ABSTRACT

Blacks, Latinx, and American Indians are killed by police at a disproportionately higher rate than whites and Asians, but whether racial discrimination accounts for these killings remains disputed. We contribute to this debate by examining structural conditions in US metropolitan areas that are associated with the expected count of police-caused killings. Using an economic competition model, we find that the size of the metropolitan black population (relative to the white population) positively predicts the expected count of police-caused killings for all minorities and blacks. Moreover, the size of the Latinx population (relative to whites) predicts the expect count of police-caused killings of Latinx civilians. Furthermore, we find that metropolitan areas with more mixed-race neighborhoods experience higher expected counts of police-caused killings, specifically, for all, black and white civilians. Finally, we find that overall population size also predicts the expected number of people killed by the police, but violent crime does not, calling into question accounts that deaths are a function of crime. Our findings suggest, first, that the underlying conditions that lead to the deaths of black and Latinx people at the hands of police are different than police-caused deaths of people of other races. Second, in developing solutions to the serious social problem of police-caused deaths, we need to look beyond the proximal causes of these death (i.e., the police) to the distal factors operating at the metropolitan level that promote white supremacy.

**Word count:** 9,748

ECONOMIC COMPETITION AND POLICE-CAUSED KILLINGS

Police officers were responsible for the deaths of at least 1,146 US residents in 2015; among the dead, 544 were people of color (Swain et al. 2016). Although whites were the single largest group to die at the hands of police, when adjusting for population size, the crude death rate for blacks (7.69 deaths per million) was more than double that of whites (2.95 deaths per million) with Latinx people (3.45 deaths per million) in between (Swain et al. 2016)1. But despite the fact that those dead at the hands of police are disproportionately people of color, the findings of racial discrimination in police-caused violence are mixed (c.f. Zane 2018). Some studies conducted at the national level show that black and Latinx people have a greater probability of being shot and killed by police than white residents (Ross 2015; Buehler 2017; Bui Coates, and Matthay 2018). Other studies call these findings into question (James, James, and Vila 2016; Fryer 2018; Cesario, Johnson, and Terrill 2018).

 Widely publicized recordings of some police-caused killings have provoked scholars and the public to speculate about the prevalence of racism among police officers (Durán 2016; Hughey 2015; Ross 2015). We are interested in a more distal examination of these deaths. That is, rather than examining racial bias in policing practices, we examine the racialized contexts in which differential harm occurs. In this paper, we contribute to the ongoing debate about racial discrimination as a factor in police-caused violence by examining whether or not Blumer (1958) and Blalock’s (1967) group threat hypothesis predicts police-caused deaths at the metropolitan area level. Specifically, we examine economic competition models that include the size of the black and Latinx populations, relative to whites, the comparative economic conditions of these populations, and their residential exposure as predictors of the expected count of police-caused killings at the metropolitan area level. We separately examine all deaths, deaths to all people of color, black, Latinx, and white deaths at the hands of police.

Our analyses add to the scholarly debates about the role of racial discrimination in police-caused killings by examining metropolitan-level conditions that have already been shown to create fields for other extreme activities that harm people of color (see for example Beck 2000) thus identifying places operating under conditions that lend themselves to more racist activity—conceptualizing racism as discriminatory attitudes and actions in the manner of Quillian (1996). Unlike other studies that focus on *shootings*, we examine deaths from all forms of state violence including Tasers, beatings, vehicular assault, and other means. We also create economic competition models that are more similar to those used by race scholars (e.g. Beck and Tolnay 1990; Jacobs and Wood 1999; Jacobs and Helms 1997; Olzak 1990, 1992) than the minority threat models commonly seen in criminology (e.g. Jacobs and O’Brien 1998; Liska and Yu 1992; Sorensen, Marquart and Brock 1993; Holmes, Painter, and Smith 2018).

Our findings show that the size of the metropolitan black population relative to whites predicts the expected count of black deaths and deaths to people of color but not white deaths, and that the size of the Latinx population, relative to whites, predicts the expected count of Latinx deaths. Moreover, we find that black-white interaction predicts the number of police-produced killings for all, black and white civilians. Furthermore, our models better explain the killing of black and Latinx people than the killing of whites, thus supporting the notion that police-caused killings are a racialized phenomenon, with the killings of blacks and Latinx people occurring under different structural conditions than the killing of whites. Our findings also call into question the popular notion that police-caused killings are largely a function of crime.

BACKGROUND

The highly publicized deaths of Eric Garner, Tamir Rice, Michael Brown and others have led many scholars to wonder what role racial domination plays in the death of residents at the hands of police (Brunson 2007; Hughey 2015; Logan and Oakley 2017). Criminologists have long established that police are disproportionately likely to have encounters with people of color (Lundman and Kaufman 2003; Gelman, Fagan, and Kiss 2007; Scott, Ma, Sadler, and Corell 2017) and to concentrate police efforts in neighborhoods of color (Alexander 2011; see also Weitzer and Brunson 2015). Since US police kill civilians at a much greater rate than police in other developed countries and those killed are disproportionately people of color, scholars have looked closely at suspect behaviors, because popular accounts of such deaths in the United States often invoke a narrative that the victim would be alive if only they had complied with police orders (Selby 2017). Many of these studies (e.g., Fridell and Lim 2016; Scott et al. 2017) ultimately support the proposition that police in the United States tend to respond to the race of a suspect, rather than suspect behavior, when making decisions to shoot.

Much scholarship concludes that the increased likelihood of police to shoot people of color or to kill them leads to racial disparities in police-caused deaths. Ross (2015), using multilevel Bayesian analysis and national-level data, shows that armed black and Latinx residents have 2.94 and 1.57 times the probability of being shot by the police, respectively, than armed white residents. Death certificates show that black and Latino men were 2.8 and 1.7 times more likely than whites, respectively, to die from legal intervention, and whites, on average, lost about 169 years of expected life from police violence in 2015 and 2016, while blacks lost 674 (Bui et al. 2018).

However, in experimental simulations with police officers, James and her colleagues (2016) found that officers were less likely to shoot armed and unarmed black suspects than whites. These findings contradict earlier experimental simulations conducted by Correll and his colleagues (2007). Additionally, using data from 11 cities, Fryer’s (2018) analysis of police violence, conditioned on being stopped by the police, reveals that blacks and Latinx people are no more likely than whites to be shot by police, but they are fifty percent more likely to experience violence at the hands of police officers. However, the findings in this study do not account for differential rates of being stopped, which has been shown to be racially biased (Ferrandino 2015). Cesario and his colleagues (2018) also find that when adjusting for race-specific crime (as opposed to the size of the racial sub-population) no systematic evidence of racial disparities exist. They claim that “Exposure to police given crime rate differences likely accounts for the higher per-capita rate of fatal police shootings for Blacks, at least when analyzing all shootings.” (2018:1). However, this national-level study and some others (e.g., Bui et al. 2018; Buehler 2017; Ross 2015) do not account for differences across places and do not sufficiently consider data quality problems. Thus, there is no clear consensus among scholars regarding the role that racial discrimination plays in explaining police-caused killings.

*Group Threat*

 Whether or not racial discrimination plays a role in police-caused deaths, clearly, US police kill many civilians. A traditional criminological perspective to explain this uniquely US phenomenon is that excessive use of force by the police, including the killing of civilians, is explained by factors related to the institution of policing and the culture within individual police departments. Despite the prevalence of this micro-level perspective, the body of empirical work on police-related state violence overwhelmingly supports a more macro-level conflict perspective (see Holmes 2018 for a review of this literature). The conflict perspective on policing is predicated on the idea that power is distributed unequally across groups, and state agencies are put in place to maintain this unequal distribution (Chamlin 1989; Liska 1992; Liska and Yu 1992; Kent and Jacobs 2005). Thus, the police, as agents of the state, are employed, not for general safety and order, but to coercively maintain the existing racial structure that ensures the continuation of white power (Jackson and Carroll 1981; Holmes et al. 2008). As Logan and Oakley explain, police involved killing can only be understood in the context of social control. They note, “...the more fundamental issue [of police-caused killing] is a routine function of policing: protecting the mainstream United States from the perceived risk from its ‘ghetto’ underbelly” (2017: 1031).

How much protection whites assume they need is a function of how threatened they feel by the presence of an out-group; as a minority group grows in size, we typically see more acts of racial domination and more racial disparities (c.f. Tolnay, Beck, and Massey 1989). One possible reason is a larger population of people of color can more effectively demand economic, social, and power resources. Criminologists testing this idea to predict police resource distribution (Kent and Jacobs 2005; Stults and Baumer 2007), sentencing (Wang and Mears 2015), use of excessive force (Smith and Holmes 2014), and other discriminatory policing practices (Holmes 2000; Holmes et al. 2018; Jackson and Carroll 1981; Liska and Yu 1992; Stucky 2005) refer to this pattern as the *minority threat hypothesis.* Race scholars call it *group threat* (e.g., Fossett and Kielcolt 1989; Quillian 1996; Beck 2000). Race scholars show that the size of minority populations, relative to whites, is associated with prejudice (Fossett and Kielcolt 1989; Quillian 1996; Bobo and Hutchings 1996), racially motivated violence (Tolnay et al. 1989), and white supremacy (Beck 2000).

Group threat (and minority threat) are predicated on Blumer’s (1958) classical work on racialized group dynamics. Blalock (1967) elaborated Blumer’s ideas by theorizing that whites feel threatened by the presence of people of color who are able to accrue and mobilize resources. Blalock’s *economic competition theory* provides a nuanced perspective on the relative “threat” that people of color pose to whites, especially with regard to competition for resources that are presumed to be scarce, such as jobs (Blau and Blau 1982; Jackson 1986).2 Blalock argues that under conditions of economic threat, racially motivated outcomes such as lynching (Tolnay et al. 1989) or Klu Klux Klan activity (Beck 2000) will increase linearly with increased “threat” until a tipping point is reached, and then discriminatory outcomes will increase at a decreasing rate. In other words, the relative size and economic power of minorities in relation to whites will exhibit a log-linear function as an explanation of discrimination. Some studies of policing have demonstrated this relationship (Jackson and Carroll 1981; Eitle et al. 2002; Stucky 2005).

To better understand how group threat works, consider Beck’s (2000) study of Ku Klux Klan (hereafter, “Klan”) activity. Under conditions where whites feel that they must compete with blacks for scarce resources, they may find the rhetoric of the Klan—the most infamous of US white supremacist groups—compelling, regardless of “whether these ‘threats’ are materialistic, symbolic, or even delusional” (Beck 2000: 157). When population size and household incomes of people of color approach that of whites, or when whites feel “forced” to share their neighborhoods with people of color, structural conditions are in place for high levels of racial domination activities, like Klan rallies. We argue that if police are operating in these kinds of racist contexts, then these communities are fertile grounds for racially biased activities that result in the killing of people of color by institutions of the state.

 Our argument is supported by work on resource allocation. Decades ago, researchers empirically established that that when people of color are a (perceived) threat to the white power structure, policing resources are more heavily directed toward communities of color (Liska 1992). As the size of the black population grows, relative to whites, so does the police presence in black neighborhoods, arrest rates of blacks, and black rates of incarceration (Jacobs 1979; Jackson and Carroll 1981; Liska, Lawrence, and Benson 1981; Loftin and McDowall 1982; Greenberg, Kessler, and Loftin 1985; Jackson 1986; Chamlin 1989; Jackson 1989; Chamlin 1990; Brandl, Chamlin, and Frank 1995; Jacobs and Helms 1997; Jacobs and O’Brien 1998; Eitle et al. 2002; Kane 2003; Kent and Jacobs 2005). There is some evidence that this occurs in Latinx communities as well (Holmes et al. 2008). The concentration of police efforts in black and Latinx neighborhoods reflects the larger perception that these populations are inherently dangerous (Quillian and Pager 2001; Chiricos, McEntire and Gertz 2001). In the case of Latinx communities that tend to have a large proportion of immigrants (or are perceived as such), immigrants—especially poor immigrants from Mexico—are stereotyped as innately criminal; thus, they are often the target of “crime control” measures (Jackson 1985, Mirandé 1987; Martinez 2002; Holmes et al. 2008). In sum, when people of color are more visible in the community and as people with economic power, policing is used as a tool of oppression.

In other words, while concentrating their crime control efforts in communities of color, police, regardless of their own race, internalize the perceived “threat” of the people they are policing, so that there is both more police presence in minority communities and the police view the less powerful people they are policing as more dangerous than whites (Chambliss 2001; Kent and Jacobs 2005). So, police may have more opportunities to kill people of color, relative to whites, because they are interacting more with these people. Police working in larger communities of color may also be more likely to kill because they consider the people they are (over) policing inherently more dangerous than whites (Jacobs 1979).

 In our study we test the economic competition variant of Blumer (1958) and Blalock’s (1967) group threat model to examine how the size of black and Latinx populations relative to whites, relative household income, and residential exposure predicts the expected count of police-caused killings at the metropolitan area level. Our underlying argument is that as people of color approach whites in population size (which allows people of color greater power in electing local politicians) and in economic and residential conditions (which allows people of color to purchase more desirable real estate, open businesses in prominent locations, and make hiring decisions), the number of people of color killed by police will increase. True to Blalock (1967), we assume there is also a tipping point such that as communities of color come closer to achieving the size and economic conditions of whites, the number of killings by police will increase at a decreasing rate as (possibly) more power is shared. If “threat” is occurring in any form, our models should better predict the killing of people of color than the killing of whites.

*Prior Studies*

The group (or minority) threat literature on police use of force using official statistics has mixed findings. Using vital statistics data, Jacobs and Britt (1979) found that inequality, population change, and violent crime are significant in predicting police-caused killings, but black percent was not a significant predictor. By contrast, Liska and Yu (1992) found that percent non-white, racial segregation, and police agency size were significantly associated with more police-caused killings. Other researchers, using supplementary homicide reports (SHR) and large cities as the unit of analysis (Sorensen, et al. 1993; Jacobs and O’Brien 1998; Smith 2003) find consistent support for a positive relationship between percent black and police-caused killings. Smith (2003 and 2004) also found a significant relationship between the violent crime rate and police-caused killings, but when he limited his analysis to cities with 250,000 or more residents, there is no significant effect of crime on black deaths. Most recently, Holmes and his colleagues (2018) used the 2008-2013 SHR to examine group threat at the city level. They find that the percent of the local population that is black is negatively associated with local police-caused shooting deaths, contradicting the group threat hypothesis. They also find that income inequality—measured by the Gini coefficient—has no association with the expected count of all deaths, while residential segregation—measured by the dissimilarity index—is positively associated with all police-caused deaths.

Using official data like the SHR to study police-caused deaths may be problematic. Although the SHR (e.g. Holmes et al. 2018; Holmes 2000; Smith 2003, 2004) and vital statistics (e.g. Liska and Yu 1992; Sherman and Langworthy 1979) have been used extensively in studying police violence, these data are incomplete and may reflect biased reporting practices (Ross 2015). Better data are required.

Official statistics on police-caused deaths are voluntarily self-reported and are limited only to deaths of those in custody, yielding data where deaths are greatly undercounted (Ross 2015; Klinger 2008; Williams, Bowman and Jung 2016). Williams and his colleagues find that government data sources like the SHR report only 46 to 75 percent of the deaths (2016). These official data are so problematic that on January 15, 2015, then US Attorney General Eric Holder called official data “unacceptable,” and, a month later, then FBI Director James Comey asserted that, “It’s ridiculous that I can’t tell you how many people were shot by the police last week, last month, last year” (Schmidt 2015: Online). Scholars argue that it is time to stop using official indicators that are known to be unsound, and it is time to develop new ones (c.f. Klinger 2008).

 Frustrated by the lack of reliable data on police violence, media such as the *Washington Post* and the *Guardian* are now documenting officer-caused deaths using citizen science (Ross 2015). The public contributes the names of those killed, and reported deaths are verified by a team of paid professionals using accepted journalistic practices. These new data make it possible to identify more people killed, which produces more accurate models.

Holmes, Painter, and Smith (2018), using the SHR, maintain that official statistics are superior because there are more years of data. They argue that because “police-caused homicides are relatively rare events, the use of a six-year time frame minimizes the influence of random fluctuations and produces a more stable measure…” (13). We disagree. These scholars use count models which are already designed to account for rare events (Piza 2012). Furthermore, we see no evidence of much fluctuation in the number of killings from year to year. Using data from *The Guardian,* the number of police-produced deaths at the metropolitan area-level correlated at r=.91 between 2015 and 2016. In other analyses (CITATION REDACTED), the second author of this paper compares data from the two years of The Counted, three years of Fatal Force (which records only those shot by the police), and three years of the SHR. He finds consistent results using both years of the Counted and three years of Fatal Force, but much more variation in models using SHR, which, in some years, contains only 51 percent of the cases found in the other data sets.

In our study, we use data from *The Guardian* and models designed to account for rare events to model police-caused killing at the metropolitan area-level. Our models allow us to consider death from all causes (not just shootings as in prior studies—e.g., Ross 2015, Scott et al. 2017; Holmes et al. 2018) and to account for variation across space using data that captures more cases than official statistics.

DATA AND METHODS

Our data are taken from The Counted, a project of *The Guardian*, which provides information on “any deaths arising from police encounters with law enforcement” in the United States (Swain et al. 2016). The Counted provides addresses where deaths occurred. Using those addresses, we geo-locate deaths across 381 US metropolitan areas. We use the metropolitan areas as the context, as some race scholars do (c.f. Oliver and Wong 2003) despite the fact that many criminologists use the city (e.g., Holmes et al. 2018), because we argue that the racialized “threat” is spread by local media and across commuting spaces which are metropolitan (see Roche and Espino 2009; Pottie-Sherman and Wilkes 2017). Additionally, use of smaller contextual units potentially minimizes the threat effect because whites often segregate themselves in suburbs away from people of color (Massey and Hajnal 1995; Rocha and Espino 2009). We also find that only 54.6 percent of 2015 police-caused deaths involved city police, further making the city a less reasonable contextual unit than the metropolitan area.

Our dependent variable is the number of police-caused deaths in 2015 for each US metropolitan area. We separately count all deaths, all deaths of people of color, deaths of blacks, Latinx people, and whites. We do not count Asians, American Indian, or Middle Easterners’3 deaths separately (although we include these deaths in all deaths and deaths to people of color), because these populations are regionally concentrated, while blacks and Latinx people are more widely dispersed.

In our analyses, we exclude the handful of deaths that occurred in non-metropolitan places as well as deaths as the result of a clear accident (such as a fatal car crash where a driver accidentally hit a police car). We include “accidental” deaths that occurred from police negligence (such as turning off the water in a jail cell). However, because these determinations are somewhat subjective, two experts independently reviewed all cases and flagged those deemed accidental. The reviewers included a former Florida police officer trained in critical criminology and a Tennessee police officer. We excluded those cases marked as “accidental” by the experienced law enforcement reviewers. Because this case-by-case review has only been conducted on the 2015 data, so far, we limit our analysis to that year. After removing accidental deaths, the remaining count of deaths range from 0 in places like Billings, Montana to 58 in the Los Angeles-Long Beach-Anaheim metropolitan area (mean = 2.38).

All predictors in our model are transformed by taking their natural log, capturing the essence of economic competition as originally articulated by Blalock (1967; see also Eitle et al. 2002). One predictor of interest is the natural log of the ratio of the black to white and Latinx to white population, taken from the 2014 American Community Survey 5-year estimates. Like Blalock (1967), we assume a positive relationship between the ratio and deaths to people of color. Measuring relative population size as a ratio has been empirically supported by race scholars over the decades (Fossett and Kiecolt 1989; Tolnay et al. 1989; Quillian 1996; DeFina and Hannon 2009). Criminologists usually measure minority threat as the percent black or percent minority as Blalock (1967) did (c.f. Eitle et al. 2002; Smith 2003, 2004; Holmes et al. 2018). However, Blumer (1958) argues that it is the relative—rather than absolute—size of a minority group that matters (see Alba, Rumbaut, and Marotz 2005). Thus, the justification for using ratios rather than percentages is simple: in the group threat context, percent black assumes everyone else is white; a ratio of black to white does not (see Smith 2003: 154).

Our second predictor is the natural log of the 2014 relative average per capita income calculated as the ratio of mean black and Latinx per capita income (separately) to mean white per capita income taken from the 2015 American Community Survey. Similar measures have been used to measure racial inequality (Jacobs and O’Brien 1998) and economic threat (Jacobs and Wood 1999; Beck 2000). These measures are expected to be positively associated with the expected count of deaths of people of color.

Our third predictor is the natural log of the black-white and Latinx-white neighborhood exposure indices. Blalock (1967) asserts that residential segregation is an important indicator of group threat. Previous studies typically use a measure of evenness (i.e., the index of dissimilarity) to account for segregation (c.f. Liska and Yu 1992; Smith and Holmes 2014; Smith et al. 2018). We argue that exposure is a better measure of Blalock’s theoretical concept (see also Brunson 2007), because “Exposure measures the degree of potential contact, or possibility of interaction, between minority and majority group members” (Massey and Denton 1988: 287). To measure exposure, we use a 2010 interaction index taken from Logan’s (2014) Diversities and Disparities project.4 Interaction ranges from 0 to 100, where larger values mean that the average group member lives in a tract with a higher percentage of people from the other group.

In keeping with prior studies (e.g., Smith 2003, 2004; Holmes et al. 2018) we control for the natural log of the 2014 population size of the metropolitan area (in thousands) and the violent crime rate. Including population (taken from the American Community Survey) assumes larger areas have more police, and more police represent more risks of death. The 2014 violent crime rate is taken from the Uniform Crime Reports (UCR) and represents the number of violent crimes (murder, rape, robbery, and aggravated assault) known to police per 100,000 residents. Additionally, we include dummy variables to account for regional differences in the number of people killed by police, using Southwest (California, Arizona, New Mexico, and Texas) as our reference.5

Logging the variables of interest is true to Blalock’s (1967) theory. Population and violent crime variables are also logged to provide a better overall fit to the models (based on AIC) and corrects for skewness in the distribution (see also Ousey and Unnever 2012; Sorensen et al. 1993; Smith and Holmes 2014).

 Our models include 314 of the 381 US metropolitan areas. Fifty-nine metropolitan areas were listwise deleted due to missing data on the UCR violent crime rate and the indices of black-white and Latinx-white exposure. We also eliminated four metropolitan areas as they were unacceptable points of influence, based on Cook’s D calculations (Weisberg 1985). These metropolitan areas were Los Angeles-Long Beach-Anaheim, New York-Newark-Jersey, Riverside-San Bernardino-Ontario, and Laredo.6 Our final sample captures 701 police-caused killings, of which 377 deaths are of non-whites.

 We use seemingly unrelated, lagged Poisson regression models for our analysis. Statistically rare event, like police-produce deaths, can be analyzed effectively with count models. However, there are many kinds of count models. Previous studies of police-caused killings have used negative binomial models because official counts (e.g., SHR) at the city level are over-dispersed (cf. Smith 2003, 2004; Holmes et al. 2018), meaning that the conditional mean and variance of the dependent variable are not the same (Cameron and Trivedi 1998; Osgood 2000). After estimating our saturated models with The Counted data using the metropolitan areas as our unit of analysis, the conditional mean variance assumption is met using Poisson, as measured by both the deviance and Chi-square statistics. Moreover, both deviance and goodness-of-fit tests indicate that the data follow a Poisson distribution for all models.

Of the 314 metropolitan areas used in our study, there were 122 metropolitan areas with 0 police-caused killings, 197 with 0 minority deaths, 242 with 0 black deaths, 266 with 0 Latino deaths, and 172 with zero white deaths. Despite the large number of zero cases, in analyses not shown (available upon request), zero-inflated models overestimated these zeros to a far greater extent than non-adjusted Poisson models; Poisson models did a better job of correctly classifying data. We discuss this in greater detail in another study (CITATION REDACTED).

Our models were tested for multicollinearity by estimating variance inflation factors (VIFs). The estimated VIFs, indicating the inflation of the variances of regression coefficients compared with those for linearly unrelated independent variables (Neter, Kutner, Nachtsheim and Wasserman 1996) for all independent variables were small, with the exception of Latinx-white exposure (8) and black-white exposure (8). Although high, they remain below the level (10) at which significant distortion of findings is likely to occur. Thus, parameter estimates were not unduly influenced by correlations among predictors (Ibid).

RESULTS

Table 1 displays the descriptive statistics for all variables in our models. On average, 2.36 people were killed in the 314 metropolitan areas studied. Average black, Latinx, and white death counts are 0.70, 0.34, and 1.03, respectively with 1.2 people of color killed in each metropolitan area in 2015, on average.

[Table 1 about here]

Measures of relative population show a higher average for Latinx to white (.34) than black to white (.17). In some places, people of color outnumber whites. The black population exceeds the white population in Albany (GA), Jackson (MS), and Memphis (TN). The Latinx population exceeds the white population in nine metropolitan areas in California (Bakersfield, El Centro, Fresno, Hanford-Corcoran, Madera-Chowchilla, Merced, Salinas, Stockton-Lodi, and Visalia-Porterville), three in New Mexico (Santa Fe, Las Cruces, Albuquerque), five in Texas (Brownsville-Harlingen, Corpus Christi, El Paso, McAllen-Edinburg-Mission, and San Antonio-New Braunfels), Miami-Fort Lauderdale-West Palm Beach (FL), Yakima (WA), and Yuma (AZ).

Average relative per capita income is higher for blacks to white (.56) than Latinx to whites (0.50). Black average per capita income exceeds whites in Bend-Redmond (OR), Elizabethtown-Fort Knox (KY), Farmington (NM), and Las Cruces (NM). In every case, except Elizabethtown-Fort Knox, the black population in those metropolitan areas is less than two percent of the total population, so it is likely that the few blacks who live in these places are drawn there by exceptional income opportunities or that a few high income blacks are driving up the average. Latinx income exceeds whites in Altoona (PA), where Latinx people comprise only 1.1 percent of the population.

 In exposure, we see that, on average, Latinx people more often than blacks live in neighborhoods with whites (63.64 to 57.84, respectively).

Metropolitan areas in our study have an average of 625,000 residents, Carson City’s (NV) 54,630 residents at one end and Chicago-Joliet-Naperville’s (IL-IN-WI) 9.5 million residents on the other. On average, metropolitan areas have 354 violent crime rates per 100,000 residents. We see wide variability with the lowest crime metropolitan area (Bangor, ME) having 76.91 violent crimes per 100,000 and Memphis (TN) having over thirteen times as many crimes with 1,015 crimes per 100,000 residents. It is worth noting that some metropolitan areas typically seen as “liberal” (e.g., Austin, TX; Portland, OR; and Seattle, WA), have large numbers of police-caused deaths relative to metropolitan areas anchored by cities with a more checkered past with regard to race relations (e.g., Memphis, TN and Boston, MA).

Table 2 shows the results of five Poisson regression models used to test economic competition. Models 1-5 represent all deaths, deaths to people of color, black, Latinx, and white deaths, respectively. Table 2 reports unstandardized coefficients, but we use standardized percent change values in our discussion as it yields a more meaningful interpretation of significant terms (see Long 1997). This approach is often used in studies of police-caused killings (cf. Smith and Holmes 2014; Holmes et al. 2018), and can be interpreted as the percent change in killings associated with a one standard deviation increase from the average of a predictor when all other predictors are held constant. Since all of the predictors in our models are logged, when we discuss percent change, we are reporting the change from an unlogged variable to increase comprehension.

[Table 2 about here]

Table 2 shows that the ratio of black to white people is significantly associated with an increased expected count of police-caused killings for all minorities (one standard deviation increase is associated with a 32% increase in minority deaths) and blacks (117%), but not for the other groups, consistent with theory. The ratio of Latinx to white is significantly associated with a 568% increased expected count of police-caused killings for Latinx people but no other groups. This finding also provides support for the group threat hypothesis. Such findings are consistent with previous studies in that “threat” measures are associated with increases in the expected count of police-caused killings for all minorities, blacks, and Latinx people, but not for the total incidence of police-caused killings or for the killing of white people (Holmes et al. 2018).

We find no relationship between relative income and police-caused deaths; this lack of finding is consistent with other recent work on minority threat using different measures of income inequality (Smith and Holmes 2014). Older research finds the inverse: large differences between majority and minority income are associated with more “threat” (Jackson and Carroll 1981; Holmes 2000), including police-caused killings (Jacobs and O’Brien 1998). These older findings are counter to Blalock’s (1967) economic competition theory that suggests that people of color may be perceived as a threat when the income gap is reduced.

The black-white interaction index is significantly and positively related to all deaths (42%), black deaths (55%) and white deaths (92%). Using a seemingly unrelated technique allows us to assert that the largest effect is with white deaths; that is, the more frequently blacks and whites share residential space, the higher the expected count of police-caused killings of whites, especially, but also of blacks and of all Americans as a group. No significant effects are found for the Latinx-white interaction index. Previous research, using dissimilarity indices, indicate a significant relationship between black-white segregation and police-caused killings (cf. Liska and Yu 1992; Holmes et al. 2018). As far as we know, we are the first scholars to use exposure—rather than evenness—to model group threat in police-caused killings, and we are the only scholars, to our knowledge, who find an effect on whites. It is possible that white people who live in neighborhoods with blacks are viewed as threats. Alternatively, those neighborhoods may be over-policed, which increases the risk of death. More research is needed. We acknowledge that a limit of using the interaction index is that places with relatively small populations of people of color will have fairly large exposure indices, which may distort the distinction between places where blacks and Latinx people live in mixed race neighborhoods and places where there are just few black and Latinx people. However, when we measured exposure categorically, the findings were similar but reduced model fit.

Overall, our findings provide some support for economic competition theory in that black and Latinx population size, relative to whites, is associated with the expected count of police-caused killing of black and Latinx people, and metropolitan areas with more black-white interaction (as measured by neighborhood exposure) have more killings of black and white people and of all people overall. However, we find no evidence that reductions or increases in the black-white or Latinx-white income gap is associated with police-caused deaths.

Examining the controls, we see that larger metropolitan population sizes are significantly associated with higher expected counts of police-caused killings in all of our models, consistent with other findings using different data and models (Jacobs and O’Brien 1998; Smith 2003; Holmes, et al. 2018). Surprisingly, the 2014 violent crime rate is not significantly associated with any police-caused killings in 2015. Previous studies of group threat yield mixed results regarding crime. For example, Sorensen and colleagues (1993), find crime is associated with deadly use of force by police officers in cities with 100,000 or more residents, but in their analysis of larger cities (250,000 or more) crime has no significant effect on police-use of deadly force. Similarly, Smith (2003) finds a significant effect for crime in cities with 100,000 residents or more, but the effect again disappears when looking at larger cities with 250,000 residents or more. Smith (2004) finds crime to be associated with an increase in all killings in large cities, but it is not associated with increases in black or white deaths specifically. This suggests that a crime rate effect is likely only to be seen in smaller areas. Overall, the finding calls into question the notion that deaths are function of crime (cf. Cesario, et al. 2018).

Compared to the Southwest, the Northeast has lower expected counts of police-caused killings for all (41%), all people of color (43%), and whites (36%). Moreover, the South has (33%) fewer expected Latinx deaths compared to the Southwest. However, we find no regional differences in the expected count of police-caused killings of blacks.

Seemingly unrelated tests of the coefficients across models (indicated by subscripts a and b in Model 3) show that metropolitan population size is consistently associated with higher expected count of police-caused killings for all people regardless of race, however, this effect is especially pronounced for blacks. This finding aligns with previous research in that population size consistently has an effect on the incidence of police-caused killings (cf. Holmes et al. 2018; Smith 2003, Smith 2004). These findings matter because they provide evidence that the killing of blacks by the police is a different phenomenon than the killing of whites or others, suggesting that larger cities are more dangerous environments for black people with regard to their interactions with police. Insofar as population size is a proxy for the number of police potentially operating in an area, our finding suggests that blacks face a greater danger from police than others do.

In supplementary analyses, we re-estimated all models using linear terms in order to create models more similar to criminologists’ minority threat models. We also included quadratic terms in order to test the Blalock’s (1967) power threat hypothesis. Based on AICs (available upon request), the models presented here are better fitting models than those with linear or quadratic effects. We further tested this by comparing the predicted number of deaths from the various models with the observed counts. We consistently see smaller differences between observed and predicted counts for the models presented in this paper.

CONCLUSIONS

In examining the structural conditions that predict the deaths of US civilians at the hands of police, we contribute to the debate over the role of racial discrimination by examining killings from all means using structural predictors suggested by Blalock (1967). We argue that the patterns of police-caused killing are place-based, meaning that there are metropolitan areas where police rarely kill civilians and there are places where the police kill many, and these patterns are consistent. Thus, understanding police-caused killing requires looking at the role of place and using statistics that are more localized than the national level.

 In this paper, we used an economic competition model based on Blalock’s (1967) to examine metropolitan patterns in police-caused death. We find that in places where the black population approaches and sometimes surpasses the white population, there are more police-caused deaths of blacks and people of color. In places where the Latinx population approaches or surpasses that of whites, there are more police-caused deaths of Latinx people. We also find that in metropolitan areas where blacks and whites share more of the same neighborhoods, there are more deaths of blacks, whites, and all civilians. Interestingly, we find no evidence that the metropolitan violent crime rate is associated with the expected count of people killed by the police. Overall, our findings provide some support for Blalock’s economic competition theory, especially with regard to the relative size of the black and Latinx populations.

Previous scholarship on police-caused killing using conflict models, including minority threat models (Liska and Yu 1992; Jacobs and O’Brien 1998; Smith 2003; 2004; Holmes, et al. 2018), have used official statistics, large cities as their unit of analysis, dissimilarity as a measure of segregation, and percent black as their measure of “threat.” These studies have yielded inconsistent findings. Our predictors are more consistent with those found in race scholarship of group threat examining other racial domination outcomes in using more complete counts of police-caused killings, the metropolitan area as the unit of analysis, exposure as a measure of segregation, and minority population relative to whites. Our overall findings are often consistent with previous findings but also do not include some of the troubling results of prior studies. For example, Holmes and his colleagues (2018) find that when the percent of a city’s population that is black increases, the expected count of deaths declines. We find that as the black population approaches or surpasses the white population in a metropolitan area, the expected number of black and minority deaths (but not white deaths) increases, consistent with theory.

In examining police-caused deaths, some race scholars have speculated about the prevalence of white racism among police officers (Durán 2016; Hughey 2015; Ross 2015). Our findings suggest that police are not immune to the racial forces operating at the place level. Whether police are explicitly or implicitly racist, they react in ways that suggest a fear that black and Latinx people represent a life-threatening risk. This is especially interesting given that violent crime is not associated with the expected count of killings in our models. Certainly, conservative commentators have asserted that “violent criminal attacks are the best predictor of whom police might shoot in America” (Selby 2017: online), and Cesario and his colleagues (2018) argue that adjusting deaths by race by race-specific crime rates eliminates the appearance of racial bias, at least at the national level. However, it is worth noting that crime effects appear to be significant only in conflict studies of smaller cities (cf. Smith 2003; Smith 2004). When analyses are limited to larger cities (and, in our case, to metropolitan areas) no crime effect is found. Although one could argue that using larger geographic areas obscures the relationship between police-caused killing and crime, we do not think so, since about half of all of those killed by police, at least in 2015, were killed by county and state officers.

Our research provides evidence that structural factors of racism are at work in producing civilians’ deaths from some forms of state violence, and these factors should be considered when attempting to understand why people are killed by the police. Our results also call into question explanations of deaths in terms of criminality. Ultimately, to the extent that police are killing civilians and these civilian deaths reflect racial discrimination, our findings underscore that the problem is rooted at the structural level. Police are influenced by the same structures in their community as everyone else, and the logic of white supremacy is inescapable: if police are killing civilians because their split-second judgment is that the civilian poses a lethal threat to the police officer or others, then that judgment is colored by a dynamic that works through the racial composition of the larger community and residential integration. Since there are factors at play at the structural level, solutions aimed at reducing police-caused killing need to be concentrated in ways that move beyond simply retraining police officers. Minority presence must become normalized, and this is a tall order in a society built on racial oppression.

An important caution when examining group threat models is that “threat’ is merely a descriptor that does not explain the process by which factors such as the increasing presence of people of color increases racial domination activity. We believe that it is too simplistic to assume that police-caused killings can be explained by simply asserting that the presence of people of color makes everyone feel unsafe. Rather, we speculate that the presence of a critical mass of people of color allows opportunities for exploitation, and it is these “opportunities” that result in conditions such as death. For example, it is possible that police may target communities of color as a relatively unopposed space for issuing citations that generate local government revenue. These kinds of conditions likely foment hostility between the police and local residents that results in civilian death. These types of possibilities require more study.

NOTES

We classify Latinx people as a race and use *white* to mean non-Latinx whites, reflecting a scholarly, rather than politically official, perspective (Rodriguez 2000; Roth 2012).

Jobs are presumed to be scarce—rather than actually scarce—because population size and economic growth are closely related (c.f. Molotch and Logan 1987). People with jobs put money into a local economy, which, in turn, creates new jobs. Therefore, cities with economic booms have population booms (and vice versa). At the same time, the fact that many Americans believe that immigrants take jobs from native workers suggests that American view the growth of the white population in a local area (a sign of success) differently than the growth of a minority population (“job stealing”).

There is continuing disagreement about what constitutes a race as we note (1) above. People of Middle Eastern origin are socially constructed as a racialized group. An advantage of The Counted is that those of Middle Eastern descent are identified separately from (other) whites.

As far as we can tell, there is no common name for these data that data can be found at https://s4.ad.brown.edu/projects/diversity/segregation2010/Default.aspx

The region variables were constructed to match the census definitions, except the “South” category includes all metropolitan areas except those in Texas. The “Northwest” region includes all metropolitan areas in states defined as West, with the exception of those in Arizona, California, and New Mexico. The “Southwest” region includes Arizona, California, New Mexico, and Texas. This categorization has been extensively used (cf. Holmes 2000; Smith 2003, 2004; Holmes et al. 2018) and is intended to separate the states in which the majority of the US Mexican-origin population reside.

Points of influence provide a false impression of central tendency. At the same time, metropolitan areas removed from the analysis due to influence are real places where people have died. Models that include these cases (which do not show different patterns of direction or significance) are available upon request.

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