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Complaining While Black: Racial Disparities in the Adjudication of Complaints Against the Police

Jacob William Faber
Robert F. Wagner School of Public Service, New York University

Jessica Rose Kalbfeld*
Department of Sociology, New York University

Reports of citizen complaints of police misconduct often note that officers are rarely disciplined for alleged misconduct. The perception of little officer accountability contributes to widespread distrust of law enforcement in communities of color. This project investigates how race and segregation shape the outcomes of allegations made against the Chicago Police Department (CPD) between 2011 and 2014. We find that complaints by black and Latino citizens and against white officers are less likely to be sustained. We show neighborhood context interacts with complainant characteristics: Incidents alleged by white citizens in high-crime and predominantly black neighborhoods are more likely to be sustained. These findings provide context for understanding tensions between communities of color and the CPD. These results are consistent with theories that individual and institutional actors prioritize white victimhood and reflect the neighborhood effects literature stressing the interaction between individual and contextual factors in shaping outcomes.

INTRODUCTION

Tension between police and communities of color has marked national discourse throughout the 2010s, one aspect of which is scrutiny of the processes through which officers are held accountable for misconduct. Media reports and Department of Justice analyses of the adjudication of allegations against police characterize the processes as opaque and note that officers are rarely disciplined, particularly when the complainant is nonwhite (DOJ 2017; Lewis et al. 2015; Ransom 2015). Furthermore, many high-profile police shootings that have marked this political moment involved officers with many complaints against them (McLaughlin 2015; Peters and Elinson 2016; Soergel 2014; Tribune News Service 2016; Weichselbaum 2015). The seeming ineffectiveness of accountability—within a context of simultaneous inadequacy and disproportionality of policing in communities of color—may contribute to the lack of trust in law enforcement among minorities (Desmond, Papachristos, and Kirk 2016; Peterson and Krivo 2010). Developing an understanding of the social contexts that shape these outcomes, therefore, is of concern to scholarly and public discourse.

*Correspondence should be addressed to Jessica Rose Kalbfeld, Department of Sociology, New York University, 295 Lafayette St., New York, NY 10012; jessie.kalbfeld@nyu.edu.

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Scholars have repeatedly shown racial disparities in the frequency and nature of interactions with the justice system: People of color are more likely than whites to be stopped while driving (Engel and Calnon 2004), questioned while walking (Crutchfield et al. 2012), or arrested for drug possession (Mitchell and Caudy 2015). The spatial concentration of exposure to law enforcement (Legewie 2016; Peterson and Krivo 2010; Sewell, Jefferson, and Lee 2016) is both a cause and consequence of persistent racial segregation, as policing serves to reinforce racialized neighborhood boundaries and is informed by narratives conflating race and criminality (Anderson 1992; Besbris et al. 2015; Goffman 2015; Quillian and Pager 2001; Sampson 2012).

We leverage administrative data on allegations of police misconduct to explore two issues of sociological interest: the racialized nature of victimhood and the ways in which neighborhood context interacts with individual characteristics. Specifically, we investigate how race and segregation shape the outcomes of complaints made against the Chicago Police Department (CPD) between 2011 and 2014. We find that complaints by black and Latino citizens were significantly less likely to result in a recommended sanction of the officer. Black officers were more likely than white officers to have punishment recommended, especially when the complainant was white. Additionally, we show that neighborhood played a role in shaping outcomes. The gap between white and black complainants was largest in predominantly black and high-crime neighborhoods. These disparities help provide context for understanding the tensions between communities of color and the plurality-white Chicago Police Department and illuminate flaws in a procedure ostensibly designed to enforce accountability on those sworn to protect and serve and, more consequentially, empowered with the right to take human life.

BACKGROUND AND LITERATURE REVIEW

POLICING RACE, POLICING SPACE

The history of policing is rooted in enforcement of racial order—beginning with slave patrols (Barkan and Bryjak 2011; Bass 2001).[1] Following slavery, law enforcement continued to maintain the color line by enforcing racial separation as maintainers of the "colonized status of black Americans" (Blauner 1972:97) through the enforcement of de jure and de facto discrimination (Bass 2001; Loewen 2005), an important aspect of which was reification of boundaries between racialized places. Rather than quelling violent reactions to blacks, police were often passive, allowing violence to occur against blacks in white spaces (Sugrue 2014). At times, police officers even contributed to the spread of violence (Hirsch 1983).

Differential treatment of people of color continues well after the Civil Rights Era. Whites have lower rates of contact with police (Crutchfield et al. 2012). Black drivers are more likely to be stopped than whites (Engel and Calnon 2004; Jernigan 2000; Lundman and Kaufman 2003). Street stops are more common in communities of color despite lower rates of summons, arrest, and confiscation of contraband (Fagan 2012; Fagan and Davies 2000; Fagan et al. 2016). Additionally, people of color are more likely to be the subject of drug arrests despite a lack of evidence that they engage in higher levels of drug offenses than whites (Mitchell and Caudy 2015). The way in which minority neighborhoods are policed is part of a broader dynamic in which the racialization of place is a

crucial aspect of the American racial order (Lipsitz 2005, 2007). Segregation not only separates people, but distributes amenities (e.g., jobs) and disamenities (e.g., crime) unequally (Massey and Denton 1993), which serves to perpetuate inequality (Sharkey and Faber 2014).

The spatial overlap of racial isolation and socioeconomic disenfranchisement (Sharkey 2013) helps structure stereotypes about places, which conflate race and criminality. Negative stigma associated with poor communities of color is reinforced with the assertion, via overzealous policing (Alexander 2013; Gelman et al. 2007) and media reporting (Eschholz et al. 2003; Gilliam, Valentino and Beckman 2002), that such places are dangerous (Anderson 1992; Besbris et al. 2015; Link and Phelan 2001; Neckerman and Kirschenman 1991; Quillian and Pager 2001; Sampson 2012; Sampson and Raudenbush 2004). Police are more likely to use excessive force against citizens of color in the context of places with minority groups that, following minority threat theory, threaten the white social order, and racialized places that may "trigger myriad social psychological responses among police officers that make the gratuitous use of force more likely" (Smith and Holmes 2014). In the era of disorder-based policing, the links between race, place, and disorder may offer a partial explanation of racial disproportionality in police–citizen encounters and further enable police in the enforcement of geographic racial boundaries (Kalbfeld 2016). Furthermore, these dynamics may help explain differences in both the quantity and the quality of citizen–police interactions, as well as how complaints against the police are situated, understood, and evaluated.

TRUST OF CITIZENS AND POLICE

Lack of minority trust in law enforcement may be expected given the racialized nature of policing. Two reasons for this distrust are particularly salient for our research: a sense that black lives and black victimhood are devalued and a related sense that policing is racialized. Evidence that black victimhood is valued less than white victimhood has been documented across multiple arenas, from capital punishment (Carter 1988; Phillips 2008) to news media (Weiss and Chermak 1998). Beliefs about victimhood and culpability regarding criminal acts are often racialized, with victims assumed to be white and transgressors assumed to be black (Carter 1988). Crime reporting reinforces a devaluation of black victimhood with stories about white victims more likely to get media coverage (Weiss and Chermak 1998). Similarly, people convicted of killing whites are more likely to receive the death penalty than those convicted of killing blacks (Arkin 1980; Bowers and Pierce 1980; Gross and Mauro 1984; Nakell and Hardy 1987; Paternoster 1983, 1984; Phillips 2008). Furthermore, social psychology has found that whites perceive blacks to be less innocent and systematically overestimate the culpability of black youth (Goff et al. 2014). Finally, black victimhood is often juxtaposed with hyper-valorization of the police—a construct shaped and perpetuated via the media (Rantatalo 2016; Reiner, 2003, 2010). Mythologizing police contributes to differential trust across actors in legal conflicts (Bridgeman and Marlowe 1979; Faigman and Baglioni 1988).

A second reason for distrust in the police—the belief that policing is racialized in policy and practice—also fuels perception that policing is ineffective in communities of color (Peterson and Krivo 2010). Rather than protectors, as they are perceived in white areas, police are seen as adversarial (Katznelson 1981; Scaglion and Condon 2008; Schuck,

Rosenbaum, and Hawkins 2008). Communities of color feel simultaneously abused and abandoned by police via harassment through racial profiling and insufficient enforcement when necessary (Freeman 2006).

One implication of distrust is that residents are less likely to call police, which can lead to more crime (Desmond et al. 2016). A sense of injustice combined with the feeling that policing has a different impact across communities contributes to the idea that there is no point in contacting the police for aid (Kirk and Papachristos 2011). Instead, these communities are afraid to report incidents other than emergencies because the police may not have their interests at heart (Anderson 2000). Unwillingness to go to police lowers the cost of criminal action, which lowers the deterrent effect of crime control (Peterson and Krivo 2010). Additionally, lack of trust in the efficacy of formal social control (i.e., police efficacy) is linked to lower levels of informal social control, especially in communities with large African American populations and disadvantage (Drakulich and Crutchfield 2013). In this way, distrust of the police contributes to a feedback loop where distrust leads to lower likelihood of calling the police for help and contributes to less collective efficacy and informal social control, which lowers the cost of criminal activity, which contributes to crime, which confirms negative stereotypes, which contribute to the stigma of communities of color, which further encourages the policing of racialized neighborhood boundaries, which contributes to the distrust in police (Morenoff, Sampson, and Raudenbush 2001; Sampson and Wilson 1995; Sampson, Raudenbush, and Earls 1997; Shaw and McKay 1942).

Official complaints allow civilians to make direct comments about interactions with the police. Trust and confidence in criminal justice are more closely linked to perceptions of the fairness of interactions with the system and its representatives, and the means with which those representatives assert their authority, than to the outcomes of those procedures (Sunshine and Tyler 2003; Tyler 2001). When civilians formally complain, we might assume the expectation of procedural justice has already been violated. Therefore, any perception of injustice, discrimination, or racial disparity in adjudication may contribute to an already existing sense of unfairness. Both the procedure and outcome of the complaint process are, therefore, important factors in civilian trust in police, which carries the previously discussed implications for efficacy of social control.

THE PATTERN OF COMPLAINTS

Previous research on police misconduct complaints has shown connections between the complaint process and citizen perceptions of procedural justice. Several studies found individuals who made complaints against police were less interested in disciplining the offending officer and more concerned with the misconduct being officially documented, receiving the opportunity to confront the officer, and receiving an apology (De Angelis 2009; Walker 1997; Waters and Brown 2000). De Angelis (2009) found that the institution of a citizen review board had little effect on complainant satisfaction as the change did not substantively alter the review process or outcomes.

Reviews of complaints against police from across the country show variation in rates at which complaints are sustained; however, most found the rate to be below 12 percent (Dugan and Breda 1991; Hassell and Archbold 2010; Hickman 2006; Liederbach

et al. 2007; Manis, Archbold, and Hassell 2008; Michelle Lersch and Mieczkowski 1996; Terrill and Ingram 2015). A 2010 analysis of complaints made against a Midwestern law enforcement agency found that 62 percent of complaints were sustained (Hassell and Archbold 2010). At the other end of the spectrum, Liederbach et al. (2007) found that only 1.6 percent of complaints made against officers in a Midwest City were sustained. Liederbach et al. (2007) also found complaints by blacks were less likely to be sustained than complaints by nonblacks and complaints against black officers were more likely to be sustained than those against other officers. Therefore, the race of both the complainant and the officer are important factors in predicting complaint outcomes.

Despite the rich literature on police complaints, there has been no previous investigation of the spatial context of complaints. Within this context, we aim to fill that gap by investigating the impact of race and space on the outcomes of complaints made against police in Chicago. We begin with several hypotheses. First, given research on the devaluation of black victimhood, we expect that complainants of color will have a lower likelihood of having their complaints sustained. Second, given over policing of neighborhoods of color, the historical policing of racialized boundaries, and use of excessive force in communities of color, we expect complaints made in communities of color, particularly those with high crime rates, will have a lower likelihood of being sustained compared to complaints made in predominantly white communities. Finally, we expect to find that the combination of race and place will interact to further disadvantage complainants of color who complain about misconduct experienced in the most disadvantaged neighborhoods such that complaints made by people of color in high crime rate communities of color will have the lowest likelihood of being sustained compared to other complaints.

THE CHICAGO CONTEXT

Chicago is one of the most segregated cities in the country (Bader and Warkentien 2016; Logan et al. 2015). Large racial gaps in income contribute to the concentration of poverty and shape the distributions of crime and policing in the city (Kent and Carmichael 2014; Sampson 2012). The unequal racial and spatial distribution of crime is reflected in patterns of policing (ACLU of Illinois 2014a, 2014b, 2015; Schuck et al. 2008). Black and Hispanic Chicagoans were more likely to face traffic stops than whites and be searched when stopped (ACLU of Illinois 2014a). Although black Chicagoans represent just 32 percent of the city's population, they were subjected to 72 percent of all street stops in 2014 (ACLU of Illinois 2015). Use of force is widespread and disproportionately directed at blacks (DOJ 2017).

Despite the racial disproportionality of the number of negative police interactions, deployment disproportionately denies service to black neighborhoods so that residents have to wait longer for response to calls for service and fewer officers are allocated to respond than for white neighborhoods (ACLU of Illinois 2014b; DOJ 2017). One Chicago police officer told Department of Justice investigators that the law is "unquestionably enforced differently" in white and black neighborhoods, contributing to the different experiences these communities have with police (DOJ 2017). Although crime in Chicago

has dropped over the last decade, it still remains high compared to other major U.S. cities, and increased in 2015 (City of Chicago Data Portal 2016b).

THE COMPLAINT PROCESS

The processes through which citizens hold officers accountable for improper or illegal activity are determined by individual jurisdictions, creating a patchwork of procedures without a nationally uniform method of data collection or standard of punishment. In Chicago, complainants endure a multistage process (IPRA 2016). During the period of study (i.e., 2011–2015), two agencies split adjudication based on complaint type.[2] CPD's Bureau of Internal Affairs (BIA) handled complaints of criminal misconduct, operational violations, substance abuse, and off-duty incidents (McCarthy 2014). The Independent Police Review Authority (IPRA), which is separate from CPD, investigated complaints of excessive force, domestic violence, verbal abuse "based on bias," coercion, and incidents where officers discharged a firearm or Taser and where someone died or suffered "serious bodily injury" in custody.[3] Complaints could be made via phone, internet, or in person. Once a complaint was made, it would be logged and the IPRA would forward to the BIA those complaints that were not under its purview.

Once a complaint was logged, the IPRA had seven business days to notify the complainant that their complaint was received. Other than exceptional circumstances, both the BIA and the IPRA could not proceed with investigation of a complaint without a signed affidavit from the complainant certifying the veracity of their complaint. The IPRA had 30 days to obtain the affidavit, at which point they decided if the complaint would be dropped due to lack of affidavit or if the investigation would proceed anyway. If they determined that the complaint was of great enough severity to pursue without the signed witness affidavit, they were required to obtain an affidavit from the Chief of the BIA (though this option was rarely used; DOJ 2017). Similarly for complaints assigned to the BIA, without a sworn affidavit investigation would not proceed unless the complaint alleged criminal conduct, a violation of Medical Policy, a violation of the residency policy, the complaint was made by a member of the CPD or the IPRA, or an affidavit override approval was obtained (CPD 2015).

Investigations had several possible outcomes. The allegation may be *not sustained*, meaning there was insufficient evidence to support the allegation, so it could neither be proven nor disproven. The allegation may be *unfounded*, meaning either the facts of the incident were not as reported or the incident did not occur. The investigation may end in *exoneration*, meaning the evidence showed the officer took the alleged actions but that the actions were found to be "lawful and proper." Finally, the allegation could be *sustained*, meaning sufficient evidence was found to justify disciplinary action against the officer. Officers could be sanctioned in a variety of ways, including the violation being noted in their record, a formal reprimand, a suspension, and separation from the department (IPRA 2016). Following the conclusion of an IPRA investigation, an Advisory Letter was sent to the CPD if the investigation uncovered something that warranted specific attention.[4] Once recommendations were made, the Police Board could decide, at their discretion, to overturn the punishment suggested by either IPRA or BIA (CPD 2015; IPRA 2016).[5] In fact, DOJ found that in cases where a complaint was sustained, it was common for officers to never face sanction, either through action of the Police

Board, the appeals process, or other means (DOJ 2017). In an official investigation, DOJ found that the IPRA was insufficiently staffed and that BIA and IPRA investigators were insufficiently trained to properly conduct internal investigations, which were often haphazard, gave undue weight to officer statements in the face of contradictory evidence, and failed to interview witnesses or follow up on other evidence. Additionally, the process was found to lack transparency and potential complainants were discouraged from filing complaints when they attempted to make them in person (DOJ 2017).

DATA

INVISIBLE INSTITUTE FOIA

The data for this project were provided by the Invisible Institute's Citizens Police Data Project ("II" hereafter), a Chicago-based, nongovernmental organization focused on human rights and investigative reporting (Invisible Institute 2016). In November 2015, II released a database of 21,624 misconduct complaints[6] acquired via the Freedom of Information Act. Our primary outcome of interest is a dummy variable coded 1 if the complaint is sustained (i.e., punishment was recommended). We create dummy variables for complainant and officer race (i.e., non-Hispanic white, non-Hispanic black, Hispanic/Latino, and—for officers—Asian/Native American[7]) as well as dummy variables identifying male complainants and officers. Officer rank is measured with indicator variables for Police Officer (lowest rank) and Sergeant, with higher ranked officers as the comparison group. We use a linear measure of the number of witnesses on the officer's side. We use a dummy variable to identify cases in which an additional witness was listed on the side of the complainant because only 1.2 percent of complainants identified another witness. We include dummy variables for the type of incident alleged (i.e., false arrest, illegal search, lockup procedure, operation/personnel violation, use of force, or other[8]). We measure the length of time between submission of complaint and final adjudication in number of days. Because the dataset includes the name of the involved officer, we capture the total number of complaints made against each officer during the period of study. The adjudication process consists of multiple steps, the first of which is obtaining an affidavit from the complainant. We capture whether a complainant submits an affidavit with a binary variable (coded 1 if an affidavit was submitted). The dataset also includes information on the punishment recommended if sustained, which we incorporate into supplementary analyses.

Despite the richness of the dataset, there is missing information. We do not know, for example, which agency reviewed the complaint. However, as discussed above, each of the two agencies handles different complaint types, so our inclusion of controls for category should address this. We are also unaware of any criminal activity committed by the complainant. The judicial process could shape willingness or ability to submit an affidavit or dedicate the resources required to carry an allegation to its end (e.g., if a complainant is incarcerated). Similarly, criminal proceedings against the complainant or officer may influence the perception of either party. The addresses of alleged incidents at residential locations have been redacted from the dataset to protect privacy. Our dataset, therefore, consists of incidents that occurred at public or semipublic places and inferences we draw

about ecological factors are specific to the locations in which the alleged incident occurred.

NEIGHBORHOOD CHARACTERISTICS

As Chicago is a city where space is highly racialized (Sampson 2012), navigation of racialized spaces may be particularly relevant for citizens and police (and may shape interactions between the two). We rely on census tracts as ecological units because of the simplicity with which they can be used to join other data. We geocode allegations and identify the tract in which the alleged incident occurred. We then use tracts to connect complaints to a host of ecological characteristics, starting with racial makeup gathered from the Neighborhood Change Database (GeoLytics 2016).

We focus primarily on black population share for several reasons. First, blacks are the most segregated group in Chicago. In 2010, the typical black Chicagoan lived in a census tract that was 79.9 percent black, compared to 61.1 percent for Latinos, 60.2 percent for whites, and 20.9 percent for Asians (Logan et al. 2016). Second, neighborhood racial homogeneity creates multicollinearity problems when we estimate models with multiple measures of race—percent black is strongly, negatively correlated with percent Latino (–0.69) and white (–0.77). Finally, the relationships between outcomes of interest and percent white or Latino appear to be driven by places being not black, rather than being either white or Latino. Specifically, the relationships between outcomes and percent white and percent Latino are in the same directions (i.e., the opposite of percent black). The one exception is Latino complainants in predominantly Latino tracts—disparities between whites and Latinos are largest in these areas (see Appendix Table A1).

There is dramatic spatial and racial variation in exposure to crime across Chicago, which likely affects police presence and tactics, as well as perceptions of individuals from particular neighborhoods. We gathered data on violent crime (i.e., homicide, assault, robbery, and battery) for each of the years of our study from City of Chicago Data Portal (2016b). For each tract-year, we calculate the log of the total number of such crimes.[9] There may also be differences across neighborhoods in willingness and/or ability to contact government for help with any problem. To address potential bias such differences could present, we gathered data from the City of Chicago Data Portal (2016a) on 311 calls made during the years of study. We geocoded[10] 2,212,286 calls and aggregated 311 call volume at the tract-level by year. We use the log of the number of calls per capita within each tract-year to estimate willingness of citizens to contact government. We also include the natural log of the number of police misconduct allegations per capita within a tract as an additional proxy of willingness to reach out to government. Although this measure may conflate willingness to contact officials with need to do so, we believe that conditional on the other covariates we are capturing important variation in willingness to interact with bureaucracy.

SAMPLING

We analyze allegations that have a full record and have been geocoded. Of the 21,624 records in the dataset, 3,912 had not yet been adjudicated and/or were filed in 2015.[11] We exclude an additional 7,282 observations because the conclusion of the process or

TABLE 1. Sample Descriptives

	Mean	SD	Min.	Max.
Sustained	0.057	0.231	0	1
Filed affidavit	0.45	0.498	0	1
White complainant	0.18	0.384	0	1
Black complainant	0.704	0.456	0	1
Latino complainant	0.115	0.32	0	1
Male complainant	0.586	0.493	0	1
White officer	0.517	0.5	0	1
Black officer	0.257	0.437	0	1
Latino officer	0.226	0.418	0	1
Male officer	0.833	0.373	0	1
Rank: PO	0.846	0.361	0	1
Rank: SGT	0.095	0.293	0	1
Additional complainant witness	0.012	0.11	0	1
False arrest	0.1	0.3	0	1
Illegal search	0.176	0.381	0	1
Lockup procedures	0.087	0.282	0	1
Operation/personnel violations	0.331	0.47	0	1
Unknown category	0	0	0	0
Use of force	0.19	0.392	0	1
Number of officer witnesses	0.18	0.641	0	5
Officer's *N*th complaint	2.06	1.71	1	16
Percent black 2010	0.642	0.406	0.001	0.998
Violent crime	190	120	3	637
Total 311 calls per capita (all years)	0.227	0.093	0.001	0.729
Total number of complaints per capita in census tract	0.015	0.022	0	0.123
Observations	10,077	*	*	*

the complainant's race was recorded as "Unknown." Of remaining records, 353 were missing addresses because the alleged incident occurred at a residence. We were unable to geocode 746 allegations, due to typos in the II dataset. By excluding complaints that are missing a recorded outcome, our estimates are potentially biased by right censoring—97 percent of allegations from 2011 have outcomes; that rate falls to 95 percent in 2012, 92 percent in 2013, and 77 percent in 2014. Because, as we show below, disparities widen as time to adjudication increases, we have strong reason to believe that the right censoring of our data biases our result towards zero. Specifically, by omitting observations that have yet to be adjudicated, we are likely omitting observations that are even more preferential toward whites.

Table 1 shows descriptive statistics for our sample of 10,077 allegations. Compared to the city, which is 32 percent white, 32 percent black, and 29 percent Latino, the sample is disproportionately black (70 percent) and male (59 percent), which we expected given who is most likely to interact with the police. Also as anticipated, complaints about misconduct were concentrated in nonwhite tracts—particularly in the predominantly black South Side. Racial differences between CPD as a whole and the officers in the sample were not as stark, though CPD was 70 percent male, compared to our sample (83 percent; CPD 2010). CPD is somewhat whiter than the city's population, which may affect interracial interactions between citizens and officers.

METHODS

We use a series of logistic regressions with police district random effects to explore the roles of race and space in the process of complaint adjudication. Because the majority (83.6 percent) of variance in the primary outcome of interest (i.e., whether an allegation was sustained) was between districts, we prefer random effects to fixed effects (Allison 2009). Furthermore, several districts had so few observations—a function of the geographic unevenness of complaints—that their regressors perfectly predicted outcomes, which forced the exclusion of additional cases. Not surprisingly, racial disparities in allegation outcomes are significant regardless of approach.

We first estimate the likelihood that an allegation is sustained based on the race and gender of the complainant and officer, officer rank, number of prior allegations against that officer, presence of witnesses, complaint category, and year. We next add ecological variables: percent black, as well as the log of the number of violent crimes, police misconduct allegations per capita, and 311 calls per capita by year. Formal tests for multicollinearity did not suggest any problems with our chosen model specification. The highest variance inflation factor (VIF) is 2.86 (for percent black). We then interact tract racial makeup and crime with complainant race to estimate heterogeneity in the relationships between these phenomena and allegation outcomes. Finally, we investigate whether specific complainant–officer racial combinations are particularly likely to result in a sustained allegation by interacting race variables for both actors.

We employ multiple strategies to assess racial disparities at various steps in the adjudication process. We focus primarily on the submission of an affidavit subsequent to filing an allegation because records of that step are clearest. In a sequence of logistic regressions, we estimate the likelihood that a complainant takes this step based on citizen, officer, incident, and ecological factors. We then model the outcome of allegation sustained among the subsample of complaints for which an affidavit was provided. This sequence of models provides insight into how racial and spatial inequalities manifest at different points in the adjudication process.

RESULTS

Of the 10,077 complaints in our sample, only 5.7 percent were sustained. There were, however, dramatic racial disparities. A mere 1.9 percent of complaints by blacks were sustained, compared to 6.7 percent for Latinos and 19.7 percent for whites. Officer race also played a role, but differences were less striking: Allegations against black officers were the most likely to sustained (9.3 percent), while Latino (5.2 percent), Asian/other (5.0 percent), and white (4.1 percent) officers were less likely to have a sanction recommended.

Less than half (45.0 percent) of complainants filed an affidavit subsequent to a complaint. Racial differences in the rates of affidavit submission explain some of the disparities in the likelihood that allegations are sustained. Black complainants were less likely to file an affidavit (41.7 percent) compared to Latinos (48.7 percent) and whites (55.5 percent). Our data do not allow us to disentangle whether complainants do not file affidavits because of direct (e.g., through discouragement) or indirect (e.g., through a lack of due diligence) dissuasion or if they choose not to for some other reason (e.g., lack of time or

TABLE 2. Distribution of Complaints Across Complainant and Officer Race

	Officer Race				
Complainant Race	White	Black	Hispanic	Asian/Native American	Total
White	960	392	398	67	1,817
Black	3,427	1,989	1,462	219	7,097
Hispanic	660	123	343	37	1,163
Total	5,047	2,504	2,203	323	10,077

fear of further entanglement with police); however, DOJ evidence indicates officers engaged in intimidation to discourage complaints, including refusing to take complaints in person and filing, or threatening to file, baseless criminal charges against complainants and witnesses (DOJ 2017). Regardless of mechanism, there are substantial racial disparities in complaint outcomes even among those who filed affidavits. Within this subsample, only 4.6 percent of allegations made by blacks were sustained, compared to 13.8 percent of Latinos and 35.5 percent of whites.

Misconduct allegations were clustered in black neighborhoods.[12] Some of this is due to the fact that district offices, where many complaints are concentrated, are located in black neighborhoods. Although the average differences in allegation outcomes did not vary dramatically across neighborhood racial makeup, this obfuscates important heterogeneity in the relationship between neighborhood context and outcomes of interest, which we explore below. Table 2 displays the overlapping distributions of complainant and officer races. For complainants of all races, the accused officer was most likely to be white (because Chicago PD is predominantly white). For both black and Latino complainants, the accused officer was more likely to be black and Latino, while the opposite was true for white complainants—perhaps because beats were allocated such that an officer's race was reflective of his or her beat.

Finally, there were differences in the category of allegation across complainant race. Complaints made by blacks and Latinos were more likely to be about a "physical" incident, which reflects the heavy handedness of policing in communities of color (DOJ 2017)—52.9 percent of black and 43.7 percent of Latino grievances were about false arrest, illegal search, or use of force, compared to only 23.5 percent of whites. Across all categories, allegations by blacks were significantly less likely to be sustained than those by whites. In all categories other than illegal search, Latinos were also less likely to see their allegations sustained than whites.

MODELING THE ROLES OF RACE AND SPACE IN THE ADJUDICATION PROCESS

Table 3 shows results from logistic regressions with police district random effects as odds ratios. The first model, which includes complainant, officer, and incident characteristics (as well as dummy variables for each year), shows the likelihood of a sustained allegation is lower for blacks (87 percent less likely) and Latinos (51 percent) compared to whites, supporting our first hypothesis that complainants of color would have a lower likelihood of having their complaint sustained. Male complainants were 42 percent more likely to see the process end in their favor. Officer race also played a role, as

TABLE 3. Models Predicting Sustained Using Entire Sample

	Model 1		Model 2		Model 3		Model 4	
Complainant characteristics								
Black	0.131***	(0.016)	0.095***	(0.012)	0.153***	(0.044)	1.580	(1.451)
Hispanic	0.485***	(0.072)	0.527***	(0.081)	0.518**	(0.116)	0.494	(0.497)
Male complainant	1.422**	(0.157)	1.368**	(0.153)	1.363**	(0.152)	1.359**	(0.152)
Officer characteristics								
Black officer	2.240***	(0.271)	1.750***	(0.221)	1.755***	(0.223)	1.763***	(0.223)
Hispanic officer	1.354*	(0.187)	1.326*	(0.186)	1.321*	(0.185)	1.324*	(0.185)
Asian/Native American officer	1.105	(0.340)	1.166	(0.364)	1.173	(0.366)	1.179	(0.369)
Male officer	1.053	(0.134)	0.981	(0.127)	0.975	(0.126)	0.970	(0.125)
Rank: PO	1.552*	(0.317)	1.723*	(0.365)	1.741**	(0.370)	1.728**	(0.366)
Rank: SGT	1.131	(0.280)	1.200	(0.306)	1.203	(0.307)	1.188	(0.303)
Rank: Unknown	1.533	(0.797)	1.661	(0.900)	1.657	(0.901)	1.591	(0.864)
Incidents characteristics								
Officer's *N*th complaint	0.986	(0.043)	0.953	(0.043)	0.953	(0.043)	0.954	(0.042)
Additional complainant witness	3.343***	(1.038)	3.537***	(1.109)	3.580***	(1.124)	3.612***	(1.137)
Number of officer witnesses	1.565***	(0.083)	1.555***	(0.084)	1.554***	(0.084)	1.553***	(0.084)
False arrest	0.061***	(0.037)	0.057***	(0.034)	0.057***	(0.034)	0.058***	(0.035)
Illegal search	0.017***	(0.012)	0.017***	(0.012)	0.017***	(0.012)	0.017***	(0.012)
Lockup procedures	0.327***	(0.065)	0.298***	(0.061)	0.295***	(0.060)	0.294***	(0.060)
Operations/personnel	0.703**	(0.090)	0.662**	(0.088)	0.660**	(0.088)	0.659**	(0.087)
Use of force	0.260***	(0.053)	0.258***	(0.053)	0.259***	(0.053)	0.258***	(0.053)
Tract characteristics								
ln(Total 311 calls per capita (all years))			0.987	(0.112)	1.006	(0.114)	1.002	(0.114)
ln(Total number of complaints per capita in census tract)			1.207**	(0.081)	1.203**	(0.081)	1.198**	(0.080)
ln(violent crime)			0.809*	(0.077)	0.804*	(0.076)	0.920	(0.104)
Percent black 2010			2.679***	(0.555)	2.999***	(0.700)	2.638***	(0.538)
Interactions between complainant race and tract characteristics								
Black * Percent black 2010					0.539^{+}	(0.189)		
Hispanic * Percent black 2010					1.050	(0.370)		
Black * ln(violent crime)							0.570**	(0.105)
Hispanic * ln(violent crime)							1.013	(0.211)
Incident year = 2012	1.332*	(0.174)	1.295^{+}	(0.174)	1.304*	(0.175)	1.321*	(0.178)
Incident year = 2013	1.385*	(0.188)	1.372*	(0.193)	1.378*	(0.194)	1.388*	(0.195)
Incident year = 2014	0.227***	(0.061)	0.229***	(0.063)	0.231***	(0.063)	0.236***	(0.064)
Observations	10,077		10,077		10,077		10,077	

Note. Results presented as odds ratios (i.e., exponentiated coefficients). Standard errors in parentheses. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

allegations against black and Latino officers were 2.2 times and 1.4 times more likely to be sustained than those against white officers, respectively. Junior officers also faced greater odds of a recommendation of sanction, which could be a function of their lack of experience and training, a filtering out of problematic officers over time, or institutional protection of higher ranked officers.[13] Perhaps surprisingly, the number of previous complaints against the involved officer was uncorrelated with the likelihood of a sustained allegation.

Interestingly, the presence of witnesses for both the complainant and the involved officer was significantly and positively correlated with the likelihood that a complaint would be sustained. We may have expected this outcome for witnesses on the complainant's side, but perhaps not for witnesses on the officer's side. One potential interpretation is that officers involved in more egregious incidents of misconduct (i.e., those more likely to be sustained) feel compelled to secure witnesses for their defense. This would, therefore, be a form of omitted variable bias. Unfortunately, without more data describing the incidents and the adjudication process, we are unable to definitively explain this surprising result.

Adding ecological characteristics (Model 2) did not substantively alter these relationships. Black and Latino complainants were less likely to receive favorable outcomes, as were black and Latino officers (from their contrasting perspective) after controlling for tract racial makeup, violent crime, total misconduct allegations per capita, and 311 calls per capita. Interestingly, seemingly in contradiction to our second hypothesis, the likelihood that an allegation was sustained increased with tract percent black, which we may not have expected if we assume institutional bias against black space. Conversely, sustained likelihood decreased with violent crime.

To unpack the relationships between neighborhood characteristics and allegation outcomes—especially regarding heterogeneity across complainant race—we next estimate two models with interactions between these phenomena. Models 3 and 4, which interact complainant race with tract percent black and tract violent crime, respectively, indicate significant racial heterogeneity obfuscated by the noninteracted estimates in Model 2. To assist in interpreting these results, we plot predicted probabilities of sanction recommendation by complainant race across the distributions of tract racial makeup and crime based on Models 3 (Figure 1) and 4 (Figure 2). These figures display an interesting pattern of racial and spatial heterogeneity: The largest disparities in the likelihood a complaint is sustained are among allegations in predominantly black and high-crime areas. Or more specifically, white complainants (especially when contrasted with black complainants) are most successful in their pursuit of officer sanction when in Chicago's most racially disadvantaged and violent neighborhoods. This supports our third hypothesis that race and space interact to most disadvantage complainants of color in black, high-crime neighborhoods. We discuss this dynamic more fully in the Discussion section below.

Interacting Complainant and Officer Race

Models in which we interacted complainant and officer race indicate another way in which race shaped outcomes. Figure 3 indicates differences across the 12 combinations of complainant and officer race in the likelihood that an allegation is sustained, the likelihood that a complainant submits an affidavit, and the likelihood that an allegation is sustained conditional on filing an affidavit. Although the predicted outcomes do not vary

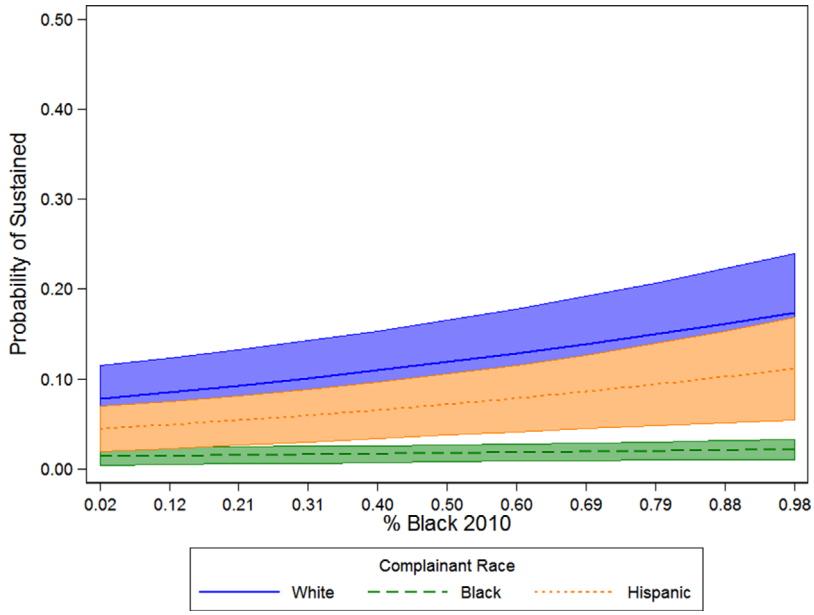

FIG. 1. Predicted probability that an allegation was sustained for model interacting complainant race with census tract percent black. [Color figure can be viewed at wileyonlinelibrary.com]

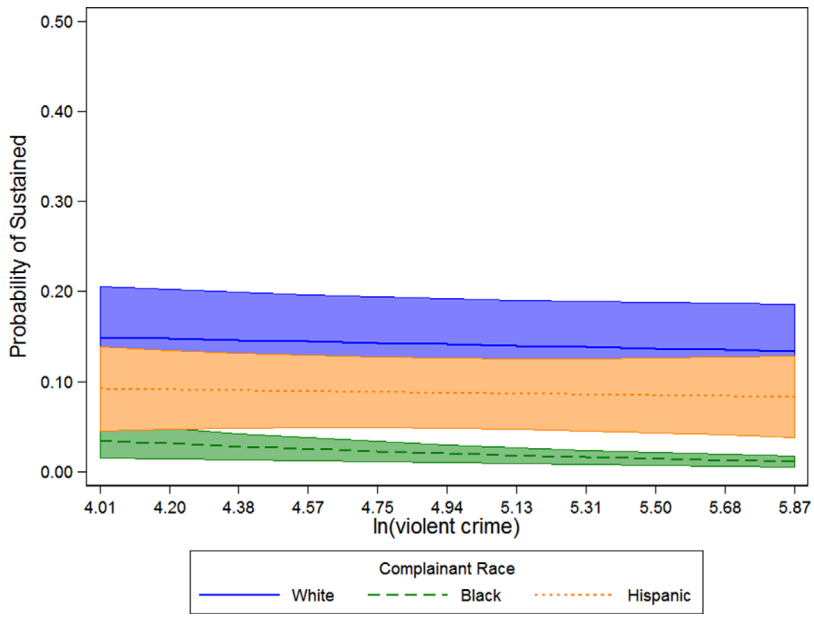

FIG. 2. Predicted probability that an allegation was sustained for model interacting complainant race with census tract crime volume. [Color figure can be viewed at wileyonlinelibrary.com]

TABLE 4. Models Predicting Affidavit Submission and Sustained Conditional on an Affidavit

	Outcome: Submitting an affidavit after complaint						Outcome: Sustained conditional on submitting an affidavit					
	Model 5		Model 6		Model 7		Model 8		Model 9		Model 10	
Complainant characteristics												
Black	0.584***	(0.041)	1.053	(0.110)	2.656*	(1.040)	0.132***	(0.018)	0.140***	(0.042)	1.499	(1.403)
Hispanic	0.790**	(0.070)	1.091	(0.121)	3.287*	(1.846)	0.601**	(0.100)	0.487**	(0.115)	0.357	(0.379)
Male complainant	1.185***	(0.058)	1.171**	(0.057)	1.178***	(0.058)	1.207	(0.144)	1.215	(0.145)	1.204	(0.144)
Officer characteristics												
Black officer	0.999	(0.061)	1.000	(0.061)	1.001	(0.061)	1.964***	(0.266)	1.952***	(0.264)	1.967***	(0.266)
Hispanic officer	1.024	(0.062)	1.022	(0.062)	1.024	(0.062)	1.342*	(0.199)	1.340*	(0.199)	1.346*	(0.200)
Asian/Native American officer	1.089	(0.148)	1.092	(0.148)	1.091	(0.148)	1.104	(0.368)	1.118	(0.372)	1.103	(0.367)
Male officer	1.127^{+}	(0.072)	1.120^{+}	(0.072)	1.125^{+}	(0.072)	0.928	(0.127)	0.920	(0.127)	0.921	(0.127)
Rank: PO	0.877	(0.091)	0.881	(0.092)	0.877	(0.091)	1.843**	(0.402)	1.840**	(0.401)	1.852**	(0.404)
Rank: SGT	1.100	(0.137)	1.101	(0.138)	1.093	(0.136)	1.096	(0.286)	1.088	(0.284)	1.076	(0.281)
Rank: Unknown	0.677	(0.219)	0.688	(0.225)	0.675	(0.219)	1.957	(1.157)	1.960	(1.165)	1.859	(1.102)
Incidents characteristics												
Officer's *N*th complaint	0.994	(0.015)	0.996	(0.015)	0.994	(0.015)	0.959	(0.046)	0.956	(0.046)	0.961	(0.046)
Additional complainant witness	2.127***	(0.444)	2.202***	(0.461)	2.172***	(0.452)	2.086*	(0.695)	2.058*	(0.688)	2.081*	(0.694)
Number of officer witnesses	2.630***	(0.149)	2.607***	(0.148)	2.618***	(0.149)	1.219***	(0.068)	1.219***	(0.068)	1.222***	(0.068)
False arrest	0.254***	(0.025)	0.251***	(0.025)	0.250***	(0.025)	0.108***	(0.065)	0.109***	(0.066)	0.108***	(0.065)
Illegal search	0.225***	(0.020)	0.224***	(0.020)	0.223***	(0.020)	0.036***	(0.026)	0.036***	(0.026)	0.036***	(0.027)
Lockup procedures	0.170***	(0.018)	0.167***	(0.018)	0.167***	(0.018)	0.660^{+}	(0.144)	0.665^{+}	(0.146)	0.638*	(0.140)
Operations/personnel	0.272***	(0.021)	0.270***	(0.021)	0.268***	(0.021)	1.186	(0.165)	1.177	(0.164)	1.162	(0.162)

(*Continued*)

TABLE 4. Continued

	Outcome: Submitting an affidavit after complaint						Outcome: Sustained conditional on submitting an affidavit					
	Model 5		Model 6		Model 7		Model 8		Model 9		Model 10	
Use of force	2.666***	(0.235)	2.660***	(0.234)	2.638***	(0.233)	0.216***	(0.044)	0.218***	(0.045)	0.216***	(0.045)
Tract characteristics												
ln(Total 311 calls per capita (all years))	0.955	(0.050)	0.997	(0.052)	0.963	(0.050)	1.027	(0.123)	1.033	(0.124)	1.047	(0.126)
ln(Total number of complaints per capita in census tract)	1.120***	(0.035)	1.103**	(0.035)	1.109***	(0.035)	1.118	(0.079)	1.119	(0.079)	1.114	(0.078)
ln(violent crime)	0.891**	(0.038)	0.870***	(0.037)	1.118	(0.079)	0.810*	(0.082)	0.812*	(0.082)	0.903	(0.112)
Percent black 2010	1.207*	(0.113)	3.138***	(0.497)	1.217*	(0.114)	2.318***	(0.504)	2.129**	(0.529)	2.320***	(0.500)
Interactions between complainant race and tract characteristics												
Black * Percent black 2010			0.282***	(0.047)					0.957	(0.350)		
Hispanic * Percent black 2010			0.377***	(0.091)					1.656	(0.636)		
Black * ln(violent crime)					0.729***	(0.058)					0.614**	(0.116)
Hispanic * ln(violent crime)					0.733*	(0.089)					1.117	(0.247)
Incident year = 2012	0.908	(0.057)	0.911	(0.057)	0.910	(0.057)	1.406*	(0.199)	1.404*	(0.199)	1.419*	(0.202)
Incident year = 2013	0.812**	(0.054)	0.818**	(0.054)	0.810**	(0.054)	1.586**	(0.236)	1.589**	(0.237)	1.592**	(0.238)
Incident year = 2014	0.535***	(0.041)	0.540***	(0.042)	0.534***	(0.041)	0.319***	(0.089)	0.319***	(0.090)	0.329***	(0.092)
Observations	10,077		10,077		10,077	5	4,534		4,534		4,534	

Note. Results presented as odds ratios (i.e., exponentiated coefficients). Standard errors in parentheses. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

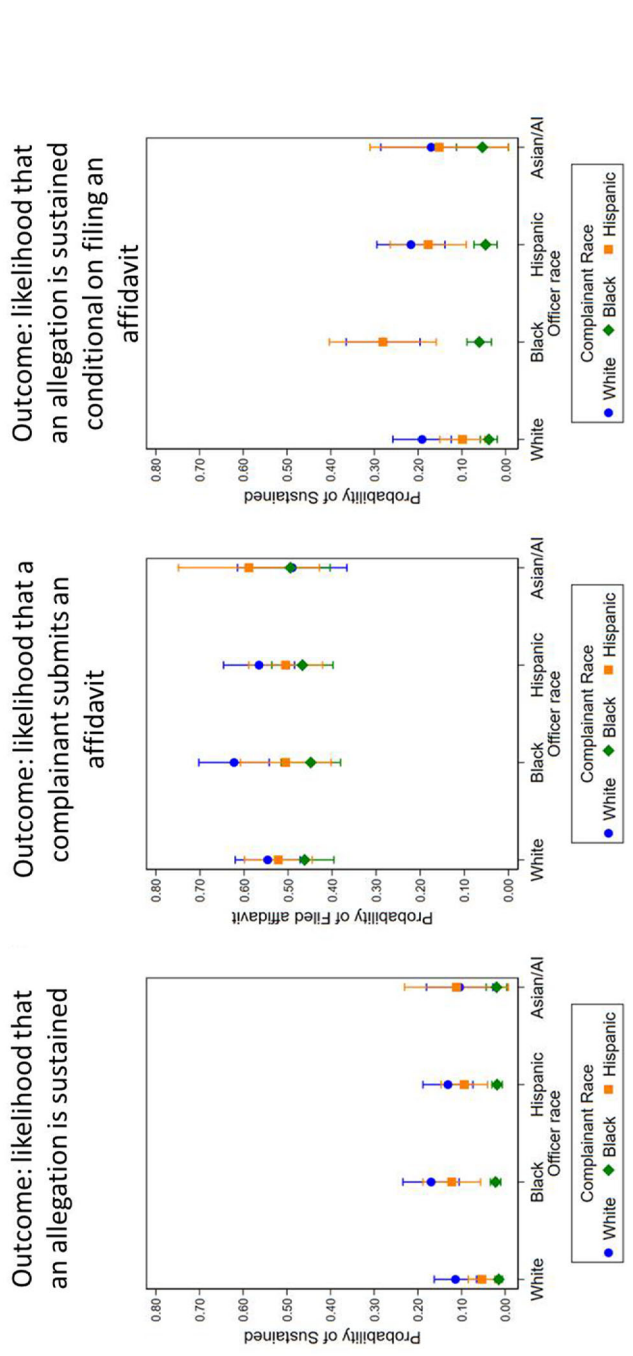

FIG. 3. Predicted probabilities of each outcome for models interacting complainant and officer race. [Color figure can be viewed at wileyonlinelibrary.com]

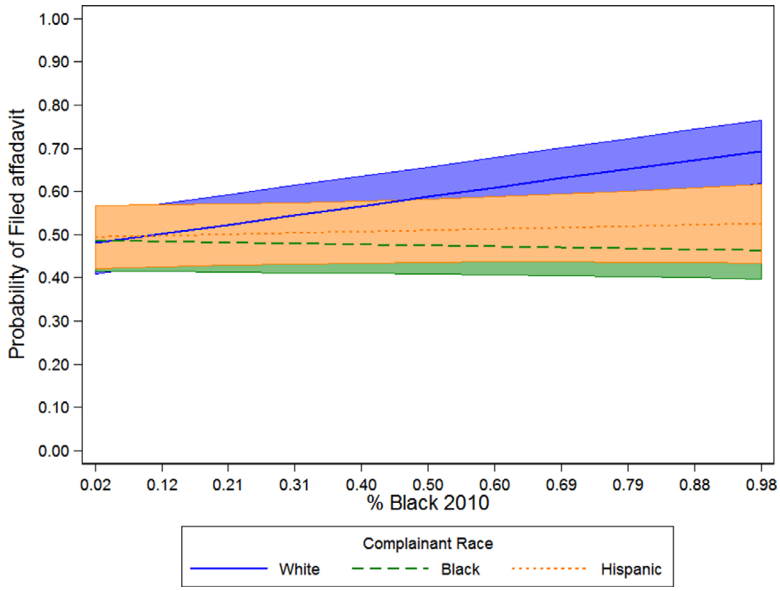

FIG. 4. Predicted probability that a complainant filed an affidavit for model interacting complainant race with census percent black volume. [Color figure can be viewed at wileyonlinelibrary.com]

substantially across officer race for black complainants, allegations against black officers by white and (to a lesser extent) Latino complainants were significantly more likely to result in favor of the citizen. White complainants appear to have been particularly motivated to file affidavits for incidents involving black officers and complaints against black officers were more likely to be sustained for both white and Latino citizens conditional on affidavit submission.

Models Disaggregating the Adjudication Process

Table 4 displays estimates from models predicting the likelihood that a complainant files an affidavit (columns 1 through 3) and the likelihood that an allegation with a corresponding affidavit is sustained (columns 4 through 6). Black and Latino citizens were approximately 41 percent and 20 percent less likely, respectively, to file an affidavit after submitting a complaint. Officer race did not predict this step in the process, while tract variables did play significant roles—though again with racial heterogeneity. The marginal probabilities displayed in Figures 4 and 5 (as well as the interaction terms in Models 6 and 7) indicate that white complainants were more likely to file an affidavit if the alleged incident occurred in a black or high-crime area.

Although lower rates of affidavit submission among blacks and Latinos may explain some of the disparities shown in Table 3, significant racial differences in allegation outcomes persist even after conditioning on affidavit submission (Models 8 through 10). Within the subsample of misconduct allegations for which the complainant provided an affidavit, blacks and Latinos were 87 percent and 50 percent less likely to receive a favorable decision, respectively. The significance of officer race reemerges in these models—black and Latino officers were 2 times and 1.3 times more likely to have sanctions recommended than white officers, respectively. Although neighborhood percent

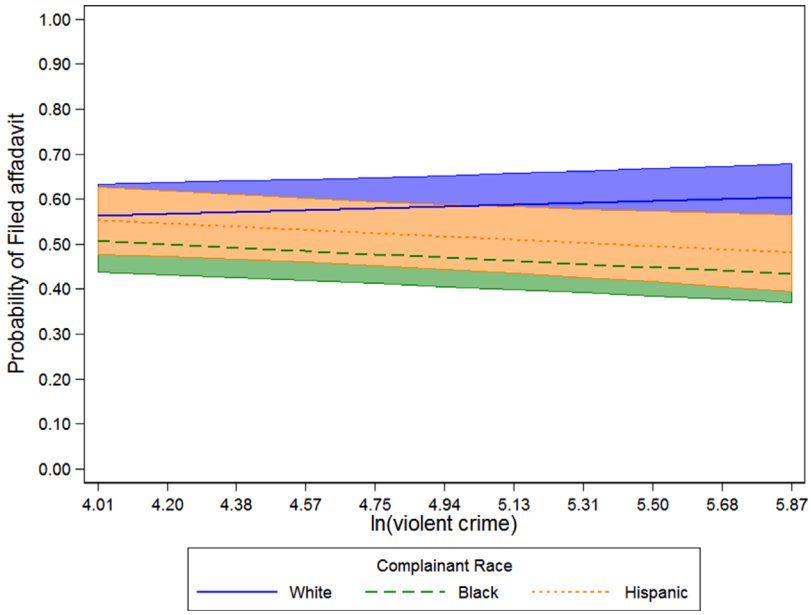

FIG. 5. Predicted probability that a complainant filed an affidavit for model interacting complainant race with census tract crime volume. [Color figure can be viewed at wileyonlinelibrary.com]

black was positively correlated with the likelihood an allegation was sustained, we do not observe significant racial heterogeneity present in previous models. Violent crime, alternatively, was only significantly predictive (and negatively so) of this outcome among black complainants.

So far, we have established a number of important facts about the roles of race and space in the complaint adjudication process. Overall, it was very rare (only 5.7 percent) that an allegation was sustained, and it was particularly rare among black (1.9 percent) and Latino (6.7 percent) complainants compared to whites (19.7 percent). These disparities may be driven, in part, by variation across racial groups in the types of interactions with police. However, even after controlling for incident, officer, and neighborhood characteristics, black and Latino Chicagoans were 87 percent and 51 percent less likely than whites to have their allegations sustained, respectively.

White citizens may also benefit from having more social, political, and/or financial capital, which they could leverage for preferred outcomes. Although minority complainants were less likely to file an affidavit, they remained at a disadvantage even after conditioning on this bureaucratic hurdle. Furthermore, an interesting pattern emerged when we explored the relationship between the length of the adjudication process (a variable we excluded from our main analyses because of endogeneity concerns) and the process's outcome. While the number of days between allegation submission and decision was positively correlated with the likelihood a complaint would be sustained, there was a significant and negative interaction between this variable and the black indicator variable (marginal probabilities displayed in Figure 6), suggesting that racial disparities not only persisted, but were widest among citizens who are able and motivated to invest the most time in this bureaucratic conflict.

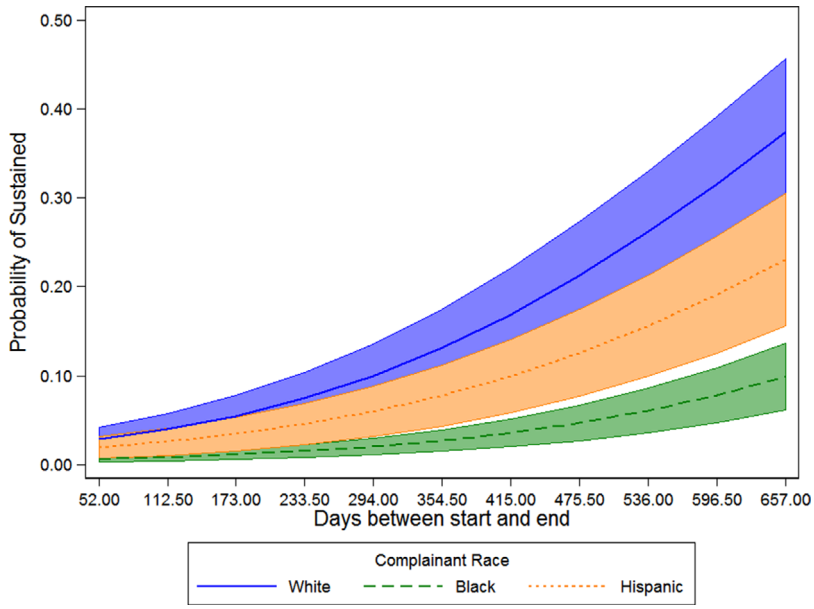

FIG. 6. Predicted probability that an allegation was sustained for model interacting complainant race with time between complaint submission and the end of the process. [Color figure can be viewed at wileyonlinelibrary.com]

The gap between white and black complainant outcomes was largest in black and high-crime neighborhoods. We did not find evidence that this was driven by differences across tract characteristics in the types of allegations made by whites or blacks. Estimates do suggest that white complainants in predominantly black parts of the city were particularly motivated to submit an affidavit subsequent to a complaint, perhaps as a performance of the hierarchy of racialized spaces. White citizens may also be seen as more believable vis-à-vis the environment in which the alleged incident occurred, particularly when interacting with black officers, who are themselves disproportionately operating in black and high-crime areas. We did find that racial disparities were the most dramatic when the officer was black.

Supplemental Models and Robustness Checks

It is possible that simply measuring neighborhood percent black may obfuscate crucial dimensions of racial diversity. To explore this potential concern, we estimated additional models using the white–black index of concentration at the extremes (ICE), which offers an alternative measure of neighborhood racial segregation operationalized as contrasting social isolation and privilege (for more on this measure, see Krieger et al. [2017] and Massey [2001]). Results from these models (available upon request) are substantively identical to those presented here. Specifically, the gap in sustained likelihood between white and black complainants was widest in neighborhoods with the lowest ICE scores (i.e., places where blacks were most segregated from whites).

The models above assume the characteristics of the tract in which the incident allegedly occurred shaped the nature of the interaction between officer and citizen and/or the

believability of the individuals involved. While we are willing to believe this assumption in most cases, it may break down in particular instances. For example, many alleged incidents occurred at or in close proximity to a police station, which is expected, as complaints about Lockup Procedures may have taken place as a citizen was being processed at a precinct. In other instances, citizens may have gone to police stations to file a complaint and simply used the address of the station when filing.

In supplemental models (Appendix Table A2), we estimated the outcomes of interest among samples derived from the distance along city streets between the incident and the nearest station: within one block (660 ft), within two blocks, further than one block, and further than two blocks. Reflecting the main findings, black and Latino complainants were less likely to see their allegations sustained and tract percent black was positively correlated with the sustained outcome in all subsamples. Negative interactions between black complainant and tract variables were only significant predictors of a sustained allegation in the two samples at least one block from a station. The interactions between tract percent black and both black and Latino complainant were significant and negative when estimating the likelihood of affidavit submission, while the race-by-violent crime interactions were only significant away from stations. These estimates suggest neighborhood characteristics may have played a larger role in incidents away from stations, though there is evidence the neighborhoods in which stations are located were important to the process.

We also explored relationships between allegation outcomes and the geography of other potentially important institutions that may affect policing tactics and/or the perceptions of citizens. We measured the distance along city streets between each allegation and the nearest public housing location (CHA 2016) and school (City of Chicago 2016). Neither measure was a significant predictor of allegation outcomes nor did inclusion affect the other relationships of interest. Appendix Tables A3 and A4 show that the relationships of interest were substantively equivalent when modeled using multinomial logistic regression and ordered logistic regression, respectively. Finally, we explored variation in the severity of recommended sanction conditional on a sustained allegation by estimating ordered logit models with an outcome variable coded 0 for "Violation Noted", 1 for "Reprimand", 2 for a suspension of any length, and 3 for "Resigned or Separation." The results from these models were not precise enough to draw definitive conclusions because so few allegations were sustained.

DISCUSSION

A wealth of research on citizen–police interactions has illuminated racial differences in treatment and trust. In this article, we move the focus from citizen interactions with officers to their interactions with the state via the complaint review apparatus. We add to the evidence regarding the extent to which complaints against the police go unanswered and, more specifically, racial disparities in this outcome, and address the heretofore unexamined impact of the spatial context of the complaint. Among the 10,077 complaints we analyzed alleging police misconduct between 2011 and 2014, a small minority (5.7 percent) resulted in sanction recommendation, placing Chicago at the low end of the sustain rate spectrum established in previous investigations of complaints across the United States. After controlling for available incident and officer characteristics, as well as

ecological characteristics, black and Latino complainants were 87 percent and 51 percent less likely, respectively, to see their allegations sustained. Racial disparities were due in part to the fact that minorities were less likely to file an affidavit subsequent to submitting a complaint, though inequality persisted even when limiting our analyses to incidents with an affidavit. It is also important to note that we have no data indicating whether recommended sanctions were enforced. If there is bias in enforcement of recommendations, we expect it to operate in the same direction as bias in the determination of those recommendations. Therefore, we expect racial disparities widen further during the execution of recommendations.

We also document interesting—and potentially troubling—nuance regarding racial gaps in the likelihood that punishment is recommended for an officer. First, the disparity between white and black outcomes widens in black and high-crime areas. One interpretation of this finding is that white citizens may feel particularly aggrieved about (alleged) state misconduct in predominantly black areas if it is perceived as a threat of their otherwise elevated status within that area. If so, they may be more willing to invest the resources to pursue officer sanction. A parallel explanation of this result is that the institutions responsible for adjudicating citizen complaints carry the same interest in racial hierarchy and, therefore, are more willing to protect white citizens against police transgressions in black spaces. Second, we find that the difference in outcomes between white and black citizens is largest when the accused officer is black. Again, this may be evidence of racial bias among white complainants, who seek punishment more ardently against those perceived to be of a lower racial status. It may also indicate that black officers, who face greater risk of sanction overall, are especially institutionally vulnerable when accused of misconduct by the population they are expected to prioritize (i.e., the white citizenry). Unfortunately, missing data preclude us from evaluating between these interpretations—a limitation we discuss further below.

Beyond implications for trust in police, disparities play directly into narratives of racial policing, the devaluation of black victimhood, and racial differences in perceptions of culpability (Hagan et al. 2005; Kohler-Hausmann 2013; Weitzer and Tuch 2004). Furthermore, that the gap between black and white complainant outcomes was largest in black and high-crime areas reinforces the idea that those areas are policed differently from white areas and that the victimhood of white complainants is valued more in those areas. Specifically, the argument could be made that when whites make complaints in areas where they stand out as racially privileged, their victimhood is made more salient. This may contribute to racial gaps in trust, as blacks may see whites protected in black spaces as a function of a racist process, while whites may see the same dynamic as the purpose of policing.

Additionally, the tendency of whites to perceive blacks as more culpable (Goff et al. 2014) and the general myth of the cop as a heroic figure (Reiner 2010) may increase the likelihood that black complainants are seen as illegitimate, while the officer is perceived as incapable of wrongdoing. This is supported by DOJ evidence that IPRA accepted officers' accounts despite contrary evidence (DOJ 2017). The exception occurs at the intersection of identities: Complaints against black officers are more likely to be sustained than complaints against white officers. Here, the perception of black culpability described in Goff et al. (2014) may be more powerful than their heroic status as policemen. It is possible that investigators were less likely to accept black officers' accounts over contrary evidence, especially when the complainant was white.

These findings also carry implications for our understanding of how racial isolation shapes inequality. Although we are unable to make strong causal claims because our sample is far from random and our methods are correlational, the results speak to several aspects of "neighborhood effects" theories. First, the fact that local context (i.e., tract racial makeup and violent crime) plays a role in how allegations are adjudicated fits with theories about the importance of institutional mechanisms in shaping spatially disparate phenomena (Allard and Small 2013; Ellen and Turner 1997; Jencks and Mayer 1990a, 1990b). And second, the interactions between complainant race and neighborhood context speak to calls for investigating heterogeneity in the effects of ecological characteristics (Sharkey and Faber 2014). Although Chicago may be an extreme case, it is far from the only hypersegregated city.

Our findings must be interpreted with caution given the information missing from our dataset. If, for example, more educated complainants are more likely to see their allegations sustained because they are able to communicate their concerns better, some of what we have documented may be due to racial differences in educational attainment. We suspect that inclusion of class markers in our analyses would lessen—though not eliminate—the importance of race in predicting outcomes and help explain the mechanisms driving inequality. We also have imperfect data about officers. Although rank should capture some variation in training and skill, there is likely unobserved heterogeneity within ranks. We find that the lowest ranking officers are most likely to have sanction recommended, suggesting these factors may play a role. Alternatively, this could also be evidence that police departments are more likely to protect high-ranking officers.[14]

We also must consider research that individuals involved in criminal activity may be disinclined to resolve conflict through official channels (e.g., Goffman 2015).[15] Because we have no evidence to expect differential reluctance to complain about misconduct among those involved in crime and across race, nor racial heterogeneity in how such involvement may be incorporated into adjudication of complaints, we hesitated to speculate about the direction of bias in our estimates. However, we do believe the reluctance of individuals involved in criminal activity to issue a complaint about misconduct leads us to understate the prevalence of misconduct.

The lack of addresses of alleged incidents at residential locations is another limitation of our data in that it creates ambiguity about the nature of the involved citizen's interaction with the neighborhood. We may theorize, for example, that a white person living in a black neighborhood may have a different experience than one traveling to that neighborhood, which may result in different interactions while there. Because only a small minority of cases (353) were excluded from our sample due to lacking addresses, we do not believe this threatens our results.

Filing a complaint is not easy. Indeed, DOJ found evidence of officers refusing to take complaints in person and intimidating people into not filing complaints (DOJ 2017). In addition to the resources required to submit an allegation, a complainant must submit an affidavit to continue the process. Because of this bureaucratic step, as well as disparities in exposure to policing that is construed as improper, our sample is far from random or representative of the city. Not only are complainants likely to be particularly motivated individuals (especially those who have provided an affidavit), but the volume of allegations we have analyzed is likely an undercount of interactions about which citizens feel wronged. Given these two sampling biases, as well as the broad reporting of CPD misconduct (Coen and St. Clair 2016; DOJ 2017; Emmanuel 2015), we believe our

results to be conservative estimates of racial inequality in the handling of citizen concerns regarding policing.

Furthermore, if "legal cynicism" is more common among blacks and/or Latinos than whites (Kirk and Matsuda 2011; Sampson and Bartusch 1999), meaning minorities are less likely to complain given the same experience, then our sample represents particularly motivated nonwhite Chicagoans. If we assume motivation is positively correlated with police sanction, which is supported by the correlation between the duration of the process and the likelihood of sanction recommendation, then this sampling bias should mute racial disparities observed in the data. This further suggests we have presented a conservative interpretation of the data.

Future research could qualitatively explore specific aspects of the process, which we were unable to examine. For example, we were unable to identify the mechanisms responsible for racial disparities in the affidavit submission. The failure to submit an affidavit could be due to characteristics of or decisions made by the complainant, and/or action or lack thereof on the part of the state to elicit affidavits. Interviews with complainants could help elucidate this potential point of leverage. Additionally, further research should investigate the relationship between how complaints are handled and the level of community trust in the police and the criminal justice system more broadly. We might hypothesize, within a procedural justice framework, that the breach in trust in the fairness of the process that leads to a complaint, combined with and amplified by a perception that the process of complaint adjudication is not fair, may have a particularly strong negative effect on trust in the police and a belief in the legitimacy of the system. Moreover, future research should look at the significance of territorial boundaries in both the distribution of complaints and their outcomes. Prior research has demonstrated the importance of boundaries in relation to complaints about neighbors and the dynamics of gang violence with findings suggesting that conflict arises around contested boundaries (Brantingham et al. 2012; Legewie and Schaeffer 2016; Papachristos, Hureau, and Braga 2013). We might, therefore, hypothesize that complaints made at the boundaries of majority black, high-crime neighborhoods will reveal further evidence of disparities in the adjudication process with the disparity between white and black complainants being further amplified.

Following several incidents of misconduct and bureaucratic mishandling of officers involved, Chicago has voted to replace IPRA (Spielman 2016), which was responsible for adjudicating many of the allegations analyzed in this paper. Currently, the city is required to release a Summary Report of Investigation (SRI) to the public after the conclusion of each complaint investigation process except "to the extent that information contained therein is exempted from disclosure by the Illinois Freedom of Information Act, collective bargaining agreement, or any other applicable law" (IPRA 2016:14) and this is expected to continue once COPA takes over (COPA 2016). BIA, however, provides almost no information regarding its investigations (DOJ 2017). Scholars should continue tracking the disciplinary process to estimate any effect of this restructuring on racial disparities. If the shift results in closing the gap between white and minority outcomes, there may be lessons that are transferrable to other police departments struggling to build rapport with communities of color.

One consequence of the rarity of a sanction recommendation is the fact that most allegations were made against officers who had at least one previous complaint made against them. We did not find any evidence that the number of previous allegations made against

an officer was predictive of the outcome of any subsequent complaint. This null result is important to highlight not only because it may be perceived as evidence that citizen complaints do not deter poor officer behavior and that the process protects repeat offenders, but also because it may be a lost opportunity to identify particularly bad police officers. Several of the officers involved in recent, high-profile killings had long records of alleged misconduct, including the killers of Laquan McDonald in Chicago (McLaughlin 2015), Eric Garner in New York (Soergel 2014), and Alton Sterling in Baton Rouge (Tribune News Service 2016). Increased transparency, particularly regarding officers who accumulate misconduct allegations, is crucial for improving relations between communities and police departments. Furthermore, there does not appear to be a process, either in the IPRA or proposed COPA procedures, for citizens to appeal decisions, though there is a process for officers to appeal (COPA 2016; IPRA 2016). Providing a clear and official citizen appeal process may increase perceptions of procedural fairness, which is an important factor in perceptions of police legitimacy, and place a further check on the adjudication system.

We have shown that not only are officers rarely disciplined for alleged misconduct, but that there are significant racial disparities in the outcomes of a process ostensibly designed to provide accountability in a highly segregated city. Although we are unable to prove explicit racial discrimination, the inequalities created and/or perpetuated by this process are still of great import to the policed communities, the CPD, and criminologists. Perceptions about (or the reality of) the unfairness of the disciplinary process may reduce trust in law enforcement and exacerbate tensions between communities of color and the police.

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Notes

[1]There were other contributions to the modern police related to regional (i.e., North/South) differences; a system of social control (Barkan and Bryjak 2011); a consequence of urbanization (Barkan and Bryjak 2011; Miller 1999; Monkkonen 1992; Reiner 2010); a response to ethnic infighting (Barkan and Bryjak 2011; Miller 1999); union busting (Barkan and Bryjak 2011; Harring, 1983, 1993; Harring and McMullin 1975); and as a militia (French 2018). We acknowledge these factors shaped modern policing, though we maintain that the enforcement of the racial order was not only central to policing's history, but an important dimension of each of these alternative explanations.

[2]As of this writing, the City Council voted to replace IPRA with the Civilian Office of Police Accountability (COPA; Spielman 2016) and create an office of Deputy Inspector General for Public Safety.

[3]Although all complaints must be made initially to IPRA, IRPA only keeps complaints within its jurisdiction. Approximately 70% are sent to BIA, which refers 40 percent of those to individual police districts (DOJ 2017).

[4]DOJ found that complaints were often resolved through mediation in which the officer agreed to a sustained finding in exchange for lesser punishment or a lesser "charge"—a result complainants were not notified of (DOJ 2017).

[5]There were no guidelines for punishment. Decisions were based on IPRA supervisor discretion. Many recommended punishments were never imposed. Furthermore, the Police Board has a history of reversing decisions, so most sustained findings did not lead to punishment (DOJ 2017).

[6]A dataset of complaints made between 2002 and 2008 was also released by II. We exclude it because it only included allegations made against officers with over five excessive force complaints, so the sample was not representative.

[7]Too few (105) complainants belonged to a group other than white, black, or Latino to draw inference about them. We are unaware of whether the listed complainant is the person who originally suffered from the alleged incident or if the complaint was submitted on behalf of that person (e.g., by a parent). This distinction could lead to misspecification of race and/or gender. Only 1.2 percent of our sample indicates an additional witness on the complainant's side, so we do not believe this is a serious threat to our findings.

[8]The "Other" category consists of allegations of Bribery/Official Corruption (32 complaints), Conduct Unbecoming (Off-duty) (215), Criminal Misconduct (16), Domestic (283), Drug/Alcohol Abuse (42), Supervisory Responsibilities (62), Traffic (281), and Verbal Abuse (288). The smallest disaggregated category was Lockup Procedures (906).

[9]We focus here on violent crime, rather than property crime, for several reasons. First, prior research suggests that violent crime rates vary dramatically between urban areas with low and high levels of disadvantage, whereas property crimes rates do not (Krivo and Peterson 1996; Skogan 2006). Additionally, highly disadvantaged neighborhoods, which are more likely to have higher rates of violent crime, are also more likely to be places where police engage in misconduct and abuse authority (Kane 2002; Skolnick and Fyfe 1993; Ulmer, Harris, and Steffensmeier 2012). Finally, we also estimated our main models with property crime instead of violent crime and with both property and violent crime. Our primary findings are consistent in these models. Although the main effect of property crime is weaker than that of violent crime, we still see an interaction between complainant race and neighborhood-level property crime, showing that the gap between black and white outcomes is largest in high-crime areas. There is also a positive interaction between property crime and Hispanic complainant. We plotted marginal effects from these model estimates, which indicate that this also shows a distancing of Hispanic complainants from black complainants.

[10]Location was available for calls about vacant and abandoned buildings, pot holes, street lights, abandoned vehicles, sanitation code, graffiti, tree trims, garbage cans, tree debris, alley lights out, rodent baiting, and street lights all out.

[11]We only have a recorded outcome for 35% of complaints submitted in 2015, so we omit this year completely.

[12]Racial makeup of tracts is reflective of citizens making complaints in that tract, though this relationship is strongest for blacks. Correlation between the percent of the population and the percent of complainants that were black was 0.753, while correlation for Latinos and whites was 0.691 and 0.572, respectively.

[13]It is possible that our estimates of the importance of officer rank are driven by the fact that most complaints were made against officers with the lowest rank (i.e., 8,522 or 84.6 percent). However, a substantial number of officers against whom complaints were made were Sergeants (i.e., 957 or 9.5 percent) or higher ranks (i.e., 538 or 5.3 percent), so we are confident that the difference in outcomes between officer ranks is not merely a statistical construct.

[14]DOJ found widespread inadequate training, including a lack of ability among officers to articulate the rules of appropriate use of force. We might, therefore, expect training to be generally poor across the board (DOJ 2017).

[15]DOJ presented evidence of complainants in custody facing higher hurdles to adjudication of their complaint. Investigators were reluctant to travel to interview locked up complainants, some complainants with charges were reluctant to sign the affidavit, and charges were used to discredit complainants (DOJ 2017).

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APPENDIX

TABLE A1. Models Exploring Measures of Census Tract Racial Makeup

	Model 1		Model 2		Model 3		Model 4	
Sustained								
Black	0.115***	(0.015)	0.109***	(0.014)	0.101***	(0.015)	0.109***	(0.015)
Hispanic	0.464***	(0.070)	0.585***	(0.091)	0.341***	(0.068)	0.709^{+}	(0.141)
ln(violent crime)	1.048	(0.097)	1.054	(0.083)	1.043	(0.096)	1.057	(0.083)
ln(Total 311 calls per capita (all years))	1.003	(0.112)	1.220^{+}	(0.137)	1.008	(0.113)	1.218^{+}	(0.136)
Percent White 2010	0.502**	(0.132)			0.346***	(0.106)		
Percent Hisp. 2010			0.204***	(0.052)			0.247***	(0.078)
Black * Percent White 2010					2.221	(1.232)		
Hispanic * Percent White 2010					3.873*	(2.097)		
Black * Percent Hisp. 2010							1.336	(0.955)
Hispanic * Percent Hisp. 2010							0.430	(0.248)
Observations	10,077		10,077		10,077		10,077	
Submitting an affidavit after complaint								
Black	0.626***	(0.043)	0.612***	(0.041)	0.422***	(0.038)	0.522***	(0.044)
Hispanic	0.752**	(0.067)	0.832*	(0.076)	0.469***	(0.060)	0.714*	(0.099)
ln(violent crime)	0.964	(0.040)	0.957	(0.035)	0.956	(0.039)	0.961	(0.035)
ln(Total 311 calls per capita (all years))	0.995	(0.052)	1.038	(0.053)	1.023	(0.054)	1.053	(0.054)
Percent White 2010	0.870	(0.107)			0.325***	(0.062)		
Percent Hisp. 2010			0.656***	(0.072)			0.380***	(0.079)

(*Continued*)

TABLE A1. Continued

	Model 1		Model 2		Model 3		Model 4	
Black * Percent White 2010					4.368***	(0.984)		
Hispanic * Percent White 2010					4.338***	(1.369)		
Black * Percent Hisp. 2010							2.305**	(0.588)
Hispanic * Percent Hisp. 2010							1.813*	(0.522)
Observations	10,077		10,077		10,077		10,077	
Sustained conditional on submitting an affidavit								
Black	0.153***	(0.021)	0.141***	(0.019)	0.153***	(0.024)	0.144***	(0.022)
Hispanic	0.538***	(0.087)	0.672*	(0.114)	0.444***	(0.095)	0.912	(0.199)
ln(violent crime)	1.039	(0.102)	0.979	(0.083)	1.035	(0.101)	0.988	(0.084)
ln(Total 311 calls per capita (all years))	1.057	(0.126)	1.239^{+}	(0.148)	1.049	(0.125)	1.231^{+}	(0.147)
Percent White 2010	0.718	(0.198)			0.641	(0.210)		
Percent Hisp. 2010			0.225***	(0.059)			0.315***	(0.104)
Black * Percent White 2010					0.831	(0.477)		
Hispanic * Percent White 2010					2.281	(1.310)		
Black * Percent Hisp. 2010							1.112	(0.819)
Hispanic * Percent Hisp. 2010							0.289*	(0.173)
Observations	4,534		4,534		4,534		4,534	

Note. Results presented as odds ratios (i.e. exponentiated coefficients). All models include full set of covariates. The interactions in Models 3 and 4 are between complainant race and tract characteristics. Standard errors in parentheses. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

TABLE A2. Models Using Samples Dependent on the Distance to the Nearest Police Station

	Outcome: Sustained			Outcome: Submitting an affidavit after complaint			Outcome: Sustained conditional on submitting an affidavit		
Within 1 block of police station									
Black	0.050***	0.010*	1.789	0.662*	1.263	1.775	0.053***	0.007*	1.397
	(0.019)	(0.021)	(4.496)	(0.126)	(0.355)	(1.907)	(0.024)	(0.015)	(3.653)
Hispanic	0.459^{+}	0.300^{+}	0.030	0.931	1.422	1.089	0.383^{+}	0.136*	0.004
	(0.208)	(0.205)	(0.095)	(0.225)	(0.422)	(1.596)	(0.192)	(0.105)	(0.015)
ln(violent crime)	0.632^{+}	0.637^{+}	0.711	0.842	0.822^{+}	0.960	0.646	0.646	0.706
	(0.166)	(0.168)	(0.228)	(0.093)	(0.091)	(0.189)	(0.189)	(0.194)	(0.265)
Percent Black 2010	6.795**	5.206*	6.206**	1.100	3.417**	1.122	4.389*	2.210	3.830*
	(4.293)	(3.456)	(3.838)	(0.279)	(1.489)	(0.285)	(2.870)	(1.581)	(2.525)
Black * Percent Black 2010		6.555			0.230**			12.341	
		(14.436)			(0.106)			(26.641)	
Hispanic * Percent Black 2010		2.528			0.237*			11.095*	
		(2.644)			(0.161)			(13.343)	
Black * ln(violent crime)			0.495			0.814			0.524
			(0.249)			(0.181)			(0.277)
Hispanic * ln(violent crime)			1.759			0.967			2.558
			(1.135)			(0.310)			(1.908)
Observations	1,210	1,210	1,210	1,210	1,210	1,210	576	576	576
Within 2 blocks of police station									
Black	0.041***	0.007*	1.204	0.524***	1.015	2.237	0.046***	0.005*	1.285
	(0.014)	(0.014)	(2.741)	(0.087)	(0.255)	(2.158)	(0.017)	(0.011)	(3.084)
Hispanic	0.373*	0.359^{+}	0.106	0.710	1.108	1.315	0.353*	0.235*	0.041
	(0.150)	(0.201)	(0.276)	(0.151)	(0.291)	(1.721)	(0.150)	(0.138)	(0.118)
ln(violent crime)	0.593*	0.599*	0.679	0.771**	0.753**	0.950	0.634^{+}	0.644	0.725
	(0.140)	(0.143)	(0.190)	(0.076)	(0.074)	(0.169)	(0.167)	(0.173)	(0.236)
Percent Black 2010	5.929**	5.124**	5.252**	1.179	3.663***	1.190	3.615*	2.348	3.250*
	(3.323)	(3.060)	(2.930)	(0.257)	(1.416)	(0.260)	(2.050)	(1.474)	(1.822)

(*Continued*)

TABLE A2. Continued

	Outcome: Sustained			Outcome: Submitting an affidavit after complaint			Outcome: Sustained conditional on submitting an affidavit		
Black * Percent black 2010		7.530			0.239***			12.797	
		(16.556)			(0.097)			(27.897)	
Hispanic * Percent black 2010		1.082			0.241*			2.746	
		(0.984)			(0.142)			(2.742)	
Black * ln(violent crime)			0.513			0.740			0.520
			(0.233)			(0.147)			(0.250)
Hispanic * ln(violent crime)			1.307			0.877			1.590
			(0.709)			(0.251)			(0.962)
Observations	1,518	1,518	1,518	1,518	1,518	1,518	701	701	701
More than 1 block from police station									
Black	0.074***	0.135***	1.083	0.672***	1.097	2.132*	0.091***	0.125***	1.147
	(0.010)	(0.040)	(1.044)	(0.045)	(0.111)	(0.816)	(0.013)	(0.038)	(1.142)
Hispanic	0.437***	0.425***	0.300	0.940	1.267*	4.829**	0.472***	0.368***	0.160+
	(0.070)	(0.101)	(0.324)	(0.081)	(0.136)	(2.621)	(0.080)	(0.091)	(0.177)
ln(violent crime)	0.793*	0.787*	0.889	0.867***	0.850***	1.051	0.838+	0.837+	0.910
	(0.080)	(0.079)	(0.107)	(0.035)	(0.035)	(0.073)	(0.088)	(0.088)	(0.118)
Percent black 2010	2.537***	2.943***	2.507***	1.154	2.711***	1.160	2.289***	2.208**	2.299***
	(0.560)	(0.738)	(0.546)	(0.104)	(0.430)	(0.105)	(0.533)	(0.591)	(0.530)
Black * Percent black 2010		0.460*			0.335***			0.684	
		(0.167)			(0.055)			(0.258)	
Hispanic * Percent black 2010		1.082			0.390***			1.850	
		(0.402)			(0.093)			(0.736)	
Black * ln(violent crime)			0.586**			0.784**			0.603*
			(0.113)			(0.062)			(0.120)
Hispanic * ln(violent crime)			1.083			0.699**			1.260

(*Continued*)

TABLE A2. Continued

	Outcome: Sustained			Outcome: Submitting an affidavit after complaint			Outcome: Sustained conditional on submitting an affidavit		
			(0.243)			(0.082)			(0.290)
Observations	8,867	8,867	8,867	8,867	8,867	8,867	3,958	3,958	3,958
More than 2 blocks from police station									
Black	0.077***	0.141***	1.131	0.693***	1.124	2.016^{+}	0.093***	0.130***	1.217
	(0.011)	(0.042)	(1.113)	(0.048)	(0.115)	(0.782)	(0.014)	(0.040)	(1.232)
Hispanic	0.445***	0.405***	0.233	0.974	1.296*	4.573**	0.472***	0.347***	0.128^{+}
	(0.073)	(0.099)	(0.259)	(0.085)	(0.141)	(2.517)	(0.082)	(0.088)	(0.146)
ln(violent crime)	0.804*	0.799*	0.893	0.881**	0.864***	1.053	0.849	0.849	0.915
	(0.083)	(0.082)	(0.109)	(0.036)	(0.036)	(0.074)	(0.092)	(0.091)	(0.121)
Percent black 2010	2.537***	2.876***	2.522***	1.118	2.596***	1.124	2.353***	2.225**	2.385***
	(0.571)	(0.736)	(0.560)	(0.103)	(0.418)	(0.104)	(0.560)	(0.611)	(0.562)
Black * Percent black 2010		0.457*			0.339***			0.673	
		(0.167)			(0.057)			(0.256)	
Hispanic * Percent black 2010		1.247			0.407***			2.116^{+}	
		(0.474)			(0.099)			(0.861)	
Black * ln(violent crime)			0.586**			0.798**			0.599*
			(0.115)			(0.064)			(0.122)
Hispanic * ln(violent crime)			1.146			0.712**			1.320
			(0.262)			(0.085)			(0.311)
Observations	8,559	8,559	8,559	8,559	8,559	8,559	3,833	3,833	3,833

Note. Results presented as odds ratios (i.e., exponentiated coefficients). Standard errors in parentheses. All models include controls for officer and tract characteristics. The interactions are between complainant race and tract characteristics. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

TABLE A3. Multinomial Logistic Regression Models of Outcomes of Interest

	Model 1		Model 2		Model 3		Model 4	
Outcome: No affidavit								
Black	1.218^{+}	(0.145)	1.218	(0.170)	0.803	(0.134)	0.394	(0.264)
Hispanic	1.115	(0.174)	1.093	(0.167)	0.832	(0.161)	0.334	(0.312)
Male complainant	0.881	(0.071)	0.882	(0.070)	0.887	(0.071)	0.885	(0.070)
Black officer	1.014	(0.077)	1.043	(0.077)	1.040	(0.077)	1.041	(0.077)
Hispanic officer	1.007	(0.069)	1.004	(0.069)	1.005	(0.069)	1.004	(0.069)
Asian/Native American officer	0.965	(0.150)	0.941	(0.148)	0.939	(0.145)	0.939	(0.147)
Male officer	0.927	(0.064)	0.910	(0.065)	0.912	(0.065)	0.910	(0.065)
Rank: PO	1.452**	(0.172)	1.341**	(0.149)	1.331*	(0.149)	1.340**	(0.150)
Rank: SGT	1.028	(0.133)	0.985	(0.125)	0.983	(0.126)	0.991	(0.126)
Rank: Unknown	1.855^{+}	(0.618)	1.708	(0.579)	1.673	(0.567)	1.704	(0.580)
Officer's *N*th complaint	1.008	(0.020)	1.008	(0.019)	1.007	(0.019)	1.008	(0.019)
Additional complainant witness	0.535^{+}	(0.174)	0.536^{+}	(0.175)	0.518*	(0.170)	0.525*	(0.172)
Number of officer witnesses	0.379***	(0.050)	0.382***	(0.051)	0.386***	(0.051)	0.384***	(0.051)
False arrest	3.738***	(0.601)	3.743***	(0.606)	3.779***	(0.619)	3.785***	(0.615)
Illegal search	4.311***	(0.602)	4.231***	(0.596)	4.242***	(0.599)	4.265***	(0.599)
Lockup procedures	4.361***	(0.752)	4.938***	(0.796)	5.045***	(0.805)	4.996***	(0.805)
Operations/personnel	3.506***	(0.387)	3.616***	(0.393)	3.630***	(0.394)	3.650***	(0.397)
Use of force	0.358***	(0.042)	0.354***	(0.042)	0.354***	(0.042)	0.357***	(0.042)
ln(Total 311 calls per capita (all years))			1.047	(0.083)	1.017	(0.081)	1.039	(0.083)
ln(Total number of complaints per capita in census tract)			0.804***	(0.037)	0.817***	(0.037)	0.812***	(0.037)
ln(violent crime)			1.149*	(0.077)	1.169*	(0.079)	0.960	(0.113)

(*Continued*)

TABLE A3. Continued

	Model 1		Model 2		Model 3		Model 4	
Percent black 2010			1.144	(0.184)	0.519*	(0.165)	1.132	(0.183)
Black * Percent black 2010					2.652**	(0.855)		
Hispanic * Percent black 2010					2.506*	(0.957)		
Black * ln(violent crime)							1.268^{+}	(0.179)
Hispanic * ln(violent crime)							1.297	(0.256)
Constant	0.453***	(0.092)	0.081***	(0.037)	0.100***	(0.045)	0.190**	(0.122)
Outcome: Sustained								
Black	0.127***	(0.026)	0.095***	(0.026)	0.143***	(0.049)	1.591	(1.872)
Hispanic	0.464**	(0.109)	0.543**	(0.121)	0.440**	(0.124)	0.190	(0.275)
Male complainant	1.447*	(0.215)	1.292^{+}	(0.200)	1.289^{+}	(0.196)	1.288^{+}	(0.197)
Black officer	2.767***	(0.380)	1.823***	(0.290)	1.820***	(0.283)	1.831***	(0.284)
Hispanic officer	1.367*	(0.201)	1.338^{+}	(0.201)	1.334^{+}	(0.200)	1.340^{+}	(0.202)
Asian/Native American officer	1.030	(0.281)	1.117	(0.319)	1.126	(0.323)	1.130	(0.325)
Male officer	0.862	(0.130)	0.867	(0.137)	0.862	(0.136)	0.858	(0.135)
Rank: PO	1.290	(0.336)	1.767^{+}	(0.536)	1.764^{+}	(0.537)	1.770^{+}	(0.532)
Rank: SGT	1.104	(0.325)	1.218	(0.367)	1.217	(0.366)	1.204	(0.357)
Rank: Unknown	1.725	(0.915)	1.946	(1.162)	1.935	(1.166)	1.863	(1.111)
Officer's *N*th complaint	0.953	(0.050)	0.920^{+}	(0.046)	0.918^{+}	(0.046)	0.922^{+}	(0.046)
Additional complainant witness	2.290*	(0.915)	2.677*	(1.212)	2.676*	(1.229)	2.665*	(1.238)
Number of officer witnesses	1.226***	(0.068)	1.210**	(0.070)	1.219***	(0.071)	1.214***	(0.070)

(*Continued*)

TABLE A3. Continued

	Model 1		Model 2		Model 3		Model 4	
False arrest	0.077**	(0.063)	0.082**	(0.066)	0.082**	(0.066)	0.084**	(0.067)
Illegal search	0.030***	(0.022)	0.029***	(0.022)	0.029***	(0.022)	0.030***	(0.023)
Lockup procedures	1.171	(0.389)	0.703	(0.246)	0.697	(0.242)	0.693	(0.244)
Operations/personnel	1.459	(0.336)	1.219	(0.256)	1.202	(0.254)	1.214	(0.255)
Use of force	0.163***	(0.045)	0.171***	(0.042)	0.172***	(0.043)	0.174***	(0.043)
ln(Total 311 calls per capita (all years))			0.886	(0.123)	0.896	(0.127)	0.901	(0.127)
ln(Total number of complaints per capita in census tract)			1.583***	(0.101)	1.586***	(0.102)	1.553***	(0.096)
ln(violent crime)			0.836	(0.099)	0.836	(0.098)	0.872	(0.134)
Percent black 2010			1.987*	(0.622)	1.538	(0.653)	1.982*	(0.582)
Black * Percent black 2010					0.729	(0.415)		
Hispanic * Percent black 2010					1.841	(0.959)		
Black * ln(violent crime)							0.575*	(0.141)
Hispanic * ln(violent crime)							1.255	(0.384)
Constant	0.237***	(0.076)	3.371^{+}	(2.196)	3.806*	(2.460)	2.554	(2.095)
Observations	10,077		10,077		10,077		10,077	

Note. Results presented as odds ratios (i.e., exponentiated coefficients). All models include dummy variables for each year. The interactions in Models 3 and 4 are between complainant race and tract characteristics. Standard errors in parentheses. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

TABLE A4. Ordered Logistic Regression Models of Outcomes of Interest

	Model 1		Model 2		Model 3		Model 4	
Black	0.397***	(0.049)	0.340***	(0.049)	0.885	(0.144)	3.227^{+}	(2.168)
Hispanic	0.527***	(0.080)	0.586***	(0.082)	0.939	(0.164)	1.893	(1.718)
Male complainant	1.244**	(0.090)	1.239**	(0.092)	1.211*	(0.092)	1.228**	(0.091)
Black officer	1.279**	(0.103)	1.129^{+}	(0.077)	1.134^{+}	(0.077)	1.132^{+}	(0.078)
Hispanic officer	1.050	(0.064)	1.048	(0.063)	1.042	(0.064)	1.046	(0.063)
Asian/Native American officer	1.035	(0.138)	1.098	(0.151)	1.103	(0.146)	1.106	(0.151)
Male officer	1.024	(0.069)	1.049	(0.073)	1.051	(0.074)	1.048	(0.073)
Rank: PO	0.766*	(0.083)	0.868	(0.094)	0.888	(0.098)	0.875	(0.095)
Rank: SGT	0.992	(0.125)	1.035	(0.126)	1.046	(0.127)	1.032	(0.124)
Rank: Unknown	0.677	(0.237)	0.732	(0.259)	0.749	(0.260)	0.732	(0.257)
Officer's *N*th complaint	0.987	(0.018)	0.977	(0.018)	0.982	(0.018)	0.977	(0.018)
Additional complainant witness	2.613***	(0.750)	2.560**	(0.739)	2.654***	(0.768)	2.609***	(0.756)
Number of officer witnesses	1.973***	(0.108)	1.953***	(0.106)	1.934***	(0.103)	1.946***	(0.105)
False arrest	0.229***	(0.037)	0.218***	(0.036)	0.219***	(0.036)	0.215***	(0.035)
Illegal search	0.191***	(0.028)	0.186***	(0.027)	0.188***	(0.027)	0.184***	(0.027)
Lockup procedures	0.241***	(0.039)	0.184***	(0.031)	0.178***	(0.029)	0.180***	(0.030)
Operations/personnel	0.323***	(0.042)	0.296***	(0.036)	0.297***	(0.035)	0.292***	(0.035)
Use of force	1.481**	(0.179)	1.495***	(0.168)	1.525***	(0.165)	1.484***	(0.166)
ln(Total 311 calls per capita (all years))			0.892	(0.075)	0.964	(0.076)	0.907	(0.076)
ln(Total number of complaints per capita in census tract)			1.438***	(0.065)	1.368***	(0.060)	1.408***	(0.065)
ln(violent crime)			0.847*	(0.055)	0.819**	(0.051)	1.158	(0.145)
Percent black 2010			1.150	(0.185)	5.298***	(1.688)	1.179	(0.188)
Black * Percent black 2010					0.133***	(0.042)		
Hispanic * Percent black 2010					0.261**	(0.114)		
Black * ln(violent crime)							0.626**	(0.089)
Hispanic * ln(violent crime)							0.776	(0.154)
Constant	0.248***	(0.048)	0.022***	(0.010)	0.037***	(0.017)	0.100**	(0.072)
Constant	5.607***	(1.370)	0.538	(0.241)	0.990	(0.435)	2.499	(1.771)
Observations	10,077		10,077		10,077		10,077	

Note. Results presented as odds ratios (i.e., exponentiated coefficients). All models include dummy variables for each year. The interactions in Models 3 and 4 are between complainant race and tract characteristics. Standard errors in parentheses. $+p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.