The Social Context of Racial Boundary Negotiations: Segregation, Hate Crime, and Hispanic Racial Identity in Metropolitan America

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ABSTRACT

Research has yet to fully investigate how residential context impacts how Hispanics negotiate their racial identities. We attempt to fill this gap by arguing that residential context sets the stage for racial boundary negotiations and that certain environments are less conducive to boundary blurring. We test this argument by examining whether Hispanics who live in highly segregated areas and areas with higher levels of anti-Hispanic prejudice are more likely to opt out of the U.S. racial classifications by choosing “some other race.” Using data from the American Community Survey and information on anti-Hispanic hate crimes from the FBI, we find support for these hypotheses. These results are robust to different model specifications and instrumental variable approaches. Our study widens the theoretical landscape on the role of segregation and prejudice in forming racial identities, and has implications for the extent to which Hispanics may redefine the U.S. racial order.

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INTRODUCTION

With unprecedented growth in the Hispanic population over the last half-century, there is debate about if and how the color line in U.S. society will be redrawn. While some argue that the influx of Latinos will ultimately “destroy” the Anglo American racial system (Rodriguez 2007), others argue that the definition of “whiteness” will expand to include lighter-skinned Hispanics, thus keeping the black/white divide intact (Yancey 2003). Others have articulated a third option where Latinos will represent a new racial group, separate from both blacks and whites (Gomez 2007).

Vital to determining which of these predictions will ultimately prevail is how Hispanics self-identify. Building on the theoretical perspective that racial and ethnic identities are both socially constructed and continuously negotiated (Alba and Nee 2003; Barth 1969; Wimmer 2008), researchers have begun to focus on the determinants of Hispanic racial identity to address the continued relevance of the black/white divide in contemporary U.S. society. However, previous research has primarily focused on how individual-level factors and economic mobility impact the racial identity of Hispanics (Frank et al. 2010; Landale and Oropesa 2002; Alba 2009). As a result, little is known about the role that context may play in determining how Hispanics view themselves in relation to other groups. This is a striking omission given the primacy of ecological arguments in theoretical accounts of ethnic boundary making and unmaking. According to the emergent ethnicity perspective, for example, ethnic identity develops out of “structural conditions characterizing American cities and the position of groups
in American social structure,” chief among these conditions is the degree of residential segregation among racial and ethnic groups (Yancey et al. 1976: 391).

In contrast to this view, the reactive ethnicity perspective maintains that identity is “the product of confrontation with an adverse native mainstream and the rise of defensive identities and solidarities to counter it” (Portes and Rumbaut 2001: 284). However, the research in support of the reactive ethnicity perspective has been limited to either smaller case studies (Rumbaut 2008; Jimenez 2008; Massey and Sanchez 2010) or to personal experiences with prejudice (Michael and Timberlake 2008; Golash-Boza and Darity 2008). As a result, there have been comparatively few empirical investigations into whether living in social contexts marred with inter-group conflict and prejudice affects Hispanics’ racial self-identification.

In this paper, we test both the emergent ethnicity and reactive ethnicity perspectives by investigating the roles that segregation and anti-Hispanic hate crimes play in determining how Hispanics respond to questions regarding their racial identity. We argue that certain ecological contexts impact the racial identities of Hispanics by being either conducive to or antagonistic to the blurring of racial and ethnic boundaries. Our analysis is based on individual-level data from the 2009 American Community Survey, metropolitan-level data from the 2005-2009 five-year American Community Survey estimates, and information on anti-Hispanic hate crimes from the FBI Uniform Crime Reports. We find that areas characterized by high levels of Hispanic segregation and anti-Hispanic prejudice are less conducive to boundary blurring and more likely to reaffirm the distinctiveness of Latinos compared to other racial groups. The result is that Hispanics in such contexts are less likely to identify with other racial groups and more likely to opt out of the current U.S. racial classification system by choosing the “Other” racial category. Conversely, these findings also suggest that “Hispanic” identity itself may be less salient for
individuals living in areas with low levels of segregation and antipathy towards Hispanics. In such areas, people of Hispanic origin are more likely to adopt one of the established racial categories and may not identify principally (or solely) as Hispanic.

BOUNDARY MAKING AND UNMAKING

Building on the tradition of Barth (1969), and recent extensions by Wimmer (2008), we view racial and ethnic divisions as products of classificatory struggles in which “individuals and groups struggle over who should be allowed to categorize, which categories are to be used, which meanings they should imply and what consequences they should entail” (Wimmer 2007: 11). Thus, in contrast to “primordialist” accounts that view ethnic and racial membership as acquired through birth, our use of a boundary construction framework implies that categories are contestable and capable of change.

This is especially the case among Hispanics where ambiguity about their racial and ethnic identity abounds, including whether the distinction between ethnicity and race captures the actual ways that Hispanics understand group boundaries (Landale and Oropesa 2002; Rumbaut 2006). While the U.S. has historically categorized those with any African heritage as black (the proverbial “one-drop” rule), in Latin America and the Caribbean race is a multi-category continuum (Denton and Massey 1989). In addition, many Latin Americans consider themselves to be a mix of Spanish and Indian ancestry or consider their ethnicity (i.e. country of origin) to be their ‘race’ (Brown, Hitlin and Elder 2006; Golash-Boza and Darity 2008). Because the U.S. officially recognizes ‘race’ and ‘ethnicity’ as separate and unique constructs, and racial categories have until recently been treated as mutually exclusive (Office of Management and
Budget 1997), Hispanics are forced to reconcile and negotiate their ‘racial’ identities within the existing U.S. racial classification system.

According to the boundary-centered framework, how Hispanics will identify their race will depend on (1) the salience of the social boundary which distinguishes them from other groups and (2) their options for negotiating these classifications. As Wimmer (2008: 975) explains, social boundaries display both a categorical dimension – one that divides the social world into social groups (i.e. between “us” and “them”) – and a behavioral dimension – which offers scripts of action on how to relate to individuals classified as “us” and “them.” When both schemes coincide into ways of seeing and acting in the world, there is a social boundary.

In response to the official race classifications dictated by the state, Hispanics have several options in how to negotiate their identities and the social boundaries around them. They could engage in “boundary contraction” wherein they reject the available choices and instead promote other nonracial modes of classification (Kusow 2006; Wimmer 2008). Another option is to engage in “boundary blurring” where existing racial boundaries are expanded and social distinctions become more fluid (Alba and Nee 2003). Some researchers interpret the large population of Hispanics who identify their race as ‘white’ as evidence of the boundary modification processes of assimilation that many European groups experienced, such as Irish, Jewish, and Italian immigrants (Alba 1985; Alba and Nee 2003). A third option is to reject or challenge the existing racial boundaries. Rather than working within the existing racial framework of the U.S., several authors interpret large numbers of Latinos choosing the “Other” race category as asserting a distinct Hispanic/Latino racial identity, and thus rejecting the existing categories as well as the distinction between race and Hispanic ethnicity (Vaquera and Kao 2006; Logan 2003; Michael and Timberlake 2008).
Whether Hispanics will one day be incorporated into the existing racial structure of the U.S., or ultimately redefine it, is largely dependent on the salience of the racial/ethnic boundaries created by both in-group and out-group members. An important question for the existing theoretical accounts of boundary construction and maintenance, then, is what determines the salience of social boundaries? According to the boundary-centered framework, the behavioral dimension becomes paramount in determining salience, stability, and courses of action taken to negotiate boundaries. While actors have the ability to negotiate their identities, they are not free to choose whatever strategy they like (Wimmer 2008). As Frank et al. (2010: 382) state, “Whether a boundary can be crossed, altered, or redefined depends not only on those attempting to renegotiate the boundary, but also on actors on the other side of the boundary who may reject the newcomers.”

We take this logic further by investigating Hispanics’ reactions to the responses made by those on the other side of the boundary. Specifically, we examine whether the level of anti-Hispanic prejudice in a community affects how Hispanics identify their race. We also extend the theoretical discussion of the behavioral dimension of boundary construction employed by Barth (1969), Wimmer (2008), and others, by examining whether and to what extent certain ecological environments make one of the options for boundary negotiation more or less likely. In short, we investigate the role of ecological context in determining the available options and “scripts for action” that ultimately impact how actors negotiate their identities, and we propose segregation and prejudice as two (of likely many) ecological processes that likely condition the degree of salience of ethnic/racial boundaries.
SEGREGATION AND BOUNDARIES

Whereas much of the previous research has tended to view segregation as an outcome of racial and ethnic relations, we conceptualize segregation as a dynamic social process which both reflects racial/ethnic relations and impacts the nature these relations (Iceland 2009). According to the emergent ethnicity perspective, for example, ethnic identities are formed and crystallized in ethnic residential concentrations, which in turn reinforce the maintenance of kinship and friendship networks around a shared ethnic identity (Yancey et al. 1976).

There are several mechanisms through which segregated communities may affect the available options for boundary negotiations. First, in segregated ethnic communities there is less opportunity for the day-to-day interactions with out-group members that previous research has highlighted as a key to boundary blurring (Alba and Nee 2003). As Yancey and colleagues put it:

People are more or less dependent on their community at various stages in the life cycle; for example, when looking for a job, when a child is born, when a wife goes to work and needs babysitters, when a person becomes old and needs care. These and other day-to-day needs may be served by neighbors, friends or institutions. When these are of the same ethnicity, the likelihood of ethnic behavior and identification with ethnic origins should be greater (1976: 400).

Second, segregated communities are more likely to develop a wide range of local institutions such as grocery stores, bars, schools and churches based on ethnic identification (Fitzpatrick 1966). Previous research has highlighted the role of these institutions in ethnic neighborhoods as the basis for much of the social life in the community, as well as the origin of interpersonal social networks (Breton 1964; Yancey et al. 1976). As a consequence, there is
considerably little opportunity for boundary blurring in local institutions, and thus ethnic identity is more likely to be maintained and asserted.

Finally, just as social boundaries serve to separate groups into “us” and “them,” the physical borders of communities are likely to influence the salience of social boundaries and identities to the extent that communities are viewed as separating different racial and ethnic groups. In other words, social boundaries are likely to be more salient to the extent that they correspond to physical boundaries as well. Indeed, foundational work in the sociology of assimilation and identity formation has argued that the degree to which immigrants reside in ethnic enclaves will help determine whether their immigrant identity will be maintained (see Park 1925: 9-10).

However, despite a long theoretical history and the primacy of the role that ethnic residential segregation plays in negotiating racial/ethnic boundaries, there have actually been few direct, systematic evaluations of how segregation affects identity formation. This may be due in part to the methodological difficulties of determining the direction of the relationship (see Oropesa et al. 2008 for a discussion of this issue). While theoretical and qualitative accounts point to the role of segregation as a determinant of ethnic identity, it could be the case that those who maintain a strong ethnic identity may choose to reside in an area with more co-ethnics. To establish a causal connection one has to deal with this potential selection bias. We address this issue by testing how segregation at the metropolitan (rather than the neighborhood) level affects how Hispanics identify their race, as well as by using an instrumental variable approach to determine the impact of segregation on identity formation. While we describe the strengths of this approach in the methods section, it is worth noting that this methodology is consistent with
previous research attempting to determine the causal impact of living in segregated communities on a variety of other individual-level outcomes (Cutler and Glaser 1997; Quillian 2007)

**RACIAL IDENTITY IN ANTI-IMMIGRANT TIMES**

Both the segmented assimilation and the reactive ethnicity perspectives hold that how Hispanics will eventually construct their identities largely depends on the context of reception they encounter in the United States (Portes and Zhou 1993; Portes and Rumbaut 2006). One of the primary determinants, according to these perspectives, is the degree of discrimination and prejudice experienced by Hispanics. Increasingly, Latin Americans have been portrayed in the media and even by academics (Huntington 2004) as dangerous to America’s culture, society, and economy, in what Chavez (2008) refers to as the “Latino threat narrative.” This narrative is reflected in both public opinion and actual acts of discrimination against Hispanics. According to the Pew Charitable Trusts, in 2000 only 38 percent of Americans agreed that “immigrants today are a burden on our country.” By 2006, 52 percent of Americans held this view and 74 percent of Americans rated immigration as a moderately big or very large national problem (Kohut and Suro 2006). Moreover, during this same period the acts of hate violence against Hispanics increased substantially. According to the U.S. Justice Department, from 2002 to 2007 the number of victims of anti-Hispanic hate crimes increased by 30 percent, from 639 to 830 (Federal Bureau of Investigation 2009).

The result of this anti-Latino context, according to the reactive ethnicity perspective, is the brightening and hardening of the social boundaries separating Hispanics from other groups in the face of perceived threats, persecution, and exclusion (Rumbaut 2008; see also Jimenez 2008). In general, previous survey research and qualitative accounts have found support for the reactive ethnicity perspective. For example, using data from Latinos in the Northeast region of the U.S.,
Massey and Sanchez (2010) found that Hispanics who had experienced discrimination were less likely to feel “American,” and Golash-Boza and Darity (2008), using data from two different national surveys of Latinos, found that Hispanics who felt discriminated against were more likely to report an “other” or “black” racial identity instead of “white.”

However, the research supporting the reactive ethnicity hypothesis has been limited in several important respects. First, methodologically, it is difficult to determine the relationship between discrimination and identity formation. It could be the case that those more likely to promote their Hispanic or “Other” racial identity are also more likely to experience discrimination. For example, recent work using propensity score modeling by Frank and colleagues (2010) found that recently arrived dark-skinned Latinos pay a wage penalty in the U.S. labor market, which might suggest that ‘otherness’ is leading to discrimination, and not the other way around. Second, the evidence in support of this perspective relies almost entirely on individual experiences with discrimination (see Massey and Sanchez 2010; Golash-Boza and Darity 2008) or small-scale, qualitative accounts of how discrimination has impacted actors’ boundary negotiations (Rumbaut 2008; Jimenez 2008).

The result is that we know comparatively little about whether certain ecological contexts are more likely to promote reactive ethnicities, or in which direction the relationship between discrimination and identity flows. Furthermore, by focusing only on individual level discrimination, these studies may miss the symbolic effects of vicarious victimization that are also likely affecting how other Hispanics are negotiating the U.S. racial classification system. That is, one does not have to be a victim of discrimination to be affected by the discrimination experienced by co-ethnics in the vicinity. In this article we attempt to go beyond the methodological complications of prior research by examining how the level of anti-Hispanic hate
crime in a metropolitan area affects how Hispanics form their racial identities. In doing so, we offer (to the best of our knowledge) the first systematic analysis of the role that “prejudiced places” – communities characterized by high levels of anti-Hispanic discrimination – may play in determining how Hispanics negotiate their racial/ethnic boundaries, and also broaden the theoretical landscape of the literature on boundary creation, which has yet to fully explore the role of ecological context. We think it is likely that Hispanics who experience vicarious anti-Latino discrimination will be more likely to opt out of the U.S. racial classification system altogether and choose an “Other” racial identity. Thus, consistent with the central tenants of the reactive ethnicity perspective, we predict that living in “prejudiced places” will make choosing an “Other” racial identity more likely.

However, it may be the case that levels of anti-Hispanic hate crime will have no effect on how Hispanics form their racial identities. This is because Hispanics may not perceive such attacks as stemming from racial tensions – which would likely highlight racial group boundaries – but rather, they may view them as reflecting attacks against only certain types of Hispanics such as non-English speakers, illegal immigrants, or certain sectors of the workforce (i.e. those that are perceived to displace native workers). In other words, while the crimes are documented as anti-Hispanic, they may only affect racial identity choices to the extent that Hispanics perceive them to reflect attacks against a group to which they belong.

Furthermore, even though we are observing how levels of anti-Hispanic prejudice at the ecological level impacts racial identity, there may still be questions regarding endogeneity and the direction of this relationship. It could be the case that those Hispanics who are more likely to promote their “otherness” are also more likely to illicit a violent response in the form of a hate crime in certain locations. We take up the issue of selection and endogeneity in the methods
section; however, like our measure of segregation at the metropolitan level, we note that our approach of measuring anti-Hispanic hate crimes at the same level helps obviate some of the concerns regarding selection bias. Also like our segregation measure, we further test the robustness of this relationship using an instrumental variable approach.

SUMMARY AND HYPOTHESES

Our core theoretical argument is that certain environments condition the boundary negotiations that occur among Hispanics as they encounter the U.S. racial order by setting the stage that is either conducive to or antagonistic to boundary blurring. Consistent with the emergent ethnicity perspective, by limiting interaction with out-group members and promoting local institutions based on ethnic identification, we hypothesize that highly segregated areas will be less conducive to boundary blurring. Thus, Hispanics will be less likely to choose one of the existing racial categories but instead opt out of the existing racial classifications by choosing the “other” race category. We further predict that certain environments will be more likely to illicit reactive ethnicities through higher levels of anti-Hispanic discrimination. Specifically, we hypothesize that Hispanics living in areas that experience higher levels of anti-Hispanic hate crime will be more likely to reactively assert their Hispanic racial identity, and also opt out of the existing racial classification system by choosing the “other” race category. Finally, we predict that these effects will be particularly pronounced where both segregation and prejudice are present. That is, the effect of hate crimes on identity formation will be magnified in areas that are also highly segregated (i.e., an interactive effect). Our goal, then, is to test the proposition offered by Robert Park over 80 years ago that “the isolation of the immigrant and racial colonies of the so-called ghettos and areas of population segregation tend to preserve and, where there is
racial prejudice, to intensify the intimacies and solidarity of the local neighborhood groups” (our emphasis, 1925: 9-10).

DATA, METHODS, AND LOGIC OF ANALYSIS

The data for this analysis come from three primary sources: individual-level data come from the 2009 American Community Survey (ACS), metropolitan-level segregation measures are derived from the 2005-2009 five-year American Community Survey estimates¹, and information on anti-Hispanic hate crimes come from the FBI Uniform Crime Reports for 2006-2008.² To obtain valid self-report measures of race and ethnicity, we limit our analysis to Hispanic householders for whom the information on race and Hispanic origin were not imputed. Further, because we are interested in the role of ecological context in shaping racial identities, we limit our analysis to only those Hispanics who live in metropolitan statistical areas (MSAs).³ Our final sample consists of 93,432 (un-weighted) Hispanic respondents living within 265 metropolitan areas that are identifiable in the individual-level ACS files.

Dependent Variable

Our dependent variable is the self-reported race among Hispanic respondents in the ACS. Race and Hispanic origin are determined by two questions in the survey. The first question asks: “Is this person Spanish/Hispanic/Latino?” There is an answer box for “no” and additional “yes” boxed for people to indicate if they are Mexican, Puerto Rican, or Cuban. There is also a write-in box where respondents can identify other national origins. The next question on the form asks: What is this person’s race?” There are answer boxes for White, Black, American Indian or Alaskan Native, and a series of boxes for various Asian groups (e.g. Chinese, Filipino, and
Japanese). Individuals can also mark “some other race” and, unlike pre-2000 censuses, respondents are instructed that they can choose more than one race.

This study focuses on the racial identification patterns of those who reported that they are Hispanic in the first question mentioned above. Because the census treats Hispanic ethnicity and race as distinct constructs, we are able to investigate how Hispanics negotiate their racial identities in response to the government racial classification system. As discussed by Bailey (2008), Wimmer (2008) and others, states play a key role in establishing categorical boundaries around population groups and “state-sanctioned racial classification schemas form the basis of popular perception and are linked to economic resources and political power through construction of individual and collective identification” (Frank et al. 2010: 385). Thus, how Hispanics respond to government classifications offers important insights into how they may be affecting the existing racial order. We recode respondents’ answers into 5 racial categories: (1) white alone, (2) black alone, (3) Asian/Pacific Islander or American Indian/Alaska Native (Asian/Indian for short)⁴, (4) two or more races, and (5) some other race. Important for our discussion, we take Hispanics choosing the “some other race” category as evidence of opting out of the official government racial classification system.⁵

**Focal Independent Variables**

Our first focal independent measure is the level of segregation at the MSA level. Rather than contrasting the outcomes of Hispanics living in segregated neighborhoods or schools, our approach contrasts Hispanics’ racial identities in metropolitan areas with varying levels of Hispanic-white segregation. As highlighted by Cutler and Glaeser (1997) and Quillian (2007), this approach is less subject to confounding of estimates due to non-random selection of individuals into neighborhoods. As previously mentioned, to the extent that there is a
relationship between segregation and racial/ethnic identities, it could be that those who hold strong ethnic identities are more likely to select into highly segregated communities. While we do not doubt that this type of selection occurs, we think that it is much more likely to apply to moves within metropolitan areas (i.e. into more or less segregated neighborhoods), not moves between metropolitan areas (i.e. selected into a metropolitan area based on the overall level of segregation). The advantage of comparing outcomes across entire metropolitan areas is that individuals are less likely to be selected into metropolitan areas in a way that is systematically related to racial/ethnic boundaries. While this approach does not account for all non-random selection bias, these estimates are far less likely to be confounded by the high selectivity related to racial/ethnic affiliations characteristic of intra-metropolitan neighborhood choices.

We use the index of dissimilarity ($D$), the most commonly used measure of segregation. We compute ($D$) for each metropolitan area using tract-level data based on the 2008 MSA boundaries. Metropolitan areas are typically chosen as the broader unit when calculating segregation indexes because they are reasonable approximations of housing and job markets. The use of housing and job market areas is, in turn, based on the notion that a person (or household) who works in a given commutable area can potentially choose to live in any community within the housing market. Formally, the index can be expressed as follows:

$$D = \frac{1}{2} \sum_{i=1}^{n} \left| \frac{x_i}{X} - \frac{y_i}{Y} \right|$$

Where $n$ is the number of tracts in a metropolitan area, $x_i$ is the number of Hispanics in tract $i$, $X$ is the population of Hispanics in the metropolitan area as a whole, $y_i$ is the population of non-Hispanic whites (the reference group) in tract $i$, and $Y$ is the population of non-Hispanic whites in the entire metropolitan area (Iceland and Douzet 2006). The index ranges from 0 (complete
integration) to 1 (complete segregation); however, in this analysis we multiply the index by 100 to reflect the effect of a one unit increase in segregation as opposed to the effect of going from complete integration to complete segregation. The dissimilarity index here indicates the percentage of the Hispanics that would have to move to achieve an even spatial distribution with whites in tracts across the metropolitan area.

Our second focal independent variable is the number of victims of anti-Hispanic hate crimes reported by the police in a metropolitan area from 2006 to 2008. These years were chosen because they are temporally prior to our dependent measure and we combine three years to reduce year-to-year fluctuations. We use hate crimes as our measure of anti-Hispanic sentiment because unlike other forms of discrimination, such as employment or wage discrimination, hate crimes carry an enormous symbolic power beyond the individual victims with implications of group domination and suppression (Garland 2005). As several scholars have pointed out, hate crimes go beyond victimizing particular individuals; instead, through intimidation and violence, they represent a means of controlling the behavior of an entire group (Craig 2002; Perry 2001; King et al. 2009). In line with this view, we predict that the symbolic nature of anti-Hispanic hate crime is likely to affect inter-group relations and boundary negotiations among Hispanics who experience higher levels of vicarious victimization by brightening the boundaries between Hispanics and other groups. For these same reasons, we utilize the count of victims rather than the rate because the symbolic significance of hate crimes are unlikely to be diluted in Latinos’ minds by the proportionate representation of hate crime in the immediate area (cf. Tolnay et al. 1996; King et al. 2009).

Similar to endogeneity problems with our segregation measure, if there is a relationship between anti-Hispanic hate crime and racial/ethnic identity, it could be due to selection bias, but
for a different reason. While it is highly unlikely that Hispanics (or anyone) would purposefully select into communities with higher levels of hate crime, it could be that Hispanics who are more likely to promote a Hispanic or ‘other’ racial identity are more likely to illicit hate crime responses in certain areas. By measuring hate crimes at the metropolitan level we attempt to avoid some of these concerns because, as we stated above, residential choices based on shared identity are much more likely to occur within metropolitan areas, and not between them. Because of this, we interpret the effects of metro-level hate crimes as indicating a contextual setting that impacts how Hispanics negotiate their racial identities.

Control Variables

In order to isolate the effects of ecological context on how Hispanics identify their race, we attempt to control for other relevant determinants identified in prior research. Previous studies have indicated that nativity, socioeconomic status, and other markers of assimilation play important roles in influencing Hispanic racial identity (Tafoya 2005; Michael and Timberlake 2008; Vacquera and Kao 2006; Landale and Oropesa 2002; Golash-Boza and Darity 2008). We measure foreign-born status and years in the U.S. with a series of dummy variables for 1-9 years, 10-19, 20-29, 30-39, and 40 or more years, with those born in the U.S. serving as the reference. We also control for national origin with a series of dummy variables for Puerto Rican, Cuban, and ‘other’ country of origin, with Mexicans serving as the reference category. Socioeconomic status is measured using both income and education. Education is measured with dummy variables for high school graduate, some college, and college graduate (with those with less than a high school education as the reference category), and we measure household income with dummy variables for those 100-199 percent above the poverty line, 200-299 percent above, and those whose household incomes are 300 percent or greater above the poverty line (those below
the poverty line are the reference category). As one of the primary indicators of acculturation, we include English language ability measured as whether English is the primary language spoken at home (1 = yes). We also include controls for the respondents’ sex (1 = male), marital status (1 = married), and a continuous measure of age. We follow previous research and include regional dummy variables (Campbell and Rogalin 2006; Frank et al. 2010), and we also account for within-MSA heterogeneity with a dummy variable for whether the individual resides in a central city (1= yes).

Approach

We use multinomial logistic regression models predicting the log odds of Hispanics’ racial identities into one of the five racial categories, with “some other race” serving as the reference. We present four models in all. The first includes only our control measures, the second includes the index of dissimilarity, the third includes the number of anti-Hispanic hate crime victims, and the final model includes an interaction term for both contextual measures. Formally, the full model can be expressed as follows:

\[
X_i = \log \left( \frac{\pi_i = j}{\pi_i = f} \right) = \beta_0i + \beta_1(Segregation)_i + \beta_2(Hate\ Crime)_i + \beta_3(Seg * \ Hate)_i + \beta_kD_{ik}
\]

where \(X_i\) represents the log odds of individual \(i\) choosing a \(j\) racial category (either white, black, Asian/Indian, or two or more races) compared to referent \(J\) (some other race) in a logistic model, \(B_1\) and \(B_2\) measure the effects of Hispanic-White dissimilarity and anti-Hispanic hate crime at the metro level, respectively, \(B_3\) measures the interaction effect of these measures, and \(D_{ik}\) is a vector of \(k\) controls. All models were estimated using Stata 10.
RESULTS

Table 1 reports the weighted descriptive statistics and percentage distribution of variables by self-reported race. Of the nearly 11 million Hispanics in our sample, 64 percent identified as white, 30 percent as some other race, 3 percent as two or more races, 2 percent as black, and just over 1 percent as Asian/Indian. Combined, those identifying as ‘white’ or ‘other’ make up over 93 percent of all Hispanics in the ACS. From this, it is safe to conclude that how Hispanics will ultimately affect the color line will likely be determined by whether they will one day expand the meaning of “whiteness” (Yancey 2003), or opt out of the existing racial classification system (Gomez 2007).

(Table 1 about here)

Differences in racial identification by levels of segregation and hate crime are largely in the expected direction. Respondents who identify as ‘other’ tend to live in areas with slightly higher levels of segregation compared to those who identify as White (but slightly lower than those who identify as Black), but also live in areas with considerably higher levels of anti-Hispanic hate crime.

There are significant racial identification differences by nativity. While Mexicans represent nearly 60 percent of all Hispanics in the sample, and similar proportions in most racial categories, they represent only 17 percent of those who identify as black. Puerto Ricans and Other Hispanics (i.e., those who are not Mexican, Puerto Rican, or Cuban), on the other hand, have greater representation in the Black category than their overall share of the Hispanic population (30% vs. 11% for Puerto Ricans and 43% vs. 25% for Other Hispanics). There are also differences by family structure and language ability; married individuals make up a greater share of all racial categories than those who identify as Black, and those who speak English at
home are more highly represented among ‘other race’ Hispanics compared to all other groups. ‘Other race’ Hispanics, compared to White Hispanics, are less likely to be native born, less likely to be college graduates, but are more likely to reside in a central city and live in the Northeast.

**Multivariate Results**

Table 2 presents the results for the first multinomial logistic regression model of racial self-identification. For each set of columns, the estimates represent the log odds of choosing one of the four racial categories, respectively, as compared to choosing “some other race.” Consistent with the descriptive statistics and previous research (Frank et al. 2010), we find considerable differences between different national origin groups. Compared to Mexicans, all three different Hispanic groups are more likely to indicate a black racial identity or indicate a multi-racial identity, and this is especially true among Cubans. Cubans are also far more likely to choose a white racial identity compared to Mexicans. We also find that the odds of choosing some other race decrease with education, as shown by the increasing odds of choosing any of the four racial categories as education levels rise.

(Table 2 about here)

Interestingly, we find foreign-born Hispanics who have spent more time in the U.S. are more likely to choose an “other” racial identity. Across each comparison, those who spent between 20 and 40 years in the U.S. were less likely to choose one of the existing racial classifications, and instead opted for the “other” category. These findings are consistent with the emergent ethnicity perspective – which argues that ethnic identities are formed and solidified after arrival to the U.S. – and could also be consistent with the reactive ethnicity perspective, which holds that the opportunities to experience discrimination and prejudice would increase over time, especially during a period of increased anti-immigrant rhetoric and policies. These
findings are in line with prior research indicating that Latinos with greater exposure to the United States are increasingly challenging the existing racial identification options to them (Frank et al. 2010). Such an interpretation would also be consistent with our findings that Hispanics who live in English speaking homes are far more likely to choose an “other” racial identity compared to all other options. However, while greater time in the U.S. among the foreign-born is associated with lower probabilities of choosing a specific race (as opposed to “other”), we also find that the foreign-born as whole are less likely to choose a specific race than the native-born (the omitted category). This indicates that reactive ethnicity, while perhaps more common among the foreign-born over time in the U.S., nevertheless may be less prevalent in the second+ generation.

Ultimately however, these results do not inform our understanding of whether certain ecological contexts impact Hispanics’ boundary negotiations, or test the core claims of the emergent or reactive ethnicity perspectives. We pursue more direct tests of both perspectives in Table 3.

(Table 3 about here)

Table 3 presents the results from our final 3 models. The first (model 2) shows the effects of Hispanic-White segregation, model 3 reports the effects of anti-Hispanic hate crimes, and model 4 presents the joint and interaction effects of these measures. For parsimony we report only the coefficients of interest, but all models include the full set of controls from Table 2 (full models available on request). The results in model 2 are highly supportive of the emergent ethnicity perspective. Consistent with our theoretical prediction, residing in metropolitan areas with higher levels of Hispanic-white segregation makes opting out of the existing racial classification system more likely, and this is true across every racial category. These results
suggest that net of controls for a host of other predictors, the greater the level of segregation experienced by Hispanics, the more likely they are to identify as ‘some other race.’

According to our results, a one unit increase in dissimilarity decreases the odds of choosing a white racial identity by just over 1 percent. To illustrate the magnitude of this effect, we graphed the predicted log odds of choosing a white racial identity compared to “some other race” across various levels of segregation in Figure 1a based on the results in model 2. Holding all other variables constant, a 1 standard deviation (sd = 9.5) increase in segregation decreases the odds of choosing a white identity by 10 percent. Based on the results in Table 3, going from the least segregated MSA in our sample (Redding, CA: $D = 15$) to the most segregated one (Reading, PA: $D = 70$), would result in a 47 percent decrease in odds $[1 - e^{(55 * -0.012)} = .47]$ of racially identifying as white.

(Figure 1 about here)

These findings suggest that segregation plays an important, yet to date underappreciated, role in how Hispanics negotiate their racial identities in the U.S. But what role does anti-Hispanic prejudice play in these negotiations? The results from model 3 (Table 3) offer strong support for the reactive ethnicity perspective. Similar to our segregation results, net of controls for all measures in Table 2, the odds of choosing any identity within the existing racial structure decrease as the level of anti-Hispanic hate crime increases within a metro area. These results suggest that living in “prejudice places” makes Hispanics more likely to reactively assert their ‘other racial identity,’ and offers strong support that symbolic violence aimed at groups (i.e. hate crimes) has important implications for how individuals negotiate their shared identities. And the results in Figure 1b show that this is a substantial effect. A one standard deviation increase in anti-Hispanic hate crimes (sd = 91) results in a 15 percent reduction in the odds $[1 - e^{(91 * -0.002)} =$
of choosing a white identity, and going from an MSA with no anti-Hispanic hate crimes (for example, Ann Arbor, MI) to the MSA with the highest recorded number of hate crime victims (281 in Los Angeles, CA), results in a 39 percent decrease in the odds of identifying as white $[1 - e^{(281 \times -0.002)} = .39]$.

Taken together, these results suggest that certain ecological contexts have important implications for how Hispanics negotiate their racial identities in the U.S., and that areas with higher levels of segregation and prejudice are antagonistic to boundary blurring. As a consequence, Hispanics are more likely to eschew the state recognized racial categories and instead identify as ‘some other race,’ an outcome that has important implications for the future of the U.S. color line. Our final hypothesis tests whether these contextual measures have interaction effects.

The results in model 4 of Table 3 show that metro-level segregation and anti-Hispanic hate crimes do have interaction effects that impact how Hispanics self-identify. The negative effects for the white and black comparisons demonstrate that Hispanics are more likely to identify as some other race in areas that have both higher levels of segregation and higher levels of prejudice. We demonstrate these effects visually in Figure 2.

(Figure 2 about here)

Panel A of Figure 2 shows the predicted odds of choosing a white identity compared to ‘some other race’ by various levels of segregation at different levels of anti-Hispanic hate crime, based on the results from model 4. Put simply, this graph demonstrates that the effects of segregation are more pronounced when there are more hate crimes against Hispanics. The results in Panel B, which show the predicted odds of choosing a white identity across varying levels of hate crime at
different levels of segregation, show the same pattern. The effects of anti-Hispanic hate crime are more pronounced in areas with higher levels of segregation.

*Robustness Checks and Endogeneity*

While our use of inter-metropolitan variation helps reduce the amount of selection bias in our estimates of segregation and hate crime, it does not eliminate it. A broader concern is that our results may reflect omitted metropolitan characteristics that are causing certain metropolitan areas to have higher levels of segregation and hate crimes, and affect Hispanics’ racial identities. We attempt to alleviate these concerns using an instrumental variable (IV) approach for both of our focal predictors. An IV approach involves first regressing the key predictor variable (i.e. the treatment) on an exogenous measure (i.e. the instrument) that is unrelated to the outcome measure (except indirectly through the treatment). The outcome measure is then regressed on the predicted treatment variable from the first equation. The goal of this approach is to remove the spurious correlation between the explanatory variable and unobserved characteristics. By using only that portion of the variability in the treatment (in our case, segregation and hate crime are conceived as the “treatment”) variable that is uncorrelated with the omitted variables to estimate the causal relation between the treatment and outcome, an IV helps remedy the issue of omitted variable bias (Kirk 2009; Angrist and Krueger 2001).

We use the number of municipal and township governments (logged) in 2002 to instrument our measure of segregation. This instrument has been validated in previous research (Cutler and Glaeser 1997) and is theoretically appropriate for our study, as it has been shown to impact the level of segregation within a metro area by encouraging sorting into different
neighborhoods, but is unlikely to impact how Hispanics negotiate their racial identities (except through segregation).\textsuperscript{11} Formally, we specify equations 1 and 2 as follows:

\[ S_i = \beta_{0i} + \beta_1 Z_i + \xi_i \]  \hspace{1cm} (1)

where segregation \( (S_i) \) is a function of the instrumental variable \( Z_i \) (logged number of municipal and township governments),\textsuperscript{12} and the second-part of the two-stage estimation processes is specified as:

\[ X_i = \log \left( \frac{\pi_{i=j}}{\pi_{i=j}} \right) = \beta_{0i} + \beta_1 S_i + \beta_k D_{ik} \]  \hspace{1cm} (2)

where the dependent variable \( X_i \) (racial identity) is a function of the predicted \( S_i \) from equation 1 and a vector of control variables \( D_{ik} \).

The results from these models are shown in Model 1 of Table 4. As we can see, the results are substantively the same as our estimates shown in Table 3, giving confidence to our finding that segregation impacts how Hispanics negotiate their racial identities in metropolitan America, net of selection and omitted variable bias.\textsuperscript{13}

(Table 4 about here)

To our knowledge, no prior research has investigated the impact of anti-Hispanic hate crime using an instrumental variable approach. Because of this, we were unable to rely on previous research to guide our choice of instrument. Guided by theoretical considerations, we instrument our hate crime measure with the level of total violent crime within each metropolitan area. While previous research has clearly shown that hate violence is the result of inter-group tension and conflict (often involving aspects of minority threat; see King et al. 2009; Lyons 2007; Tolnay and Beck 1995), it is likely that hate crimes are more likely to occur in places that are already prone towards violence. In other words, while many metropolitan areas have witnessed significant increases in their resident Hispanic population (Lopez and Dockterman
2011), thus likely heightening inter-group tensions, it is probable that these tensions are more likely to manifest into hate violence in areas where violence is already prevalent. If this is the case, then the level of violent crime in each metropolitan area is an appropriate instrumental variable as it is likely to impact the level of anti-Hispanic hate crimes but is unlikely to directly impact the racial identities of Hispanics.

We use the level of violent crimes reported to the police for the years 2003-2005. We use this data because (1) these years are temporally prior to our focal measure (anti-Hispanic hate crimes in 2006-2008), (2) violent crimes are more reliably reported to the police, and (3) three years reduces the influence of year-to-year fluctuations. As predicted, anti-Hispanic hate crimes are positively correlated (results not shown) with the level of violence (logged) at the metropolitan level ($r = .62; p < .001$). We specify the two-step IV models for our hate crime measure as follows:

$$H_i = \beta_0 + \beta_1Z_i + \xi_i$$

(3)

where anti-Hispanic hate crimes ($H_i$) are a function of the instrumental variable $Z_i$ (logged number violent crimes), and the second-part of the two-stage estimation processes is specified as:

$$X_i = \log \left( \frac{\pi_i}{\pi_i^{=}} \right) = \beta_0 + \beta_1H_i + \beta_kD_{ik}$$

(4)

where the dependent variable $X_i$ (racial identity) is a function of the predicted $H_i$ from equation 3 and a vector of control variables $D_{ik}$.

The results from these models are reported in Model 2 of Table 4. Almost identical to our results in Table 3, we find that Hispanics who reside in areas with higher levels of anti-Hispanic hate crime have significantly less odds of racially identifying within the existing U.S. classifications, and are thus more likely to opt out by choosing the “some other race” category.
Our final model (Model 3) shows the results when we interact our instrumented focal variables. Once again, the pattern of results is substantively unchanged compared to our original estimates (except the black estimate no longer reaches statistical significance). Using our focal measures purged of omitted variable bias, we find that the effects of segregation are particularly pronounced in areas that have higher levels of anti-Hispanic hate crime, and vice versa.

Although determining casual effects is notoriously difficult in non-experimental social research, we conclude that our findings are real and substantively meaningful. Using inter-metropolitan variation and instrumental variables to alleviate selection and omitted variable bias, the available evidence, drawn from a series of estimation procedures and sensitivity analyses, suggests that the findings presented here are robust and that segregation and hate violence have causal impacts on how Hispanics negotiate their racial identities in the United States.

DISCUSSION AND CONCLUSION

The growth of the Hispanic population in recent decades has increased uncertainty about the future of the U.S. color line. Whether Hispanics will one day blur the boundaries of whiteness or eventually create a new Hispanic race category is dependent on the salience of racial/ethnic boundaries for both in-group and out-group members. An important question for the future of racial identity in the U.S. is what determines the salience of these boundaries. In this article we have argued that an important, yet under-researched, dimension is the ecological context in which boundary negotiations occur.

Consistent with our theoretical prediction and the emergent ethnicity perspective, our results show that living in highly segregated areas impacts how Hispanics racially self-identify. We find consistent evidence that Hispanics are more likely to opt out of the U.S. racial
classifications by choosing the ‘other race’ category in metropolitan areas characterized by higher Hispanic-white segregation. This finding has important implications for the future of racial/ethnic boundaries in the U.S. While lower than the level of segregation experienced by blacks, Hispanics are still fairly segregated from whites in the U.S. (average $D = .51$). Perhaps more importantly, unlike black-white segregation, which has declined significantly since 1980 (Logan and Stults 2011), Hispanic-white segregation has remained stable during this time (Sanchez et al. 2010). Our results suggest that segregation from whites makes boundary blurring less likely, and the extent to which segregation increases or decreases in the coming years will affect the degree to which Hispanics opt out of the U.S. racial classifications.

We also find consistent evidence that the ecological context of inter-group violence significantly impacts how Hispanics identify their race. Consistent with the reactive ethnicity perspective, Hispanics were less likely to identify within the existing racial categories in areas with higher levels of anti-Hispanic hate crime. In line with our theoretical prediction, the symbolic nature of hate crime appears to affect Hispanics’ boundary negotiations by brightening the boundaries between Hispanics and other groups. These effects are particularly pronounced in areas that also have higher levels of segregation. This finding, too, has important implications for the future of race and ethnicity in the United States. With Hispanics increasingly framed as a threat to the cultural integrity of the nation and debates about immigration becoming ever more vitriolic in recent years, public opinion against Hispanic immigrants has increased along with anti-Hispanic hate violence. Our results suggest that if this trend continues, so too will the number of Hispanics who choose an ‘other race’ identity.

We readily acknowledge several important limitations in this research. First, our study did not include measures of skin color, which has been shown to have important effects on how
Latinos identify their race (Golash-Boza and Darity 2008; Frank et al. 2010). While the inclusion of this measure would no doubt provide a fuller picture of the determinants of Hispanic racial identity, our core argument is that certain ecological environments make boundary blurring more or less likely, and it is unlikely that including a measure of skin tone would affect our substantive results for the effects of segregation and prejudice.\textsuperscript{16} It could, however, qualify the findings here by illustrating whether certain contexts have greater or lesser effects depending on the respondents skin tone, an empirical question that future research should examine.\textsuperscript{17} In line with this view, we think future research should explore how different nativity groups within the ‘Hispanic’ category (i.e. Mexicans, Puerto Ricans, etc.) respond to their ecological context when forming racial identities (above and beyond “controlling” for country of origin as we did in our analysis). Because our study is primarily concerned with how the community context in which Hispanics reside impacts the color line in the U.S. more generally, we focused on all those who identified as Hispanic. However, due to the distinct history of migration among groups, different contexts of reception, differing cultural adaptations, and distinct opportunities for upward mobility, it may be the case that different nativity groups are uniquely affected by their ecological context when negotiating racial/ethnic boundaries.

Second, while our analysis shows the nature and direction of the relationship between segregation, anti-Hispanic hate, and racial identity negotiations, we are ultimately unable to identify the specific mechanisms through which these aggregate measures impact individuals’ identity choices, nor the precise identity choices of those who report “some other race”. Our analysis however, does provide a useful starting point for future research looking to identify and explicate these mechanisms. For example, future research would do well to further explore the
themes of segregation and anti-Hispanic hate using qualitative methods with participants in communities with varying levels of each.

Finally, while our between-metropolitan analysis is less subject to issues of selection bias that have plagued previous literature on the role of context in identity formation, and our results are robust to instrumental variable estimation, as with all non-experimental research, determining casual effects is difficult. It is important, however, to note the scope of our argument. We are not arguing that the relationship between segregation, prejudice, and racial/ethnic boundaries is unidirectional. Rather, we argue that patterns of segregation and anti-Hispanic hate both reflect social boundaries and impact the available options and “scripts for action” for negotiating these boundaries, especially among Hispanics whose racial identity in the U.S. remains fluid.

With these limitations in mind, our main theoretical and empirical argument remains – the ecological context of segregation and hate violence impact how Hispanics negotiate their racial identities in the United States. Taken together, our results suggest that segregation and discrimination play important roles in determining the trajectory of the American color line. By exploring and demonstrating the importance of ecological context, our results support but also extend the theoretical literature on racial/ethnic boundary negotiations. According to Wimmer’s multilevel process theory, when members of a particular group share a strong identity, alliances, and emotional attachments to co-ethnics, ethnic identities are “thicker” and “group members will be prepared to incur high costs to defend” their identity and culture, thus stabilizing the ethnic boundary (2008: 1003). While we do not doubt this to be the case, an important finding from our analysis is that this relationship also works in the opposite direction: Hispanics who experience high levels of anti-Hispanic hate crime in their communities (i.e. those that incur high costs) are more likely to form “thicker” ethnic identities, and thus, less likely to engage in boundary
blurring. The corollary is that Hispanics in areas with lower levels of segregation and fewer acts of violence directed specifically at Hispanics may find their “Hispanic” identity to be less salient, and may thus be more likely to adopt a traditional U.S. racial identity or multiple ethno-racial ones—perhaps much as Southern and Eastern immigrants did last century.

That hate crimes and persisting segregation have important effects on identity is in line with the reactive ethnicities perspective, but it also offers an important extension of this argument by highlighting the important role of vicarious victimization. Precisely because hate crimes are meant to affect the groups to which individuals belong, and not just the individuals themselves, Hispanics who have not experienced the direct effects of hate violence receive the symbolic messages sent when other Hispanics do. Thus, our analysis highlights the important role that “prejudiced places” play in affecting Hispanics’ racial identity negotiations, which extends well beyond the individual experiences with discrimination stressed in prior literature.

The research to date on how Hispanics will ultimately impact the U.S. color line has largely focused on the malleability of racial labels and has sought to understand how individuals negotiate their racial/ethnic identities. Our study partly corroborates prior work but also goes beyond extant research by drawing theoretical and empirical attention to the ways in which larger social contexts impact how Hispanics racially identify. While individual actors ultimately make choices about how they negotiate their racial/ethnic identities, these discussions do not take place in a vacuum, and certain ecological contexts provide the setting in which such negotiations take place. According to our results, these contexts can be either conducive to or antagonistic to boundary blurring. The implication is that the future of the U.S. racial order is partly a function of how individuals negotiate racial boundaries, but is also a function of the characteristics of where their negotiations occur.
Endnotes

1 We use the 2005-2009 pooled data because metropolitan segregation measures rely on neighborhood (census tract) level data, and such data are available only in the ACS 5-year (rather than 3- or 1-year) files.

2 We thank the research staff at the UCR Hate Crime Statistics office for supplying these data.

3 The ACS PUMS files do not provide geographic information on respondents who live in communities with less than 100,000 people. Therefore, comparing rural vs. urban ecological contexts is beyond the scope of this article. This, however, should be a relatively minor concern given that over 90 percent of Latinos live in urban areas (Pew Hispanic Center 2002).

4 We combine the Asian, Pacific Islander, and American Indian and Alaska Native categories because they only comprise 0.3 percent, 0.1 percent, and 1.2 percent of the Hispanic population, respectively, according to the 2000 census data (Grieco and Cassidy 2001).

5 To further test this idea we re-estimated all our models using a dichotomous dependent variable where 0 equals “some other race” and 1 equals any of the other racial classifications. The results (available on request) are substantively identical to those reported. It is important to note that, with the available data, we are unable to determine what precise ethno-racial identity might be most salient to Hispanics who choose “some other race.” We can, however, infer that none of the traditional existing racial categories are one of them.

6 We also ran our models using the information theory index (Theil’s H) to measure segregation. The results (available on request) were substantively identical to those reported.

7 The hate crime data are only available at the agency level. Aggregating up to the metropolitan area required identifying the county in which agencies were located, and then summing across the different counties that make up a particular metropolitan area. Because of this, our measure includes only hate crimes reported by sheriff’s departments and local policing agencies, and excludes hate crimes reported by state patrols or regional police. This restriction eliminated less than 3 percent of all anti-Hispanic hate crimes in our data. However, a larger concern is that not all agencies report hate crime information, and prior research has argued that non-compliance with hate crime data collection efforts may be a form of racial bias (i.e. apathy towards protecting minorities; see King et al. 2009 for a discussion). To ensure our results were not a function of non-compliance, we ran supplemental models (available on request) that excluded metropolitan areas that did not have at least 90 percent of the criminal justice agencies within its borders reporting hate crime information over the study period (2006-2008). These findings were consistent with the results in our main sample.

8 The distribution of the count measure is skewed somewhat. We therefore ran supplemental models to those shown in Table 3 using the square root transformation of the count measure to approximate a more normal distribution. The results (available on request) were substantively identical to those shown. We chose to include the un-transformed measure for ease of interpretation.

9 Mexicans, Puerto Ricans, and Cubans are the three largest Hispanic nativity groups residing in the U.S., and combined, represent 75% of all Hispanics in our sample.
The data for this measure come from the 2002 Census of Governments. We follow previous research and exclude school districts and special districts (such as water and fire districts) as these are far more likely to change over time, whereas municipal and township governments are essentially constant over time (Cutler and Glaeser 1997). Because of this, we have more confidence that our measure is exogenous to the level of Hispanic-white segregation within each metropolitan area.

The correlation between the number of governments (logged) at the level of Hispanic-white segregation is .72 (p < .001). We ran further tests to assess the strength of our instrument. Weak instruments can produce inconsistent IV estimators and increase standard errors of IV estimates (Bound, Jaeger, and Baker 1995). Staiger and Stock (1997) suggest that an F statistic below 10 may indicate a weak instrument. Our results reveal that our instrument is significantly correlated with our treatment variable well above that threshold (F = 78.79; df = 1, 264; p < .001). Another test for assessing weak instruments is to examine the partial $R^2$ for the first stage equation. As the partial $R^2$ approaches 0, the magnitude of the bias of the IV estimates increases. The partial $R^2$ for the first stage results shown in the segregation model in Table 4 is .52. These findings alleviate concerns that our segregation models are violating assumptions of the IV approach.

The regression coefficient for our instrument in equation 1 is 5.09 (p < .001).

While Stata has options to estimate models using instrumental variables (through the “ivregress” and “ivprobit” commands), these commands are only applicable to continuous or dichotomous dependent variables. There is no current command to estimate multinomial logistic models using instrumental variables. Because of this, we estimated our models by first regressing our focal measure on the instrument, saving the predicted values of that equation as a new variable, then entering that variable into the multinomial logistic models. To test the robustness of this procedure, we re-estimated our models using a dichotomous dependent variable where 0 equaled “some other race” and 1 equaled any of the remaining racial categories. With this dichotomous measure, we re-estimated our instrumental variable models using the ivprobit command in Stata for both our segregation and hate crime measures. The results (available on request) from these supplemental models show the exact same pattern as those reported in Table 4. As a further test of our modeling procedure, we also ran a series of models using the “ivprobit” command comparing the likelihood of choosing ‘some other race’ compared to each outcome separately (i.e. other race vs. white; other race vs. black, etc.). Again, the results showed the same pattern as those reported (available on request).

These data come from the Uniform Crime Reporting Program Detailed County-Level Offense Data for 2003-2005. Our measure of violent crime includes all murders, rapes, robberies, and aggravated assaults reported to the police within each metropolitan area.

The regression coefficient for our instrument in equation 3 is 39.2 (p < .001). The $F$ statistic for this first stage equation was 5.79 (df = 1, 264; p < .017); however, the partial $R^2$ for this equation is .39. While the $F$-statistic is below the recommended cutoff, this would likely bias our results in the way of finding null effects (i.e. that anti-Hispanic hate crimes do not matter) by inflating the standard errors of these estimates.

For the omission of this variable to bias our results, skin tone would have to be systematically related to the metropolitan areas in which people choose to live, net of all of the other factors already controlled for in our regressions (e.g., country of origin, education, income, etc.). Conceptually this seems unlikely.

Research by Oropesa et al. (2008) suggests that racial-ethnic identities might be affected by the interaction of skin tone and segregation. However, their study was limited to an examination of Puerto-
Rican women living in New York. Further research on a larger scale is needed to test whether their results can be generalized to other regions and other Hispanic groups.
References


### Table 1: Descriptive Statistics of Hispanic Racial Identity by Various Demographic Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>White</th>
<th>Black</th>
<th>Asian/Indian</th>
<th>Some Other Race</th>
<th>Two of More Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>10,978,757</td>
<td>7,010,073</td>
<td>226,958</td>
<td>140,175</td>
<td>3,276,976</td>
<td>324,575</td>
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<tr>
<td>Percent of all Hispanics</td>
<td>63.9%</td>
<td>2.1%</td>
<td>1.3%</td>
<td>29.8%</td>
<td>3.0%</td>
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</tbody>
</table>

#### Independent Measures

**Focal Measures**

White-Hispanic Dissimilarity: 50.9

Anti-Hispanic Hate Crimes: 65.0

#### Controls

**Nativity**

- Mexican (reference): 59.1%
- Puerto Rican: 11.0%
- Cuban: 5.1%
- Other Hispanic: 24.8%
- Native Born (reference): 39.2%
- (1-9) Years in U.S.: 11.6%
- (10-19) Years in U.S.: 17.0%
- (20-29) Years in U.S.: 15.4%
- (30-39) Years in U.S.: 8.9%
- (40 +) Years in U.S.: 8.0%

**Socioeconomic**

- Less than H.S. (reference): 35.3%
- H.S. Graduate: 24.5%
- Some College: 25.4%
- College Graduate: 14.7%
- Below Poverty (reference): 21.6%
- 100-199% Poverty Status: 27.2%
- 200-299% Poverty Status: 18.4%
- > 300% Poverty Status: 32.8%

**Acculturation**

- Speaks English at Home: 79.9%

**Other Controls**

- Married: 53.0%
- Age: 44.1
- Female (reference): 45.2%
- Male: 54.8%
- Non-Central City (reference): 72.0%
- Central City: 28.0%
- Northeast (reference): 15.8%
- Midwest: 8.3%
- South: 36.2%
- West: 39.6%

**Sources**: The Hispanic-White Dissimilarity index is calculated from 2005-2009 American Community Survey based on 2008 Census metropolitan boundary definitions. The hate crime data come from FBI Uniform Crime Reports aggregated to the MSA level for the years 2006 through 2008. All other measures come from the 2009 American Community Survey.

**Notes**: These figures represent the weighted distributions.
Table 2: Multinomial Logistic Regression with Predictors of Hispanic Racial Identity, 2009 American Community Survey (reference = some other race)

<table>
<thead>
<tr>
<th>Independent Measures</th>
<th>White</th>
<th></th>
<th>Black</th>
<th></th>
<th>Asian/Indian</th>
<th></th>
<th>Two or More Races</th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td></td>
<td>b</td>
<td>SE</td>
<td></td>
<td></td>
<td>b</td>
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<td>Puerto Rican</td>
<td>-0.011</td>
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<td>0.085</td>
<td>-0.216</td>
<td>0.120</td>
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<td>Cuban</td>
<td>1.683</td>
<td>0.068</td>
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<td>0.017</td>
<td>0.002</td>
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<td>Male</td>
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<td>-0.261</td>
<td>0.050</td>
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<td>0.057</td>
<td>-0.055</td>
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<tr>
<td>Speaks English at Home</td>
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<td>0.024</td>
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<td>0.061</td>
<td>-1.057</td>
<td>0.069</td>
<td>-1.044</td>
<td>0.047</td>
</tr>
<tr>
<td>(1-9) Years in U.S.</td>
<td>0.142</td>
<td>0.031</td>
<td>-0.290</td>
<td>0.108</td>
<td>-0.295</td>
<td>0.119</td>
<td>-0.331</td>
<td>0.081</td>
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<tr>
<td>(10-19) Years in U.S.</td>
<td>-0.045</td>
<td>0.026</td>
<td>0.058</td>
<td>0.083</td>
<td>-0.440</td>
<td>0.103</td>
<td>-0.522</td>
<td>0.071</td>
</tr>
<tr>
<td>(20-29) Years in U.S.</td>
<td>-0.232</td>
<td>0.025</td>
<td>-0.015</td>
<td>0.078</td>
<td>-0.583</td>
<td>0.100</td>
<td>-0.374</td>
<td>0.062</td>
</tr>
<tr>
<td>(30-39) Years in U.S.</td>
<td>-0.284</td>
<td>0.029</td>
<td>-0.176</td>
<td>0.093</td>
<td>-0.424</td>
<td>0.109</td>
<td>-0.290</td>
<td>0.071</td>
</tr>
<tr>
<td>(40+) Years in U.S.</td>
<td>0.000</td>
<td>0.035</td>
<td>-0.231</td>
<td>0.093</td>
<td>* -0.577</td>
<td>0.134</td>
<td>-0.183</td>
<td>0.078</td>
</tr>
<tr>
<td>Central City</td>
<td>-0.262</td>
<td>0.018</td>
<td>0.169</td>
<td>0.050</td>
<td>-0.091</td>
<td>0.064</td>
<td>-0.105</td>
<td>0.043</td>
</tr>
<tr>
<td>Midwest</td>
<td>0.111</td>
<td>0.036</td>
<td>-0.364</td>
<td>0.099</td>
<td>-0.028</td>
<td>0.145</td>
<td>-0.066</td>
<td>0.084</td>
</tr>
<tr>
<td>South</td>
<td>0.716</td>
<td>0.026</td>
<td>0.032</td>
<td>0.062</td>
<td>0.251</td>
<td>0.106</td>
<td>0.223</td>
<td>0.060</td>
</tr>
<tr>
<td>West</td>
<td>0.144</td>
<td>0.027</td>
<td>-1.188</td>
<td>0.084</td>
<td>0.475</td>
<td>0.105</td>
<td>0.047</td>
<td>0.062</td>
</tr>
<tr>
<td>100-199% Poverty Status</td>
<td>0.003</td>
<td>0.023</td>
<td>-0.199</td>
<td>0.069</td>
<td>-0.189</td>
<td>0.082</td>
<td>0.047</td>
<td>0.058</td>
</tr>
<tr>
<td>200-299% Poverty Status</td>
<td>-0.066</td>
<td>0.025</td>
<td>-0.252</td>
<td>0.077</td>
<td>-0.373</td>
<td>0.092</td>
<td>0.016</td>
<td>0.063</td>
</tr>
<tr>
<td>&gt; 300% Poverty Status</td>
<td>0.022</td>
<td>0.025</td>
<td>-0.304</td>
<td>0.072</td>
<td>-0.280</td>
<td>0.085</td>
<td>-0.025</td>
<td>0.060</td>
</tr>
<tr>
<td>Constant</td>
<td>0.059</td>
<td>0.047</td>
<td>-2.758</td>
<td>0.134</td>
<td>-2.854</td>
<td>0.165</td>
<td>-2.164</td>
<td>0.108</td>
</tr>
</tbody>
</table>

Notes: N = 93,432  -2 log pseudolikelihood = 157272.7  * p < .05  ** p < .01  *** p < .001
Significance tests are calculated from robust standard errors.
### Table 3: Multinomial Logistic Regression with Contextual Predictors of Hispanic Racial Identity: Testing for Segregation and Hate Crime Effects (reference = some other race)

<table>
<thead>
<tr>
<th>Models</th>
<th>White</th>
<th></th>
<th>Black</th>
<th></th>
<th>Asian/Indian</th>
<th></th>
<th>Two or More Races</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td></td>
<td>b</td>
<td>SE</td>
<td>b</td>
<td>SE</td>
<td>b</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic-White Dissimilarity</td>
<td>-0.012</td>
<td>0.001 ***</td>
<td>-0.019</td>
<td>0.003 ***</td>
<td>-0.023</td>
<td>0.003 ***</td>
<td>-0.018</td>
<td>0.002 ***</td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b</td>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Anti-Hispanic Hate Crimes</td>
<td>-0.0018</td>
<td>0.0001 ***</td>
<td>-0.0011</td>
<td>0.0004 *</td>
<td>-0.0024</td>
<td>0.0003 ***</td>
<td>-0.0019</td>
<td>0.0002 ***</td>
</tr>
<tr>
<td>Model 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b</td>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Hispanic-White Dissimilarity</td>
<td>0.00299</td>
<td>0.00140 *</td>
<td>-0.01366</td>
<td>0.00424 ***</td>
<td>-0.01165</td>
<td>0.00459 *</td>
<td>-0.00818</td>
<td>0.00321 *</td>
</tr>
<tr>
<td>Anti-Hispanic Hate Crimes</td>
<td>0.00092</td>
<td>0.00126</td>
<td>0.01543</td>
<td>0.00585 **</td>
<td>-0.00376</td>
<td>0.00380</td>
<td>-0.00198</td>
<td>0.00297</td>
</tr>
<tr>
<td>Dissimilarity x Hate Crimes</td>
<td>-0.00005</td>
<td>0.00002 *</td>
<td>-0.00024</td>
<td>0.00009 **</td>
<td>0.00004</td>
<td>0.00006</td>
<td>0.00001</td>
<td>0.00005</td>
</tr>
</tbody>
</table>

**Notes:** N = 93,432  * p < .05  ** p < .01  *** p < .001  (Significance tests are calculated from robust standard errors)

-2 log likelihood (Model 1 - Table 2) = 157273.7  Likelihood Ratio Test
-2 log likelihood (Model 2 - Table 3) = 157071.1  Model 1 vs. Model 2: chi-square = 201.59; p < .001, 4 d.f.
-2 log likelihood (Model 3 - Table 3) = 156919.0  Model 1 vs. Model 3: chi-square = 353.71; p < .001, 4 d.f.
-2 log likelihood (Model 4 - Table 3) = 156868.1  Model 1 vs. Model 4: chi-square = 404.61; p < .001, 12 d.f.
-2 log likelihood (Model 2 vs. Model 4) = 203.02; p < .001, 8 d.f.
-2 log likelihood (Model 3 vs. Model 4) = 50.90; p < .001, 8 d.f.

*a* All models include all variables shown in Table 2.
### Table 4: Instrumental Variable Estimates of the Effects of Segregation and Hate Crimes on Hispanics' Racial Identity

<table>
<thead>
<tr>
<th>Models*</th>
<th></th>
<th>White</th>
<th>Black</th>
<th>Asian/Indian</th>
<th>Two or More Races</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td><strong>Model 1 - Number of Governments as Instrument (2002)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic-White Dissimilarity</td>
<td></td>
<td>-0.031***</td>
<td>-0.022***</td>
<td>-0.040***</td>
<td>-0.035***</td>
</tr>
<tr>
<td></td>
<td>(.001)</td>
<td>(.005)</td>
<td>(.005)</td>
<td>(.004)</td>
<td></td>
</tr>
<tr>
<td><strong>Model 2 - Level of Violence as Instrument (2003-2005)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-Hispanic Hate Crimes</td>
<td></td>
<td>-0.0019***</td>
<td>-0.0016***</td>
<td>-0.0027***</td>
<td>-0.0025***</td>
</tr>
<tr>
<td></td>
<td>(.0001)</td>
<td>(.0005)</td>
<td>(.0005)</td>
<td>(.0003)</td>
<td></td>
</tr>
<tr>
<td><strong>Model 3 - Interaction b/w both Instruments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic-White Dissimilarity</td>
<td></td>
<td>-0.05771***</td>
<td>-0.03287**</td>
<td>-0.06960***</td>
<td>-0.05268***</td>
</tr>
<tr>
<td></td>
<td>(.00320)</td>
<td>(.01109)</td>
<td>(.01206)</td>
<td>(.00813)</td>
<td></td>
</tr>
<tr>
<td>Anti-Hispanic Hate Crimes</td>
<td></td>
<td>0.00644***</td>
<td>0.00657</td>
<td>0.00450</td>
<td>0.00410</td>
</tr>
<tr>
<td></td>
<td>(.00130)</td>
<td>(.00449)</td>
<td>(.00416)</td>
<td>(.00283)</td>
<td></td>
</tr>
<tr>
<td>Dissimilarity x Hate Crimes</td>
<td></td>
<td>-0.00006*</td>
<td>-0.00009</td>
<td>-0.00002</td>
<td>-0.00004</td>
</tr>
<tr>
<td></td>
<td>(.00003)</td>
<td>(.00008)</td>
<td>(.00008)</td>
<td>(.00005)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** N = 93,432  * p < .05  ** p < .01  *** p < .001  (Significance tests are calculated from robust standard errors - reported in parentheses)

* All models include all variables shown in Table 2.
Figure 1: Predicted Log Odds of Choosing a "White" Racial Identity Compared to "Some Other Race" Based on the Level of Segregation (Panel A) and Number of Anti-Hispanic Hate Crimes (Panel B) in Metro Area

A. Hispanic-White Segregation

B. Anti-Hispanic Hate Crimes

Notes: Predicted values come from full models of results shown in Table 3 (full tables available on request).
Figure 2: Predicted Log Odds of Choosing a "White" Racial Identity Compared to "Some Other Race": The Interaction Effects of Hispanic-White Segregation and Anti-Hispanic Hate Crimes

A. The Effects of Segregation by varying Levels of Hate Crime

B. The Effects of Hate Crimes by varying Levels of Segregation

Notes: Predicted values come from full models of results shown in Table 3 (full tables available on request).