, as attitude formation takes place primarily with respect to national-level events, symbols, and identities (Iyengar and Kinder 1987; Mutz 1998). Still, immigrants’ PD constitute a “most likely case” of spatial influence for multiple reasons. First, given their spatial dispersion (Frey 2006), today’s immigrants are likely to have very different initial experiences of American life. That is especially true with respect to the attitudes of the native-born Americans they encounter. Second, many contemporary immigrants are not fluent in English upon arrival, a fact that prevents them from following politics through newspapers or other mainstream, English-language media (Chaffee, Nass and Yang 1990). They also lack strong connections to American political parties (Jones-Correa 1998; Wong 2000; Hajnal and Lee 2011), further reducing their incentive to follow US national politics. At the same time, perceptions of everyday, individually targeted discrimination are likely to be grounded in local experiences, and thus to vary across space.

**Data and methods**

We aim to measure the spatial clustering of PD among contemporary immigrants. In doing so, we are guided by the claim of King, Keohane and Verba (1994) that when making causal inferences, “[d]escription often comes first; it is hard to develop explanations before we know something about the world and what needs to be explained on the basis of what characteristics” (34). Specifically, we identified surveys with the relevant questions and sufficient sample sizes for which geographic identifiers for respondents’ counties were available. Here, we make use of the 2005–2006 LNS ($n = 5653$ first-generation immigrants), the 2008 NAAS ($n = 4557$ first-generation immigrants), and Pew’s 2007 Muslim America Survey ($n = 749$ first-generation immigrants). All three surveys took place after 9/11 and after immigration became nationally salient in early 2006, making any differences across the surveys unlikely to be a product of the national context in which they were conducted.

Moreover, all three surveys emphasized here are telephone surveys, a fact that enables them to include respondents from varied parts of the US. The LNS, for example, is a bilingual phone survey whose sampling frame covered approximately 87.5% of the US Hispanic population. It covers respondents from 18 states, including traditional immigrant gateways such as Florida and California as well as new immigrant destinations such as Arkansas, Iowa, and Virginia. As a consequence, the counties its respondents call home vary widely. The 10th percentile foreign-born respondent lives in a county that is 5% immigrant, while the 90th percentile foreign-born respondent’s county is 36% immigrant.

Researchers studying PD sometimes have to choose between measures of PD which emphasize negative treatment of the group as a whole and negative treatment of the individual – and recent research within political science has emphasized measures that focus on group-level PD (Sanchez 2006; Lavariega Monforti and Sanchez 2010). Thankfully, the
LNS provides measures of both forms of PD, and we analyze both here. To measure PD targeted at the individual respondent, we use four LNS questions which probe both everyday discrimination and lifetime events. Specifically, the LNS asked about having ever “been unfairly fired or denied a job or promotion” (mean = 0.15); having “been unfairly treated by the police” (mean = 0.10); having been “unfairly prevented from moving into a neighborhood” (mean = 0.05); and having “been treated unfairly or badly at restaurants or stores” (mean = 0.11). There is undeniably variation to be explained, as 28% of our Latino respondents report at least one of these forms of discrimination.

From this battery of questions, we use a factor analysis model based on polychoric correlations to assign each respondent a factor score indicating his or her level of PD. Those who answered “yes” to any of the four questions about personal experiences were also asked to give a reason for the unfair treatment, with the response options including their immigrant status, skin color, accent/language, Latino ethnicity, and national origin. We examine these as well, coded as a set of indicator variables for respondents who reported discrimination and attributed it to each cause.

As this discussion makes clear, the LNS emphasizes discrimination targeting the respondents as individuals. Still, the LNS also included a general question about discrimination against Latinos as a group, asking whether respondents agreed or disagreed that “Latinos can get ahead in the US if they work hard.” This question is admittedly an imperfect measure of perceptions of generalized discrimination, as it can be influenced by views of the economy or other perceptions.

As with the LNS, the NAAS is a telephone survey whose sampling frame encompasses Asian Americans living in a wide variety of communities throughout the US. The NAAS is an eight-language telephone survey targeting respondents of Asian descent, excluding Middle Eastern countries. The sampling frame includes approximately 88% of Asian Americans in the US, and the data set has respondents from 48 of the 50 US states. It, too, affords researchers with respondents from varied environments. While the 10th percentile foreign-born respondent to the NAAS lives in a county where 7% of residents are first-generation immigrants, the 90th percentile foreign-born respondent lives in a county where 36% of residents are first-generation immigrants.

The NAAS contained a similar battery of questions on PD targeting the respondent individually, but its initial question provided a clear attribution for the discriminatory treatment. It read, “[w]e are interested in the way you have been treated in the United States, and whether you have ever been treated unfairly because of your race, ancestry, being an immigrant, or having an accent.” The NAAS asks about the same types of experiences as the LNS, but separates hiring and promotion. The highest level of discrimination reported was with respect to restaurants and stores (mean = 0.19), while the lowest was in housing (0.05). The survey also asked whether respondents have been the victim of a hate crime, (0.10). In all, 38% of respondents indicated discrimination of some form. As with the LNS, we used these questions to generate a factor score based on polychoric correlations for each respondent. And as with the LNS, the NAAS asked about having ever experienced the forms of discrimination described, rather than asking about a specific time period.

The Pew Muslim America survey asked about PD, including questions about concerns that the respondent will not be “hired for a job or promotion because of your religion” (mean = 2.2 on a scale from 1 to 4, where 1 is “not at all worried” and 4 is “very worried”) and that his or her “telephone calls and emails [will be] monitored by the
government because of your religion” (mean = 2.0 on a 1–4 scale). It also asked about experiences with harassment, such as being “singled out by airport security” (0.33), being “physically threatened or assaulted” (0.02), and being “called offensive names” (0.10).

We analyze these questions alongside questions about more generalized PD against Muslims.

Measuring geographic clustering

The most common empirical strategy to identify contextual effects using observational data is to specify a model which includes both individual and contextual covariates (Oliver and Wong 2003; Gay 2006). Yet our goal here is not to make causal inferences about the effects of specific contextual variables. Instead, we focus on the prior descriptive task of characterizing the extent to which various dependent variables vary across space. The logic underpinning this choice is straightforward. If there is little or no spatial variation in a given variable relative to its total variation, contextual effects on that variable become less likely. As a result, this research has the potential to guide future studies of the causal effects of contextual variables, which can be extraordinarily resource-intensive (Gay 2012; Enos 2014).

We measure geographic/spatial clustering straightforwardly as residence in the same US county or state. Our analyses emphasize the state and county levels for practical as well as theoretical reasons. Theoretically, counties are sufficiently large that the various mechanisms of racial threat are likely to take place within their boundaries, and they have been the primary unit at which threat has been studied by prior research (Key 1949; Taylor 1998; Oliver and Wong 2003). States, by contrast, have considerable political authority, and so can potentially influence the climate of inter-group relations with measures like Arizona’s SB 1070. Practically, both county and state of residence are available in each of the surveys we analyze. It is important to note that this operationalization of “spatial” or “geographic” differs from that found in some research which conceives of space as some function of distance (Franzese and Hays 2007; Cho and Gimpel 2010). But it is keeping with other common academic uses of the term “spatial” or “geographic” in which individuals either do or do not share a common geographic context (Wallace, Zepeda-Millan and Jones-Correa 2014; Enos 2014; Enos 2015).

Specifically, we use linear multi-level models with varying (or “random”) intercepts for each geographic cluster (Gelman and Hill 2006) to estimate Intra-class Correlations (ICCs), which measure the share of the total variation explained at the clustered level (Donner and Koval 1980; McMahon, Pouget and Tortu 2006). The ICC is a ratio of the group-level variation to the total variation, and so will grow small as the group-level variation declines or as the total variation increases. Each ICC is bounded between 0 and 1, where 0 indicates that an observation’s cluster tells us nothing about its outcome while 1 indicates that we can predict its outcome exactly.

The ICC also fits well with our substantive puzzle. What matters for a community’s attitudinal climate is not the conditional correlation between a single contextual variable and respondent attitudes, but instead the overall distribution of opinion across communities. To ensure that our results are not artifacts of this method, we employ a variety of robustness checks detailed in the appendix, including the examination of variables known to have spatial clustering and the use of alternate, coefficient-based statistical tests. We can also estimate such models with individual-level covariates, allowing us to quantify the
extent to which such spatial patterning can be explained by local differences in individual-level demographics such as education or gender.

To our knowledge, this use of the ICC to study contextual effects is novel and so requires some discussion, especially given critiques of related metrics such as the $R$-squared statistic (Achen 1977; King 1986). Still, if we define meaningful contextual effects as those that account for at least some threshold of the total variation in the dependent variable, the ICC is a useful tool with a straightforward interpretation. Furthermore, in a model with no covariates, the ICC approximates our core quantity of interest: to what extent does knowing a respondent’s county of residence provide information about her likely responses? The inclusion of models with no covariates has the added advantage that it obviates the need for multiple imputation or other model-based solutions to missing data, as the levels of missingness are typically quite small.

The lowest level of geographic aggregation which is consistently available across these surveys is the county. While US counties are very heterogeneous in size, they enable us to approximate the environments in which our respondents live, work, and interact. They also are of sufficient size to enable us to estimate meaningful county-level variation, as Figure A5 in the appendix makes clear. In it, we present the number of respondents per county for the LNS, NAAS and Pew Muslim America surveys using US maps. All three surveys provide us with ample county-level variation, though the LNS and NAAS have more respondents per county, on average. In the LNS, 52 counties have 25 or more first-generation respondents, while in the NAAS the comparable number is 33 and in the Muslim America survey it is 4.16

In Table 1, we reinforce this point by providing the total sample size, the total number of unique counties, and the mean sample size per county for each data set. We also provide data on five non-Hispanic white data sources by way of comparison. Latino and Asian American immigrants in our surveys are markedly more clustered than are the respondents of a typical, nationally representative survey17: the number of respondents per county for those groups is 11.0 and 12.3, respectively. This clustering should make it easier to detect spatial clustering by estimating the ICC.

**Geographic clustering among first-generation immigrants**

Here we measure geographic clustering in PD, focusing on PD directed against the respondent as an individual. In recent years, American states have adopted a central role in

<table>
<thead>
<tr>
<th>Survey</th>
<th>Sample size</th>
<th>Total counties</th>
<th>Mean per county</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNS 2005–2006</td>
<td>5653</td>
<td>516</td>
<td>11.0</td>
</tr>
<tr>
<td>Pew Muslim 2007</td>
<td>749</td>
<td>235</td>
<td>3.2</td>
</tr>
<tr>
<td>NAAS 2008</td>
<td>4557</td>
<td>369</td>
<td>12.3</td>
</tr>
<tr>
<td>Whites</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCCBS 2000</td>
<td>1839</td>
<td>953</td>
<td>1.9</td>
</tr>
<tr>
<td>21st Cen. 2004</td>
<td>1509</td>
<td>601</td>
<td>2.5</td>
</tr>
<tr>
<td>Pew 2006</td>
<td>1436</td>
<td>791</td>
<td>1.8</td>
</tr>
<tr>
<td>Pew 2007</td>
<td>1468</td>
<td>729</td>
<td>2.0</td>
</tr>
<tr>
<td>Pew 2009</td>
<td>1398</td>
<td>531</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Notes: This table provides the total sample size, the total number of unique counties, and the mean sample size per county for each survey analyzed in the text or appendix.
immigration policy-making (Gulasekaram and Ramakrishnan 2012), with Arizona’s SB 1070 and Alabama’s HB56 but two examples. It is plausible, then, that immigrants’ PD could vary meaningfully at the state level, as they respond to their state’s politics and policies (García Bedolla 2005; Pantoja and Segura 2003). At the same time, it is also possible that more local environments are especially influential, a fact which explains this section’s subsequent emphasis on county-level clustering.

As an initial probe of the state-level variation in immigrants’ PD, we turn to the LNS, which provides at least 48 respondents who answered its PD questions in 18 states. In Table 2, we summarize each of the four measures of individually targeted PD by state. We provide a fifth measure which sums the four binary indicators for each respondent, and we also report the number of foreign-born respondents per state. The state-level sample sizes in the LNS are substantial, with a median of 295 respondents per state. Still, there is no obvious pattern to the state-level results. Although Arizona has been home to contentious battles over immigration in recent years, its foreign-born Latinos report a lower level of PD than those in all but two states. Texas and California both have had large Latino communities for decades – and yet, Californian Latino immigrants report relatively high levels of discrimination while their Texan counterparts report relatively low levels. Immigrants in some new immigrant destinations (such as Georgia) report higher average PD than those in similar states like North Carolina. But given the sample sizes, we would expect some state-level differences by chance alone. And in fact, the state-level ICC when modeling the number of discrete types of discrimination a respondent has experienced is tiny, at 0.002 with no covariates. When conducting the same state-level analysis using foreign-born respondents in the NAAS, the ICC is again quite small (0.007). Knowing an immigrant’s state of residence tells us little about her PD.

We now turn to our primary level of analysis, the county level, as it is a better approximation of the environment in which our respondents live their daily lives. As dependent variables, we use each available measure of discrimination as well as a binary indicator for

Table 2. Perceived discrimination by state.

<table>
<thead>
<tr>
<th>State</th>
<th>Police</th>
<th>Stores</th>
<th>Job</th>
<th>Housing</th>
<th>Sum</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA</td>
<td>0.08</td>
<td>0.10</td>
<td>0.11</td>
<td>0.03</td>
<td>0.31</td>
<td>137</td>
</tr>
<tr>
<td>TX</td>
<td>0.07</td>
<td>0.09</td>
<td>0.13</td>
<td>0.03</td>
<td>0.33</td>
<td>456</td>
</tr>
<tr>
<td>AZ</td>
<td>0.09</td>
<td>0.12</td>
<td>0.10</td>
<td>0.05</td>
<td>0.34</td>
<td>222</td>
</tr>
<tr>
<td>FL</td>
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<td>0.10</td>
<td>0.10</td>
<td>0.05</td>
<td>0.35</td>
<td>553</td>
</tr>
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Notes: For the foreign-born LNS respondents, this table presents the share of respondents in each state reporting each type of discrimination. The column “sum” reports the average for a measure that sums each of the four types of discrimination for every respondent.
the reason attributed to any discrimination in the LNS. We also use the factor scores described above. In what follows, we emphasize the results from multi-level models with no covariates, although we show that the results are little different when conditioning on individual-level factors such as the immigrant’s age, gender, education, income, racial identification, time in the US, English ability, language use during the survey, and country of origin (measured through indicator variables).18

As Figure 1 makes clear, there is very little spatial clustering in Latino immigrants’ PD. First consider the black bars, reflecting the results for models with no individual-level covariates. For the questions about experiences of discrimination targeting the individual, the ICCs never reach above 0.01. For example, the ICC for unfair treatment by the police is 0.003 (SE = 0.003). For the factor score, the ICC is 0.004 (SE = 0.003). As the figure’s gray bars illustrate, the results are generally similar when conditioning on the individual-level covariates.19 (The full, fitted model of the factor score with individual-level covariates is presented in Table A1 in the appendix.)

In the LNS, only respondents who reported some form of discrimination were asked a follow-up question about their attribution as to why they were the target of discriminatory behavior. The possible attributions included skin tone, being Latino, being an immigrant, being from their nation of origin, and speaking with an accent. Given the empirical correlations among these traits, respondents may have had a hard time attributing the discrimination to a single factor; just as it is difficult to deem a behavior discriminatory, it may be difficult to attribute it to a specific cause. Still, among respondents who reported some form of discrimination, there are hints of spatial patterning in the reasons that Latino immigrants give for discrimination, with ICCs of 0.04 (SE = 0.02), 0.02 (SE = 0.01), 0.02 (SE = 0.01), and 0.04 (SE = 0.02) corresponding to attributions that discrimination is because of the respondent’s immigrant status, Latino heritage, national origin, and skin tone, respectively.20 There is some hint that while the extent of discrimination does not vary spatially, the attribution about the reason for the discrimination might vary somewhat by place.

![Figure 1](image_url). Spatial clustering in first-generation Latino immigrants’ PD. Source: Latino National Survey, 2005–2006.
To determine whether our ICC-based approach detects spatial variation that is known to exist, and to establish a baseline, the bottom bars show the ICCs when predicting whether the Latino respondents were born in Mexico. Here, we see a sizable ICC of 0.37 (SE = 0.02), a fact which helps validate the method. We detail additional tests of validity just below.

Figure 2 shows that the same pattern is true for immigrants of Asian descent. There, for the models without covariates, the single question eliciting the most spatial clustering has an ICC of 0.01, and the ICC for the overall factor score is 0.002 (SE = 0.003). As with Latino immigrants, knowing the part of the US in which an Asian immigrant lives tells us essentially nothing about the probability that he or she will report PD. In both cases, the patterns are highly similar when using individual-level controls including the respondents' countries of origin, education, and language use. For the NAAS, for example, the largest ICCs we find for PD when conditioning on individual-level variables are 0.01 for being treated unfairly by police, being unfairly fired, and the summary factor score (SE = 0.007; SE = 0.006; and SE = 0.006, respectively). For being treated unfairly in promotions or housing, or for being the victim of a hate crime, it is less than 0.001. By contrast, there is substantially more geographic clustering in the question about whether an immigrant is from India, as the bottom bars in Figure 2 indicate.

In Appendix 1, we present similar results for non-Hispanic whites using five additional surveys, results which uncover more meaningful spatial variation in immigrant-related attitudes. Those findings serve to further validate our method, as they are largely consistent with prior research on racial or inter-group threat. The results indicate that attitudes directed at Arab Americans and American Muslims might be especially variable across space.

To evaluate the possibility that such differences are felt by first-generation immigrants, we use the same methods to examine a 2007 Pew survey of American Muslims. The results, shown in Figure 3, do illustrate some level of spatial clustering. For instance, in models without individual-level covariates, clustering is observed for dependent variables measuring whether female respondents are more likely to wear a head cover in public in

Figure 2. Spatial clustering in first-generation Asian American immigrants’ PD.
certain places (0.10; SE = 0.06), whether Muslim women are treated better or worse in the US (0.06; SE = 0.03), and to indicate that hatred is a problem (0.03; SE = 0.03). Yet for those indicating that harassment is a problem in an open-ended question, the ICC is 0.02 (SE = 0.02), and it is lower still for having been called names for being Muslim (0.01; SE = 0.02), indicating that discrimination/stereotypes are a problem (0.001; SE = 0.017), or having faced discrimination in the US (4.15e−14; SE = 0.02). First-generation Muslim immigrants are not more likely to report discrimination in specific counties. We do see some evidence of spatial clustering, but not in assessments of discrimination. Consistently, the results indicate that native-born whites’ immigration-related attitudes differ across space, while immigrants’ PD does not. That pattern holds for Latino immigrants, Asian American immigrants, and Muslim immigrants.

**Robustness and discussion**

The fact that we find spatial clustering in native-born whites’ attitudes in Appendix 1 helps validate our use of the ICC, as there is already an extensive literature showing spatial influences on non-Hispanic whites’ group-related attitudes. Still, to further validate the ICC as a measure of spatial variation, the appendix details additional tests in which we measure county-level clustering in immigrants’ countries or – in the case of Mexicans – states of origin. These tests reinforce that the ICC can detect spatial clustering using immigrant samples in cases where it is known to exist; immigrants do tend to live around those from the same state or country. The appendix also compares the ICC to the results of $F$-tests conducted on the coefficients of 10 county-level variables that we added to our models, further validating the use of the ICC as a descriptive measure of county-level clustering. In addition, it presents robustness checks in which we remove small counties or

![Figure 3. Spatial clustering in first-generation Muslim immigrants’ PD.](image)

*Source: 2007 Pew Muslim Survey.*
re-estimate the non-Hispanic white results for only those counties where we sampled first-generation immigrants. In all cases, the pattern of results detailed above remains.

One explanation is that the social and psychological barriers to perceiving and reporting personal discrimination for first-generation immigrants are substantial – and that the null results for immigrants’ PD above might thus reflect measurement error.21 For example, existing measures of PD tend to focus on a narrow range of formal discriminatory contexts (e.g., hiring, police, housing) when others – including those that occur in informal domains (e.g., inter-personal interactions, casual encounters) – could be of special importance to immigrant populations. Moreover, existing measures of PD were not designed with spatial concerns in mind, and typically ask immigrants about experiences with discrimination in the US as a whole. This failure to situate PD geographically could shape the extent to which immigrants report discrimination that occurred outside their current place of residence.

Still, the descriptive statistics for the surveys we employed above show that substantial numbers of immigrants do report personal experiences of discrimination. Nineteen percent of our first-generation Asian American respondents report discrimination in stores or restaurants, and another 13% report negative encounters with the police, figures which are 11% and 10% respectively for our LNS respondents. Again, 28% of the first-generation LNS respondents and 38% of the NAAS respondents answer “yes” to at least one of the questions about personal experiences with PD.

In a similar vein, when we predict the factor score for the LNS and NAAS respondents, we find several meaningful and significant correlates: immigrants who are younger and male report higher levels of personal discrimination, as do those who have been in the US for longer and speak better English.22 As one example, when we predict perceptions of discrimination from the police in the LNS sample, the \( z \)-score for the “male” covariate is 7.52, indicating the strongly significant, positive relationship expected by prior research (Kasinitz et al. 2008). For the NAAS, the comparable \( z \)-score is 4.67. These tests undercut the claim that the results are purely measurement error, as these perceptions fit with the expectations of prior research. Still, future work might further integrate the study of prejudice and PD by developing measures of PD that explicitly address the areas in which stereotypes and anti-immigrant attitudes are most common. Tensions surrounding language are one example.

The study of PD commonly generates unexpected findings. While dark-skinned African-Americans are disadvantaged in several respects compared to their light-skinned peers, they are no more likely to report discrimination (Hochschild and Weaver 2007). Also, it is Latino immigrants who arrive in the US early in their lives that report higher levels of PD (Pérez, Fortuna and Alegria 2008). These findings emphasize the perceptual element of PD: a group might experience higher levels of discrimination and yet report lower PD. Here, we add another such unexpected result to the literature. Threatened political responses to immigrants are concentrated in certain places, but PD among first-generation immigrants is not.

**Conclusion**

Recent years have seen a spate of state and local lawmaking targeting unauthorized immigrants, from Hazleton, Pennsylvania’s 2006 “Illegal Immigration Relief Act” to Arizona’s
SB 1070 (Brettell and Nibbs 2010; Hopkins 2010; Gulasekaram and Ramakrishnan 2012). In the wake of such laws and the often heated debates surrounding them, it is understandable that observers have expected increased PD among the targeted groups living in those places (National Immigration Law Center 2012). Prior research also gives us reason to expect that immigrants living in those communities might mobilize defensively or adopt distinctive political attitudes and identities in reaction. Considered jointly, prior research proposes a causal chain running from native-born attitudes to discriminatory behaviors, which in turn might fuel PD among targeted immigrant groups.

Yet our results suggest that any connection between native-born attitudes and immigrants’ reports of negative treatment is not so straightforward. In fact, they imply that immigrants who live in the communities with the strongest anti-immigrant sentiment are no more likely to report discrimination than immigrants living elsewhere. The relative lack of spatial variation in immigrants’ PD at the county and state levels proves highly robust. The same pattern of results appears for Latino immigrants, Asian American immigrants, and Muslim immigrants. Alternate analyses confirm that ICCs can identify spatial variation known to be present, such as the spatial clustering in immigrants’ countries of origin or non-Hispanic whites’ attitudes. Certainly, this pattern of findings for immigrants’ PD is not what existing scholarship had led us to expect. Even so, it can contribute to current understandings and measurement of perceived discrimination. These findings also develop our understanding of other outcomes that have been linked to perceived discrimination, such as immigrants’ political and social incorporation.

There are multiple links in the hypothesized chain connecting native-born attitudes to immigrants’ PD, and so multiple explanations for why we fail to find meaningful spatial variation in PD. One emphasizes the distinction between attitudes and interpersonal behavior (LaPiere 1934; Sears 1983). However much local demographics shape residents’ social and political attitudes, they might not meaningfully influence how they interact with their neighbors. And even if communities do differ in their levels of discriminatory behavior, there are also barriers to detecting discrimination. Immigrants might not perceive discrimination if the actions of the native-born are either individually or collectively ambiguous, subject to multiple interpretations, or invisible to the native-born themselves (Gaertner and Dovidio 1986; Marrow 2011). Here, future research could productively connect native-born attitudes to behaviors that are observable to immigrants. Also, immigrants might differ even in how they perceive and interpret the same behavior. For instance, there are plausible theoretical reasons why immigrants might perceive either more or less discrimination from the native-born than actually exists – what are called “false alarms” and “misses” in social psychology.23 In short, there are various places in which the connection between native-born whites’ attitudes and immigrants’ PD might break down.

Our results should also inform thinking about the role of localities in shaping immigrants’ political and social incorporation as well as their political attitudes and identities. Prior scholarship supports the intuition that the early stages of immigrant political incorporation are local in orientation, as immigrants interact with people and institutions in their immediate surroundings (Jones-Correa 1998, 2006; Lewis and Ramakrishnan 2007; Hopkins 2010; Ramakrishnan and Wong 2010; Marrow 2011; Pastor and Mollenkopf 2012). Yet our research indicates that local contexts might not play as strong a role in shaping immigrants’ social and political incorporation trajectories, at least insofar as they are connected to PD. Instead, factors at lower levels (e.g., variation in
individual immigrants’ personalities) or higher levels (e.g., the content of the receiving country’s mass media) seem to dampen any intermediate local influences. These results thus encourage cross-national research on the role of space in inter-group relations – and indeed, preliminary analyses indicate little spatial clustering in PD among non-white respondents to the 2002 Ethnic Diversity Survey in Canada and the 2007–2008 Citizenship Survey in Britain as well. The finding that the reasons Latino immigrants give for discriminatory treatment may vary spatially calls for follow-up research as well, both with Latino immigrants and under immigrant groups.

These results also suggest the value of studying spatial variation in immigrants’ PD at other moments in American history. Perhaps the post-9/11 climate, the growth of national media outlets targeting non-English speakers, the contemporary salience of immigration in national politics or other period-specific factors explain the minimal variation in PD across US counties in recent years. Time may also be a stronger influence on PD than space, in that recognizing and politicizing local discriminatory experiences might require a certain knowledge, experience, and identity typically acquired by immigrants only over time. In the US, politically meaningful local experiences seem more likely to be a consequence of political incorporation and exposure to national-level politics than a cause of either.

Notes

1. Prior scholarship on PD has considered spatial patterning mainly based on race (e.g., Cohen and Dawson 1993; Hunt et al. 2007; Seaton and Yip 2009; Stainback and Irvin 2011; Canache et al. 2014) and other categories including HIV status (Miller et al. 2011) and sexual orientation (Barron and Hebl 2012).

2. On the related concept of stigma and its political consequences for Latinos, see especially García Bedolla (2005).

3. Other studies link PD to health outcomes (Borrell et al. 2006).

4. To our knowledge, the only study that considers the attitudes of the community as a whole and the stigmatized group simultaneously is Miller et al. (2011): it demonstrates that HIV-positive New England residents are more willing to disclose their status when they live in more tolerant communities.

5. Scholarship has also explored PD in ways relevant to geography outside the US. For example, Ray and Preston (2009) argue that PD among native and foreign-born ethnic minorities vary across Canada’s gateway cities.

6. In these three data sets, we coded first-generation immigrants as respondents born outside the US and its territories. In the LNS, this excludes Puerto Ricans from our analysis. The results are not meaningfully altered by their inclusion.

7. Kasinitz et al. (2008) note that “[e]ncounters with the police seem to have a particularly deep and long-lasting effect on young people, especially men” (318).

8. To be sure, these questions ask about the respondents’ specific experiences. Still, we follow Major, Quinton and McCoy (2002) in considering them to be measures of perceived discrimination, as they are assessed via self-report and so filtered through perceptual processes.

9. The factor loadings are 0.64 for the question about having been fired and the question about having been treated unfairly by the police, and 0.63 for the question about having been treated unfairly in a store or restaurant. The loading is 0.66 for having been treated unfairly in housing. The factor scores measure PD targeted at the individual.

10. Respondents were able to attribute mistreatment to gender or age, but very few did so, and we exclude these variables from our analysis.

11. The factor loadings range from 0.75 for the question about being fired unfairly to 0.60 for the question about being treated unfairly in seeking a home.
12. While this means that immigrants in our sample could be reporting on discrimination experienced outside their current place of residence, that is only true for the subset of our respondents who have previously lived elsewhere. In the LNS, 66% of respondents have never lived in another US state.

13. To identify a sufficient sample of Muslims within the US, Pew Research employed various sampling frames. It recontacted previously identified Muslim households, and it targeted areas with larger Muslim populations (excluding between 5% and 21% of the US Muslim population). Additionally, it targeted households with commonly Muslim last names.

14. Here, the introduction to the battery of questions connects such experiences to religion, as it reads: “Next, I am going to read a list of things that some Muslims in the US have experienced.”

15. To estimate the standard error of the ICC, we follow Donner and Koval (1980) as implemented by Stata’s quickicc function. For binary dependent variables, we confirmed the core patterns in models not presented here using a logistic functional form estimated through Stata’s xtmelogit command.

16. Levels of missingness for our core variables are low as well. For example, in the LNS, we were able to generate factor scores for 96% of 5653 first-generation respondents. In the NAAS, the comparable figure is 92%.

17. For example, for the surveys of non-Hispanic whites employed in the appendix, the average number of non-Hispanic white respondents per unique county ranges from 1.8 to 2.6.

18. In the LNS and NAAS, only countries of origin with 50 or more positive cases were included as controls in the models with individual-level covariates. Similarly, controls for identifying as black and white were included in the LNS but not the NAAS.

19. Ex ante, it is plausible that not simply the levels of perceived discrimination but also its antecedents might vary across places. For example, some communities might have stronger relationships between a key covariate such as education or Mexican origin and perceived discrimination. We used varying-slope models to consider this possibility – and found that the variation in slopes across states is almost imperceptible.

20. The full model can be found in Table A3 in the appendix.

21. Intriguingly, Maxwell (2012) finds that in Britain, minority respondents report higher levels of PD in closed-ended questions than in open-ended questions.

22. When predicting the discrimination factor score using the LNS sample, the z-score for age measured in years is −3.62. For the respondents’ number of years in the US, the comparable figure is 3.75, while for those taking the survey in English it is 1.44. See Table A1 in the appendix. For the first factor in the NAAS, we find that age in years produces a z-score of −0.30, while being male has a z-score of 1.10. The z-score for years in the US is 2.48, while for the respondent’s English language ability it is 2.33. Here, see Table A2 in the appendix.


24. Rahsaan Maxwell kindly modeled an index of 16 potentially discriminatory situations for 5539 non-white Britons living in 886 different wards, recovering an ICC of 0.04.

25. The 2000 SCCBS does not include a question about birthplace, so we analyze non-Hispanic whites without regard to place of birth.

26. For the LNS and NAAS, the Pearson’s correlation tests included results from models predicting PD (listed in Figure 1) and models predicting our placebo variables, country of origin of the respondent.

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References


Appendix 1. Clustering in non-Hispanic whites’ attitudes

On account of our theoretical expectations and sample size considerations, in this appendix we focus on non-Hispanic whites, although considering native-born Blacks, Asian Americans, Hispanics, or other groups would undoubtedly enrich the picture further. To do so, we draw on five surveys: the national sample of 2000 Social Capital Community Benchmark Survey \((n = 1839)\)^25, the 2004 Twenty-first Century Americanism Survey \((n = 1509)\), a 2006 survey by the Pew Research Center on immigration attitudes \((n = 1436)\), and two Pew Research Center surveys on racial attitudes conducted in 2007 \((n = 1468)\) and 2009 \((n = 1398)\). We analyze survey questions that assess affect, trust, stereotypes, and policy attitudes related to immigrants or heavily immigrant ethnic groups.

Spatial clustering among native-born whites

Do native-born attitudes on immigrants, immigration policy, Hispanics, or Asian Americans show significant levels of spatial clustering – and if so, which attitudes? Here, we report the ICCs from survey samples of non-Hispanic whites. As in our analyses...
of first-generation immigrants, we report ICCs both from models with no covariates and from models with basic individual-level covariates, which in this case include respondents’ age, income, education, and gender.

Of the available surveys, the Pew 2006 Immigration Survey has the most comprehensive set of questions given our interests, including questions on group-specific affect, perceptions about immigration, and views on policy. It also has questions that are local in reference, enabling us to validate the method. The top panel of Figure A1 provides the size of the ICCs for various dependent variables from that survey. In doing so, it provides additional validation of the ICC-based approach to measuring spatial clustering. In either specification, the question about immigration as a local problem returns among the highest ICCs of any variable, with an ICC of 0.23 (no covariates; SE = 0.06) or 0.24 (with covariates; SE = 0.07). A similar question about immigration’s impacts on the nation as a whole has a far lower ICC (0.06 without covariates; SE = 0.05), illustrating that there is more spatial clustering for questions with a local frame of reference. In models with no covariates, there are an additional 10 dependent variables with ICCs above 0.10. Respondents’ counties of residence structure a variety of attitudes and stereotypes, such as questions about whether Asian immigrants work hard (0.43; SE = 0.06), whether they increase crime (0.32; SE = 0.06), whether the respondent has positive affect toward Hispanics (0.14; SE = 0.06), and whether immigrants take jobs from US citizens (0.11; SE = 0.03). Some of these place-level differences are explained by the distribution of individual-level characteristics, as many of the ICCs decline when conditioning on individual-level factors (shown by the light gray bars). But what likely matters from the immigrants’ point of view is the overall distribution of opinion, not its antecedents. While some immigration-related attitudes (such as affect toward Asian immigrants and views on learning English) show little spatial clustering, several others do.

In the lower panel of Figure A1, we provide the results of similar analyses applying models with no covariates or individual-level covariates to the non-Hispanic white respondents in the SCCBS. This survey measures inter-group affect primarily through questions about inter-group trust, friendship, and marriage. Without covariates, the single strongest ICC is for reporting having a Hispanic friend (0.15; SE = 0.03), a finding that further validates the method. People living in certain counties have more opportunities to befriend Hispanics. We see meaningful spatial variation in inter-group affect as well, including whether the respondent would oppose a marriage between a family member and a Hispanic (0.11; SE = 0.05) or Asian American (0.09; SE = 0.05). As Figure A2 shows, we reach a similar conclusion – albeit with lower ICCs of 0.05 (SE = 0.02) and 0.04 (SE = 0.02) – when examining non-Hispanic white respondents to the Pew 2009 racial attitudes survey using models without covariates. There is also spatial variation in the SCCBS’s primary question about views of immigrants as a political group (ICC = 0.08, no covariates; SE = 0.03), which asked whether immigrants were getting too demanding in their push for rights. This item is from the modern racism scale and so can be considered a subtle measure of prejudice (McConahay 1986).

The 21st Century Americanism Survey (CAS) does not directly measure inter-group affect, but it does contain a variety of measures of policy attitudes and conceptions of American identity. Again using the models with no individual-level covariates, we see in Figure A3 that the single question which produces the most spatially variable response...
Figure A1. Spatial clustering of non-Hispanic whites’ attitudes toward immigrants. The top figure shows the ICCs for the native-born non-Hispanic white subset of respondents to the Pew 2006 Immigration Survey. The bottom figure shows the ICCs for the native-born non-Hispanic white subset of respondents to the 2000 SCCBS.

is about whether true Americans are Christian (0.23; SE = 0.03). Notice, however, that there is also substantial spatial clustering in response to questions such as whether true Americans are white (0.15; SE = 0.03) as well as support for interning Arab Americans (0.14; SE = 0.05) or profiling them in certain scenarios (0.11; SE = 0.05). Several of the attitudes that are the most clearly spatial relate to Arab Americans, Muslims, and anti-terrorism policy, a fact that makes it important to examine Muslim immigrants’
PD. Intriguingly, some of these results grow stronger when conditioning on individual-level covariates. The CAS was conducted in 2004, during a period when terrorism was highly salient. Thus, this pattern of results supports the possibility that national rhetoric

**Figure A2.** Spatial clustering of non-Hispanic whites’ attitudes toward immigrants. These figures show the ICCs for various dependent variables related to inter-group attitudes and immigrants. At left, we see the results for models fit using the native-born, non-Hispanic white respondents to a 2007 Pew Racial Attitudes Survey, while at right, we see the same subset for a 2009 Pew Racial Attitudes survey.

**Figure A3.** Spatial clustering of non-Hispanic whites’ attitudes toward immigrants. Here, we see results for non-Hispanic whites using the 2004 21st Century Americanism Survey.
and local conditions interact to shape attitudes (see also Hopkins 2010). Still, these five surveys together illustrate that for non-Hispanic whites, a variety of immigrant-related attitudes are clustered in space.

Appendix 2. Alternative explanations and robustness

One alternative explanation for the pattern of little spatial clustering in immigrants’ PD points to challenges inherent in survey research, and especially in surveying immigrant populations likely to have been educated elsewhere, to use foreign languages, and to think about these concepts differently. We thus conducted tests of the measurement technique itself, to examine whether it can detect spatial clustering that is known to exist. Exploiting the presence of network-based migration (Palloni et al. 2001), where international migrants use resources from their social networks in choosing where to settle, we examine spatial clustering in immigrants’ countries or states of origin. Can this measurement technique detect spatial clustering in a case where it is known to exist? In a word, yes, as Figure A4 illustrates. The ICCs for both Latino and Asian American immigrants are now quite large, especially for large sub-groups such as those from Mexico, the Dominican Republican, Cuba, or India.

To further validate the use of ICCs, we generate two alternate measures of the presence of contextual effects and then apply them to our core data sets of first-generation immigrants. In the first, we re-specify the multi-level models to add 10 county-level variables, including logged population, racial demographics, levels and changes in the percent of county residents who are foreign-born, household income, levels of education, and the portion of the county that has been in residence for at least five years. We then conduct Wald tests of the joint significance of all the county-level coefficients. This test assesses whether a variety of contextual measures jointly add predictive power to the model. The second test is similar. In that test, we specify linear models including county fixed effects alongside our individual-level covariates and then use F-tests to examine the fixed effects’ joint significance. Here, too, we are assessing the extent to which knowledge of a respondent’s county adds explanatory power. We then examine Pearson’s correlations between the ICCs employed in the manuscript and these alternate measures of contextual effects. The correlations are always positive and strong. For the LNS, ICCs in models
without covariates correlate with the Wald statistics at 0.70 ($p < .001; n = 25$), while for the $F$-statistics the correlation is 0.83 ($p < .001; n = 25$). For the NAAS, the correlation between the ICCs and the Wald statistics is 0.65 ($p = .001; n = 21$); for the $F$-statistics, it is 0.87 ($p < .001, n = 25$). The pattern of results would have been quite similar had we adopted either of these alternate measurement strategies.

In a separate robustness check, we consider the possibility that the results for first-generation immigrants’ PD were skewed by the presence of few respondents in smaller counties. Specifically, using the LNS sample, we aggregated any counties with fewer than 15 respondents into a single residual cluster within the state, and then re-estimated our multi-level model of the discrimination factor score. The estimated ICC for the factor score that results is 0.004 (SE = 0.003), virtually the same as the original ICC of 0.004 (SE = 0.004) estimated in the manuscript. The presence of counties with fewer respondents does not appear to be altering our ICC estimates.

A related explanation for the asymmetry uncovered here – with non-Hispanic whites’ immigration attitudes varying by space, while immigrants’ own PD do not – is simply that the immigrants and the native-born live in different places. It is plausible that the variation detected in native-born whites’ attitudes comes from those living in communities with few immigrants. To address this issue, we return to the Pew 2006 immigration survey, and reduce the non-Hispanic white sample to the 555 respondents who lived in counties represented in the LNS. We re-estimate the ICCs using no covariates for this reduced data set, and reach the same general conclusion: non-Hispanic whites’ immigration-related attitudes show demonstrable spatial clustering. For instance, the ICC for thinking that immigration is an important local problem is now 0.23 (SE = 0.09), while for agreeing that immigrants take jobs from native-born Americans it is 0.11 (0.05).

### Appendix 3

**Table A1.** The fitted model of each respondent’s perceived discrimination factor score in the LNS.

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>SE</th>
<th>z-Score</th>
<th>$p$-Value</th>
<th>LB</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.108</td>
<td>0.032</td>
<td>3.400</td>
<td>.001</td>
<td>0.046</td>
<td>0.169</td>
</tr>
<tr>
<td>Age</td>
<td>-0.001</td>
<td>0.000</td>
<td>-3.620</td>
<td>.000</td>
<td>-0.002</td>
<td>-0.001</td>
</tr>
<tr>
<td>Male</td>
<td>0.039</td>
<td>0.007</td>
<td>5.340</td>
<td>.000</td>
<td>0.024</td>
<td>0.053</td>
</tr>
<tr>
<td>Education</td>
<td>0.001</td>
<td>0.001</td>
<td>0.480</td>
<td>.630</td>
<td>-0.002</td>
<td>0.003</td>
</tr>
<tr>
<td>Income*</td>
<td>0.188</td>
<td>0.170</td>
<td>1.110</td>
<td>.268</td>
<td>-0.145</td>
<td>0.522</td>
</tr>
<tr>
<td>Black</td>
<td>0.047</td>
<td>0.042</td>
<td>1.130</td>
<td>.258</td>
<td>-0.035</td>
<td>0.129</td>
</tr>
<tr>
<td>White</td>
<td>-0.017</td>
<td>0.008</td>
<td>-1.970</td>
<td>.048</td>
<td>-0.033</td>
<td>0.000</td>
</tr>
<tr>
<td>Skin color</td>
<td>0.005</td>
<td>0.004</td>
<td>1.310</td>
<td>.192</td>
<td>-0.002</td>
<td>0.012</td>
</tr>
<tr>
<td>Years in US</td>
<td>0.002</td>
<td>0.000</td>
<td>3.750</td>
<td>.000</td>
<td>0.001</td>
<td>0.003</td>
</tr>
<tr>
<td>English skill</td>
<td>0.008</td>
<td>0.006</td>
<td>1.440</td>
<td>.150</td>
<td>-0.003</td>
<td>0.019</td>
</tr>
<tr>
<td>Survey in English</td>
<td>0.023</td>
<td>0.012</td>
<td>1.860</td>
<td>.062</td>
<td>-0.001</td>
<td>0.048</td>
</tr>
<tr>
<td>From Colombia</td>
<td>-0.045</td>
<td>0.028</td>
<td>-1.610</td>
<td>.106</td>
<td>-0.100</td>
<td>0.010</td>
</tr>
<tr>
<td>From Cuba</td>
<td>-0.038</td>
<td>0.022</td>
<td>-1.700</td>
<td>.089</td>
<td>-0.081</td>
<td>0.006</td>
</tr>
<tr>
<td>From the Dominican Republic</td>
<td>-0.026</td>
<td>0.023</td>
<td>-1.110</td>
<td>.265</td>
<td>-0.071</td>
<td>0.020</td>
</tr>
<tr>
<td>From Ecuador</td>
<td>-0.015</td>
<td>0.032</td>
<td>-0.460</td>
<td>.642</td>
<td>-0.077</td>
<td>0.047</td>
</tr>
<tr>
<td>From El Salvador</td>
<td>-0.004</td>
<td>0.022</td>
<td>-0.180</td>
<td>.861</td>
<td>-0.047</td>
<td>0.039</td>
</tr>
<tr>
<td>From Guatemala</td>
<td>-0.035</td>
<td>0.027</td>
<td>-1.280</td>
<td>.202</td>
<td>-0.089</td>
<td>0.019</td>
</tr>
<tr>
<td>From Honduras</td>
<td>-0.009</td>
<td>0.033</td>
<td>-0.280</td>
<td>.781</td>
<td>-0.073</td>
<td>0.055</td>
</tr>
<tr>
<td>From Mexico</td>
<td>-0.025</td>
<td>0.018</td>
<td>-1.370</td>
<td>.172</td>
<td>-0.060</td>
<td>0.011</td>
</tr>
<tr>
<td>From Peru</td>
<td>-0.017</td>
<td>0.037</td>
<td>-0.470</td>
<td>.637</td>
<td>-0.090</td>
<td>0.055</td>
</tr>
</tbody>
</table>

Notes: This data set has 3547 fully observed respondents living in 438 counties. Income is in thousands of dollars. English skill has four levels, with 4 denoting a fluent English speaker.
### Table A2. The fitted model of each respondent’s perceived discrimination factor score in the NAAS.

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>z-Score</th>
<th>p-Value</th>
<th>LB</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.169</td>
<td>0.128</td>
<td>-1.32</td>
<td>.185</td>
<td>-0.419</td>
<td>0.081</td>
</tr>
<tr>
<td>Age</td>
<td>-0.00013</td>
<td>0.00044</td>
<td>-0.30</td>
<td>.767</td>
<td>-0.00100</td>
<td>0.00073</td>
</tr>
<tr>
<td>Male</td>
<td>0.011</td>
<td>0.010</td>
<td>1.10</td>
<td>.270</td>
<td>-0.008</td>
<td>0.030</td>
</tr>
<tr>
<td>Education</td>
<td>0.005</td>
<td>0.002</td>
<td>2.35</td>
<td>.019</td>
<td>0.001</td>
<td>0.009</td>
</tr>
<tr>
<td>Income*</td>
<td>-0.149</td>
<td>0.099</td>
<td>-1.50</td>
<td>.133</td>
<td>-0.343</td>
<td>0.045</td>
</tr>
<tr>
<td>Years in US</td>
<td>0.0013</td>
<td>0.0005</td>
<td>2.48</td>
<td>.013</td>
<td>0.0003</td>
<td>0.002</td>
</tr>
<tr>
<td>English ability</td>
<td>0.021</td>
<td>0.009</td>
<td>2.33</td>
<td>.020</td>
<td>0.003</td>
<td>0.039</td>
</tr>
<tr>
<td>Survey in English</td>
<td>-0.027</td>
<td>0.017</td>
<td>-1.24</td>
<td>.215</td>
<td>-0.055</td>
<td>0.012</td>
</tr>
<tr>
<td>Chinese</td>
<td>0.162</td>
<td>0.121</td>
<td>1.34</td>
<td>.180</td>
<td>-0.075</td>
<td>0.398</td>
</tr>
<tr>
<td>Filipino</td>
<td>0.143</td>
<td>0.121</td>
<td>1.18</td>
<td>.237</td>
<td>-0.094</td>
<td>0.379</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>0.111</td>
<td>0.121</td>
<td>0.92</td>
<td>.359</td>
<td>-0.126</td>
<td>0.347</td>
</tr>
<tr>
<td>South Vietnamese</td>
<td>0.124</td>
<td>0.123</td>
<td>1.01</td>
<td>.314</td>
<td>-0.117</td>
<td>0.364</td>
</tr>
<tr>
<td>North Vietnamese</td>
<td>0.076</td>
<td>0.127</td>
<td>0.60</td>
<td>.551</td>
<td>-0.173</td>
<td>0.324</td>
</tr>
<tr>
<td>Korean</td>
<td>0.078</td>
<td>0.123</td>
<td>0.59</td>
<td>.553</td>
<td>-0.169</td>
<td>0.315</td>
</tr>
<tr>
<td>South Korean</td>
<td>0.067</td>
<td>0.122</td>
<td>0.55</td>
<td>.579</td>
<td>-0.171</td>
<td>0.306</td>
</tr>
<tr>
<td>Japanese</td>
<td>0.135</td>
<td>0.123</td>
<td>1.09</td>
<td>.274</td>
<td>-0.106</td>
<td>0.376</td>
</tr>
<tr>
<td>Taiwanese</td>
<td>0.177</td>
<td>0.124</td>
<td>1.43</td>
<td>.152</td>
<td>-0.065</td>
<td>0.420</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.102</td>
<td>0.122</td>
<td>0.83</td>
<td>.405</td>
<td>-0.138</td>
<td>0.341</td>
</tr>
</tbody>
</table>

Notes: This data set has 2525 fully observed respondents living in 284 counties. Income is in thousands of dollars. English skill has four levels, with 4 denoting a fluent English speaker.

### Table A3. The fitted model for whether an LNS respondent indicated that the discrimination she perceived was due to their immigrant status.

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>z-Score</th>
<th>p-Value</th>
<th>LB</th>
<th>UB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.293</td>
<td>0.090</td>
<td>3.270</td>
<td>.001</td>
<td>0.117</td>
<td>0.468</td>
</tr>
<tr>
<td>Age</td>
<td>-0.002</td>
<td>0.001</td>
<td>-1.640</td>
<td>.102</td>
<td>-0.004</td>
<td>0.000</td>
</tr>
<tr>
<td>Male</td>
<td>0.002</td>
<td>0.021</td>
<td>0.110</td>
<td>.914</td>
<td>-0.039</td>
<td>0.043</td>
</tr>
<tr>
<td>Education</td>
<td>-0.001</td>
<td>0.003</td>
<td>-0.220</td>
<td>.829</td>
<td>-0.007</td>
<td>0.006</td>
</tr>
<tr>
<td>Income*</td>
<td>0.066</td>
<td>0.442</td>
<td>-0.150</td>
<td>.881</td>
<td>-0.934</td>
<td>0.802</td>
</tr>
<tr>
<td>Black</td>
<td>0.059</td>
<td>0.103</td>
<td>0.570</td>
<td>.568</td>
<td>-0.142</td>
<td>0.260</td>
</tr>
<tr>
<td>White</td>
<td>-0.004</td>
<td>0.025</td>
<td>-0.170</td>
<td>.863</td>
<td>-0.054</td>
<td>0.045</td>
</tr>
<tr>
<td>Skin color</td>
<td>0.008</td>
<td>0.011</td>
<td>0.750</td>
<td>.456</td>
<td>-0.013</td>
<td>0.029</td>
</tr>
<tr>
<td>Years in the US</td>
<td>-0.001</td>
<td>0.001</td>
<td>-0.470</td>
<td>.640</td>
<td>-0.003</td>
<td>0.002</td>
</tr>
<tr>
<td>English skill</td>
<td>-0.033</td>
<td>0.016</td>
<td>-2.090</td>
<td>.037</td>
<td>-0.064</td>
<td>-0.002</td>
</tr>
<tr>
<td>Survey in English</td>
<td>-0.035</td>
<td>0.033</td>
<td>-1.060</td>
<td>.287</td>
<td>-0.101</td>
<td>0.030</td>
</tr>
<tr>
<td>From Colombia</td>
<td>0.161</td>
<td>0.079</td>
<td>2.030</td>
<td>.042</td>
<td>0.006</td>
<td>0.317</td>
</tr>
<tr>
<td>From Cuba</td>
<td>0.001</td>
<td>0.063</td>
<td>0.020</td>
<td>.988</td>
<td>-0.122</td>
<td>0.124</td>
</tr>
<tr>
<td>From the Dominican Republic</td>
<td>0.009</td>
<td>0.066</td>
<td>0.130</td>
<td>.894</td>
<td>-0.120</td>
<td>0.138</td>
</tr>
<tr>
<td>From Ecuador</td>
<td>0.112</td>
<td>0.088</td>
<td>1.270</td>
<td>.202</td>
<td>-0.060</td>
<td>0.285</td>
</tr>
<tr>
<td>From El Salvador</td>
<td>0.015</td>
<td>0.058</td>
<td>0.260</td>
<td>.794</td>
<td>-0.099</td>
<td>0.130</td>
</tr>
<tr>
<td>From Guatemala</td>
<td>-0.043</td>
<td>0.075</td>
<td>-0.570</td>
<td>.567</td>
<td>-0.191</td>
<td>0.104</td>
</tr>
<tr>
<td>From Honduras</td>
<td>-0.069</td>
<td>0.091</td>
<td>-0.760</td>
<td>.448</td>
<td>-0.247</td>
<td>0.109</td>
</tr>
<tr>
<td>From Mexico</td>
<td>0.036</td>
<td>0.046</td>
<td>0.780</td>
<td>.434</td>
<td>-0.055</td>
<td>0.127</td>
</tr>
<tr>
<td>From Peru</td>
<td>0.027</td>
<td>0.106</td>
<td>0.260</td>
<td>.796</td>
<td>-0.180</td>
<td>0.235</td>
</tr>
</tbody>
</table>

Notes: The ICC is 0.04, with a standard error of 0.02. This data set has 1080 fully observed respondents who reported being the target of discrimination living in 264 counties. Income is in thousands of dollars. English skill has four levels, with 4 denoting a fluent English speaker.
Appendix 4

Figure A5. The number of first-generation respondents for the LNS (left), NAAS (center), and Pew Muslim Survey (right) by county.