

The Science of Justice

*San Francisco Police Department
National Justice Database City Report*

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San Francisco Chief of Police



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CENTER FOR POLICING EQUITY

The Center for Policing Equity (CPE) is a research and action think tank, providing leadership in equity through excellence in research. CPE specializes in partnering with law enforcement and communities, with the mission of bridging the divide of communication, generational mistrust, and suffering. CPE's work is powered by science. Using advanced analytics to diagnose

disparities in policing, the organization's work sheds light on police behavior and answers questions that police and communities have asked for years about how to build a healthy relationship. Using CPE's analyses and recommendations, partners can chart a path toward better practices that are consistent with their values.

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EXECUTIVE SUMMARY

The Center for Policing Equity (CPE) partnered with the San Francisco Police Department (SFPD) to analyze the department’s policing practices during the 2014 to 2018 timeframe.¹

The project’s overall goals were (1) to identify any racial disparities in police interactions with community members; (2) if disparities were observed, to determine whether they were caused by inequitable practices on the part of officers or could be explained by other factors; (3) to identify any attitudinal dispositions on the part of officers or departmental contexts that can perpetuate inequity or make it probable that inequities, if not already present, will manifest in the future; and (4) to provide recommendations for reducing any identified disparities.

Using data contributed by SFPD to CPE’s National Justice Database (NJD), CPE examined the incidences of vehicle stops, pedestrian stops, and use of force involving major racial groups during the 5-year period, adjusting for the relative population size of each group. CPE also administered a climate survey to assess officer attitudes and beliefs that may enhance or decrease vulnerability to expressing bias. Finally, because departmental policy is critical to fostering equitable policing practice and trust between officers and the communities they serve, CPE conducted a review of SFPD’s publicly available general orders and special bulletins as they relate to: (1) collection of data regarding police interactions with the community; (2) equitable policing practices; and (3) police–community relations.

Summary of Findings

Overall, our analysis found reasons for optimism along with room for improvement concerning the goal of equitable policing. There was an overall decline in use-of-force incidents from 2016 to 2018. There was also a small but steady decline in the per capita counts of use-of-force

incidents for Black and Latinx residents relative to White residents in this time period. In the climate survey, SFPD officers generally reported perceptions that they are treated with dignity and respect by their supervisors, and they expressed high support for procedurally just policing.

The analysis also revealed areas that warrant additional attention, including evidence of racial disparities in the likelihood that Black and Latinx residents will be stopped, searched, or subjected to use of force by SFPD officers relative to the likelihood for White and Asian residents. Although the data and analytical limitations of the present study do not allow us to reach a definitive conclusion about the causes of these disparities, statistical modeling suggests the race of an individual impacts the likelihood they will be stopped or subject to use of force by SFPD officers even after characteristics of the neighborhood where the contact occurs are taken into account. Additional research is needed to better understand the extent to which these disparities can be attributed to the actions of individual police officers, the culture and policies of the department, and the relationship between SFPD and the community, and the extent to which these disparities are explained by factors beyond the control of SFPD, such as community conditions and the behavior of individual community members (see the report section entitled “National Justice Database Analytic Framework”).

Among other important findings, our analysis revealed:

- The per capita stop rate of Black drivers was over 2.6 times the per capita stop rate of White drivers or

¹ We note that SFPD initiated a collaborative reform process with the U.S. Department of Justice in 2016, and that the study period covered in this report significantly overlaps with the study period of the DOJ assessment, including their analysis of vehicle stop and use-of-force data between May 1, 2013, and May 31, 2016. More information on the collaborative reform process and resulting report are provided in the “History of SFPD Involvement in the National Justice Database” section of the report.

Latinx drivers, and roughly 4.2 times the stop rate of Asian drivers.²

- A little over half (55%) of the stops of Black drivers resulted in a citation or arrest, compared to 73% for White drivers and 79% for Asian drivers.
- This higher stop rate of Black drivers warrants additional consideration, as Black drivers are the racial group least likely to receive sanctions for traffic or legal violations when pulled over by SFPD officers.
- While about 2% of White and Asian drivers stopped by SFPD were searched, 7.2% of stopped Latinx drivers and 15.5% of stopped Black drivers were searched.
 - Black and Latinx drivers were most likely to be searched, but these searches were less likely to result in contraband being found. Among drivers stopped and searched, 13.4% of Black drivers and 15.3% of Latinx drivers were found with contraband, compared to 25.4% of White drivers and 31.1% of Asian drivers.
 - Higher search rates and lower yield rates are an indicator that Black and Latinx drivers experience a greater burden of SFPD stops and searches relative to White drivers.
- A statistical model that accounts for local crime rates, population demographics, and socioeconomic characteristics found that Black residents were over 14 times more likely to experience a pedestrian stop compared to White residents in the same neighborhood.
- An examination of the pedestrian stops of individual SFPD officers relative to the patrol areas they served suggests that the majority stopped a higher

number of Black pedestrians and lower number of White pedestrians than we would expect given the demographics of those patrol areas. This suggests racial disparities in per capita rates of pedestrian stops by SFPD are not driven by a small proportion of officers.

- The overall count of use-of-force incidents declined from 2016 to 2018, and the racial disparity in per capita risk of force also declined.
- There were 3,146 use-of-force records of an officer pointing a firearm during the 2016–2018 time period. This was the most common type of force reported by SFPD (57.4% of all use-of-force records).
- Statistical analysis controlling for neighborhood crime rate, poverty rate, and the share of the population that is Black estimated that Black residents were nearly 19 times more likely to have force used on them compared to White residents in the same neighborhood; Latinx residents were almost twice as likely as White residents.
- Statistical analysis found that a use-of-force incident was 1.21 times more likely to involve pointing a firearm when the community member was Black rather than White, after accounting for whether the community member was armed, whether the officer was injured, other characteristics of the community member (being in an altered mental state or reported to be homeless), and the officer's age.³

Although the data show racial disparities in SFPD interactions during the study period, these disparities do not necessarily indicate that police officers have engaged in biased or discriminatory behavior. The NJD analytic framework, described in the introduction to the full report, suggests that disparities may be explained by community characteristics, individual characteristics, individual officer behavior, and department policies and culture, as well as by the relationship between the

2 Per capita stop rates for vehicle stops are calculated by dividing the number of stops for each racial group by the estimated population of drivers in that racial group. The estimated population of drivers on San Francisco city streets is based on a composite of San Francisco city residents and commuters in neighboring counties, weighted by resident commuting patterns. See Section I for more details.

3 Less than 0.5% of all records included in this analysis involved the discharge of a firearm.

police and the community. Accordingly, racial differences in policing data should be contextualized with other contributing factors.

To gain better insight into social attitudes, beliefs, and morale, which can serve as risk factors for inequitable officer behavior in the field, we conducted a climate survey of SFPD officers. The survey focused on attitudes and beliefs that enhance or decrease vulnerability to expressing bias and relate to inequitable and burdensome policing, community trust, and workplace well-being and optimal job performance. In addition to measuring average attitudinal scores and how they vary, we constructed statistical models to better understand the ways in which important beliefs and attitudes are associated with one another across domains, for example, whether high job stress is associated with inequitable policing practices.

- The survey found high ratings of interactional justice, or the degree to which officers believe they are treated with dignity and respect by their supervisors; officer evaluations of the fairness of departmental processes were lower.

- On average, officers expressed strong support for procedurally just policing.
- SFPD officers expressed moderate levels of stereotype threat, or anxiety that one will inadvertently confirm a stereotype related to a social group in which one has membership. Officers who reported higher levels of stereotype threat also reported lower physical health and less positive affect.
- On the Implicit Association Test, officers demonstrated a slight but consistent unconscious bias against Black people.

Finally, departmental policy is critical to fostering equitable policing practice and trust between officers and the communities they serve. Accordingly, we conducted a review of SFPD's publicly available general orders and special bulletins for the purpose of identifying opportunities to improve (1) collection of data regarding police interactions with members of the public, (2) equitable policing practices, and (3) police–community relations. Findings from this review inform the recommendations to follow.



RECOMMENDATIONS

In this report, we advance seven specific recommendations. While not an exhaustive list of possible solutions to the issues raised in the report, we recommend SFPD adopt these actionable steps to enhance the department's commitment to fair and equitable policing. We additionally recommend SFPD draw on existing departmental strengths, including those revealed in the climate survey, when implementing these recommendations. For example, we encourage SFPD to leverage the existing positive relationships between officers and their direct supervisors and draw on officers' expressed commitment to procedural justice by emphasizing how new practices further this goal. CPE's seven recommendations are as follows:

- 1. Adopt a unified policy on data collection.** We recommend that SFPD adopt a single, comprehensive general order addressing collection of data on stops and compliance with the Racial and Identity Profiling Act of 2015 (RIPA). At present, SFPD addresses data collection requirements in individual department bulletins, such as Department Bulletins 18-247 and 18-105, both of which are entitled "Stop Data Collection System (SDCS) Implementation." format (to facilitate ease of statistical analysis) for the following fields:
 - Resistance (specifying type)
 - Whether any officer or the individual involved in the incident died
 - Nature of offense leading to arrest or citation (which may be distinct from call type)
- 2. Expand the definition of reportable force.** We recommend that SFPD amend the definition of reportable force in Department General Order 5.01 (Use of Force) to include all force used to overcome resistance, regardless of injury or complaint of injury or pain. SFPD's current definition of reportable force does not appear to encompass control holds or pain compliance techniques used to overcome resistance unless they result in injury or report of pain that persists beyond the use of the control hold.
- 3. Collect more detailed use-of-force information.** We recommend that SFPD collect and share more detailed data with respect to each use-of-force incident. In particular, we recommend that the department collect and analyze data in a tabular
- 4. Utilize the *COPS Stop Data Guidebook*.** We recommend that SFPD implement the recommendations for RIPA compliance outlined in the *COPS Stop Data Guidebook*, which was drafted by CPE and the Policing Project.
- 5. Require supervisor review of stop records.** We recommend that SFPD adopt a policy requiring officers to submit to their supervisors on a daily basis a brief narrative explanation of the basis for each stop they conduct. We recommend that this policy also require supervisors to review these reports in a timely manner to ensure that stops are supported by reasonable suspicion and are consistent with SFPD policy and applicable law.

6. Update policy on drawing firearms. We recommend that SFPD update Department General Order 5.01 (Use of Force) to clarify the circumstances in which an officer may draw a firearm. General Order 5.01 currently states that an officer may *point* a firearm only when the officer has a "reasonable perception of a substantial risk that the situation may escalate to justify deadly force." General Order 5.01 provides, however, that an officer may *draw* a firearm whenever the officer "has reasonable cause to believe it may be necessary for [the officer's] own safety or for the safety of others." We recommend that SFPD update General Order 5.01 to align requirements for drawing a weapon with the existing higher standard for pointing a firearm. In other words, we recommend that SFPD amend General Order

5.01 policy to add that officers may only draw or point their firearms if they reasonably believe that there is a substantial risk that the situation may escalate to the point where deadly force may be justified.

7. Identify situational risk factors for discrimination. We recommend that SFPD train its officers and supervisors on the situational risk factors that can increase the likelihood of racially disparate behavior, such as inexperience, time pressure, divided attention, hunger, stress, sleep deprivation, and the absence of clear norms regarding expected behavior. We further recommend that SFPD identify chronic risk factors for racially discriminatory outcomes and adopt policies to limit or eliminate these factors.

INTRODUCTION

How do you measure justice? Despite the philosophical, methodological, and logistical difficulty of this question, law enforcement executives are increasingly asked to turn over data with the aim of evaluating how fairly they are doing their jobs.

At the same time, many community members perceive law enforcement activities to be targeted toward—and biased against—non-White people. Communities wracked by mass incarceration and highly publicized police shootings have called for greater transparency and accountability on the part of the police. And research shows that positive police–community relationships are crucial for safer communities: Citizens are more likely to engage as witnesses and as partners in crime reduction if they believe in the legitimacy of police as equitable and impartial agents of the law.⁴

Increasingly, then, courageous and forward-looking law enforcement executives are seeking hard metrics on current practices as a way to identify effective policy reforms aimed at reducing bias and improving police–community relations. They are seeking out partnerships with prominent researchers to solve this riddle and to lead policing in the nation with respect to civil rights and public accountability. Toward this end, the San Francisco Police Department (SFPD) partnered with the Center for Policing Equity (CPE), a 501c(3) research and action think tank dedicated to advancing equity by way of rigorous scientific research. This report describes the data analysis resulting from this partnership.

CPE aims to address the needs of both law enforcement and communities by building the National Justice Database (NJD) to better understand and improve policing

practices. Through the NJD, CPE collects policing data to measure fairness and improve policing equity, and makes its findings transparent to law enforcement and to communities. The NJD offers a rigorous analytic framework to make sense of policing data in order to identify and understand the consequences of policing activities and the sources of racial disparity.⁵

Data collection and analysis are essential tools that can reveal empirical realities and illuminate options that might advance equity in public safety. Too often, law enforcement data have been captured with an eye toward accounting or litigation, and the data have not been leveraged to optimize performance. But just as CompStat ushered in a new era where police could be accountable for crime rates and understand how/where to direct policing resources, data on racial disparities—and the inferential analysis we pair with them here—can be used to identify opportunities to reduce disparate and burdensome practices and improve public trust and safety. Consequently, together with specific policies designed to address opportunities for improvement revealed by these analyses, we routinely recommend including better data collection as a tool for identifying problems, surfacing solutions and ensuring accountability as part of the path forward.

This report is designed to provide SFPD with a valuable resource toward that end. It is intended as a

4 Tyler, T. R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology*, 57, 375–400. <https://doi.org/10.1146/annurev.psych.57.102904.190038>

5 In this report, “racial group” refers to groups described in SFPD records by racial category (e.g., Black, Asian). When our analysis compares SFPD policing statistics to U.S. Census Bureau data, these identities are mapped onto the following census categories: Hispanic (referred to as Latinx in this report), non-Latinx Asian, non-Latinx Black, non-Latinx Native American, non-Latinx White, and non-Latinx Other Race. The census considers “Hispanic” as an ethnicity that encompasses all racial backgrounds. The description of Asian, Black, Native American, Latinx, White, and Other Race as “racial” designations does not represent a claim that any person belongs to a monolithic “race,” or indeed that the category of “race” has objective meaning independent of its social context. Finally, we note that the racial categories reported in SFPD data were based on individual self-reporting or official documentation (e.g., driver’s license).

preliminary guide to illuminate options that might advance equity in public safety and provide straightforward statistical answers to some of the most pressing questions facing this department and other law enforcement agencies. In the sections that follow, we present empirical documentation of the degree of racial disparities in SFPD’s policing practices, as well as analysis and interpretation of the factors that might contribute to such disparities. While the results are mixed, our analysis reveals encouraging findings and heartening trends. It also flags questions and issues that warrant further investigation and reform.

Our purpose is to demonstrate what can be learned when policing data are analyzed by qualified, independent researchers. This report, like those produced for other NJD participants, aims to offer law enforcement officials a road map toward greater transparency and accountability in police practices so they can transform agencies and adopt more just and equitable means of promoting public safety.

National Justice Database Analytic Framework

The NJD analytic framework aims to distinguish among five broad types of explanations for racial disparities in policing, all of which are likely to play some role in producing racial disparities in San Francisco, as elsewhere:

- 1. Individual characteristics or behaviors.** Individual conditions or behaviors—such as mental health challenges, homelessness, or participation in criminal activity—may lead to interaction with law enforcement.
- 2. Community characteristics.** Characteristics such as high crime rates or poverty may draw increased police attention to certain communities.
- 3. Individual officer characteristics or behaviors.** Some officers may view members of certain communities with a higher level of suspicion, resulting in a disproportionate rate of stops or a more punitive disposition after a stop for these individuals

4. Police department organizational culture or policy. Police departments may have established practices or policies that increase law enforcement contact with some members of the population more than others. For example, officers may be deployed to patrol some communities more frequently than others. Moreover, department culture and policy can be affected by local ordinances, outside of a police department’s purview, that force officers to sanction certain segments of the population more than others. Examples of such ordinances are those related to closing public parks at night and other forms of curfew.

5. Relationships between communities and police. Mistrust of law enforcement can reduce community members’ willingness to cooperate with police. Similarly, a sense that communities do not trust or respect police may cause officers to feel unsafe or defensive in some neighborhoods.

While the whole story likely incorporates elements of each of these explanations, the comprehensive NJD framework analyzes the role that community-level and police-level factors (with a specific focus on the first three explanations above) may contribute to racial disparities. By combining police administrative data with population data (e.g., income, racial demographics, neighborhood crime rates), a police department climate survey, and a departmental policy review, we can examine the role that these explanations play in the disparities that both police departments and communities want to reduce.

DEPARTMENTAL DATA

With regard to police administrative and population data, the NJD analytic framework leverages data that departments collect on officer–community member interactions, such as stops and incidences of use of force. These are then integrated with American Community Survey data from the U.S. Census Bureau and neighborhood serious crime rates reported by departments and coded for Part 1 crimes according to the Uniform Crime Reporting system of the U.S. Federal Bureau of Investigation.⁶ While no police department in the country currently collects all the data recommended by the NJD analytic framework,

⁶ Part 1 crimes are serious crimes—specifically, a category of eight offenses used in the FBI’s Uniform Crime Reporting statistics: murder and non-negligent homicide, rape (legacy and revised), robbery, aggravated assault, burglary, motor vehicle theft, larceny theft, and arson.

SFPD has been forthcoming in response to CPE requests for data sharing and information.

We encourage SFPD to continue its collection of vehicle and pedestrian stop, search, and seizure data. We also encourage SFPD to continue its collection of use-of-force data, including on the pointing and discharge of firearms and on incidents of deadly force. In addition, we encourage SFPD to provide data that include the reason for the stop in both vehicle and pedestrian stops, and to expand use-of-force data collection practices in line with the recommendations provided in this report.

This information will allow more powerful and comprehensive analysis to be conducted on a larger dataset that could identify trends and policy effects across multiple years of SFPD's practice. Expanded data collection and analysis will afford a significant opportunity to better understand and foster fairness in policing. This will benefit not only SFPD and the communities it serves, but law enforcement agencies and communities nationwide.

OFFICER CLIMATE SURVEY DATA

In addition to analyzing police administrative and population data, the NJD analytic framework explores conditions that serve as risk factors for ineffective and unjust policing practices. In line with that goal, we administered a climate survey to officers within SFPD, providing them the opportunity to voluntarily share their perspectives about working within the department as well as their views about the communities they serve and protect. The survey measured dispositions that can:

- increase the risk that officers will engage in inequitable and burdensome policing practices;
- increase the likelihood that officers will be resistant to policies and procedures that enhance community trust; and
- undermine the optimal job performance of officers.

With these survey findings, SFPD can better assess the types of departmental culture shifts or professional development trainings that may need to be adopted to further the goal of equitable policing.

We also conducted a review of SFPD policies and procedures related to three key objectives paramount to developing and supporting equitable policing practices:

- improving police–community member interaction data collection and management;
- promoting unbiased policing; and
- improving police–community relations.

These areas provide a foundation for setting norms and systems of accountability that can prevent racial disparities and biased treatment from occurring in law enforcement. Accountability is a proven and effective mechanism in reducing the likelihood that individuals will engage in unjust and differential treatment of others. The results of the policy review will support SFPD in promoting desired behaviors and curtailing those that are undesired.

In sum, by leveraging police administrative data, climate survey data, and a review of department policies, the NJD analytic framework produces comprehensive findings regarding a department's strengths and areas in which improvements are needed. The resulting analysis can be used to steer community engagement, relationship building, and continued departmental reform.

It is important to emphasize that the persuasive power of analytics grows substantially with the length of time a department measures and analyzes important indicators. As a result, **we encourage SFPD, the people of San Francisco, and all law enforcement agencies involved in the NJD to see this analysis as an initial benchmark against which future progress can be measured.** With many departments set to receive similar briefs in the coming years, we hope this analytic framework will serve as a road map for police and communities establishing where they are now and charting a path toward a more just and equitable future.

History of SFPD Involvement in the National Justice Database

In 2017, SFPD joined the NJD. As part of its participation, the department shared data on its stops, searches, and use-of-force incidents.

SFPD has engaged in significant efforts to enhance transparency, develop community policing, and improve police–community member interactions. The department has a Community Engagement Division where officers are assigned full-time to proactively engage with the community, including by hosting relationship-building events, participating in community events, and working with community leaders.⁷ SFPD also has a Community Police Academy, a 10-week program open to members of the community designed to provide an overview of SFPD structure and activities.⁸ The department collaborates with community members to support quality of life and public safety through Community Police Advisory Boards in which community volunteers who live and/or work in a specific geographical police district advise SFPD on the community’s public safety needs.⁹ After his appointment in 2017, Chief William Scott launched the Chief’s Advisory Forums to allow for community input on SFPD anti-bias policies and training and to enhance police-community trust.¹⁰

In 2016, SFPD began a collaborative reform process with the U.S. Department of Justice (DOJ). On October 12, 2016, the DOJ Community Oriented Policing Services (COPS) Office released an assessment of SFPD focusing on five key areas: use of force, bias, community policing, accountability, and personnel. The assessment made

272 recommendations to improve SFPD’s policies and practices in these areas.¹¹ The DOJ COPS Office announced its withdrawal from the collaborative reform process on September 15, 2017. On February 5, 2018, the California Department of Justice agreed to publicly evaluate SFPD’s implementation of the DOJ recommendations. Since the collaborative reform process began in 2016, SFPD has made numerous changes to written policies and training procedures in response to the DOJ’s recommendations, including updates to its use-of-force policy. This policy update emphasized the use of de-escalation tactics, defined pointing of a firearm at a subject as a reportable use of force, and prohibited the use of carotid restraints. SFPD also implemented mandatory crisis intervention training in 2016 for all department members and has since introduced numerous mandatory training courses for officers to address bias, including Managing Implicit Bias, Creating an Inclusive Environment, and Principled Policing. SFPD’s response to the DOJ recommendations is ongoing.¹²

Finally, since 1982, SFPD has been overseen by the Department of Police Accountability (originally named the Office of Citizen Complaints), a community oversight agency that investigates complaints against SFPD officers, conducts periodic audits, and makes policy recommendations regarding police practices.¹³

7 San Francisco Police Department. (2019). *Community engagement*. <https://www.sanfranciscopolice.org/your-sfpd/explore-department/community-engagement>

8 San Francisco Police Department. (2019). *Community Police Academy*. <https://www.sanfranciscopolice.org/community/programs/community-police-academy>

9 San Francisco Police Department. (2019). *Community Police Advisory Boards (CPABs)*. <https://www.sanfranciscopolice.org/community/programs/community-police-advisory-boards-cpabs>

10 Email communication with SFPD personnel, July 2, 2020.

11 Community Oriented Policing Services. (2016). *An assessment of the San Francisco Police Department*. Washington, DC: U.S. Department of Justice, Collaborative Reform Initiative.

12 San Francisco Police Department. (2019). *Collaborative reform initiatives: Status of recommendations*. <http://sfpd.prod.acquia-sites.com/your-sfpd/policies/collaborative-initiatives/collaborative-responses>

13 San Francisco Police Department. (2020). *Department of Police Accountability*. <https://sfgov.org/dpa/>

SECTION I: DATA AND CONTEXT

CPE’s ability to evaluate issues of equity and offer recommendations is directly related to the quality and quantity of data provided by each department.

In particular, an essential component of the NJD analytic framework is the analysis of geographic and demographic information collected when officers have interactions with community members. These data include (but are not limited to) the location of each incident and the race and gender characteristics of all officers, suspects, and community members involved.

With this in mind, departments participating in the NJD are invited to share data as completely as possible. The higher the quality of the data, the more robust the analyses that can be provided to departments. CPE analyzes all data using descriptive statistical methods and some with multilevel regression models. In this section, we focus on the quantity and quality of the data that SFPD provided for analysis in this report.

Data Provided by the Department

Table 1 provides an overview of the data that were requested and provided by SFPD. This is not a comprehensive list of data petitioned from the department, but it identifies the major pieces of data necessary for holistic assessment.

SFPD has been forthcoming in data sharing and has provided sufficient data to support descriptive and statistical analysis of stops and use-of-force incidents, as provided in Section II. However, limitations in the data received did not allow us to fully meet the analytical objectives of the NJD framework. These data limitations include the following:

- Incomplete data were provided on the type of contraband found during searches conducted after vehicle and pedestrian stops.

Table 1. Data Requested and Received From SFPD

Data Requested	Requested Timeframe	Data Received	Information Provided		
			Location	Individual Race	Officer Characteristics
Vehicle Stops	2013–2017	2014–2017	Yes	Yes	No
Pedestrian Stops	2013–2017	2017 ^a	Yes	Yes	No
Use-of-Force Incidences and Type of Force	2013–2017	2016–2018 ^b	Yes	Yes	Yes
Crime Data	2013–2017	Yes	Yes	Yes	No

a SFPD did not begin the department-wide practice of collecting data on pedestrian stops until the implementation of its eStop application (which was first implemented in 2016 and adopted department-wide in 2017).

b SFPD provided use-of-force data beginning in 2014, but indicated that the completeness of use-of-force records was improved in 2016. Use-of-force data were provided through March 2019; because we focused on annual quarters, only use-of-force data for 2016–2018 are analyzed and presented in this report.

- No officer assignment/work unit data were provided for vehicle stops conducted prior to 2017.
- Pedestrian stop data were restricted to a single year (2017).
- Incomplete data were provided for incidents of use of force for 2014–2015.
- No data on community member or officer deaths were provided for incidents of use of force.

In addition to providing the data described in Table 1, SFPD provided CPE with the department’s current general orders as well as department bulletins for calendar years 2016, 2017, 2018, and 2019. These policy documents were made available to CPE directly from SFPD’s public website.¹⁴ SFPD also allowed CPE to administer a climate survey to all sworn officers. Of the officers invited to participate, 633 completed the survey. For any given question, between 287 and 550 officers provided analyzable responses.

With the scope of data provided, we are able to offer analysis and recommendations that can support SFPD in moving toward its goals of advancing and enhancing equitable policing practices.

The Data Context

The data provided for this report must be contextualized by the people they represent. It is important to account for the demographics of the jurisdiction served by SFPD and that of the department itself. According to 5-Year American Community Survey data for 2013–2017, the population of San Francisco comprises an estimated 864,263 people. The racial demographics of the residents of the city of San Francisco are as follows:

- 41% are non-Hispanic White (“White”)
- 15% are Hispanic (referred to as “Latinx” in this report)
- 5% are non-Hispanic Black (“Black”)

- 34% are non-Hispanic Asian (“Asian”)
- Fewer than 1% are non-Hispanic American Indian/ Native American

In 2015, SFPD employed approximately 2,292 sworn officers and another 573 civilian professionals to serve the city of San Francisco. The racial demographics of the department’s sworn officers at this time were as follows:

- 50% were non-Latinx White (“White”)
- 9% were non-Latinx Black (“Black”)
- 16% were Latinx
- 22% were non-Latinx Asian, including 6% Filipino (“Asian”)
- 1% self-identified as non-Latinx Other Race, American Indian/Native American, or Native Hawaiian/ Other Pacific Islander

Two important caveats should be kept in mind when evaluating the analysis prepared from these data and presented in this report. The first involves limits on drawing conclusions based on local populations; the second pertains to the relationship between observed disparities and the presence of biased behavior among officers.

First, for SFPD, as for any other police department, it cannot be assumed that persons with whom the department’s officers interact are necessarily residents of the jurisdiction serviced by SFPD or of the neighborhood in which an encounter takes place. Nevertheless, jurisdiction-wide and neighborhood demographic data provide the best available estimates of the characteristics of persons with whom SFPD officers may interact. To this end, we used demographic benchmarks from the American Community Survey 5-year estimates released in 2017.

For analysis of vehicle stops, we leveraged commuting-area demographics to estimate the likely pool of both commuters and residents in vehicles with whom SFPD

¹⁴ San Francisco Police Department. (2020). *Policies*. <https://www.sanfranciscopolice.org/your-sfpd/policies>

officers interacted during traffic stops. We investigated commuter rates for people whose destination was San Francisco. To capture commuter demographics, we used data on commuting patterns available from the 5-Year American Community Survey Commuting Flows. We note that the most recent data available were for 2006–2010, and that commuting patterns may differ from the study period in this report.

Based on these data, we produced an estimate of drivers on the city streets and highways of San Francisco that includes weighted population estimates of the five counties from the Bay Area Census, including San Francisco, for which the destination of at least 3% of the people was San Francisco.¹⁵ The overall vehicle demographics were the demographics of each of those five counties, including San Francisco, weighted by the percentage of people commuting from each county to San Francisco. The counties and their corresponding contributions to the SF commuter population are as follows: San Francisco County (56%); San Mateo County (13%); Alameda County (12%); Contra Costa County (8.1%); and Marin County (4.4%). Then, to calculate per capita stop rates for SFPD vehicle stops, we used this estimated population of commuters and residents on San Francisco’s city streets to create a weighted estimate of the driving population benchmark. The demographic breakdown of this estimated driving population is as follows:

- 40% are non-Hispanic White (“White”)
- 19% are Hispanic (“Latinx”)
- 6% are non-Hispanic Black (“Black”)
- 30% are non-Hispanic Asian (“Asian”)
- Fewer than 1% self-identify as non-Hispanic American Indian/Native American

As pedestrians on foot are less mobile than vehicles, and these individuals are more likely to reside in San

Francisco, we used American Community Survey 5-year estimates for the municipality to benchmark pedestrian stops. (These demographics are noted at the top of this section.) We also used this resident benchmark for use-of-force incidents, with the assumption that although these incidents can occur during vehicle stops, not all will involve a mode of transport that would allow a community member to traverse a wide span of geography. The benchmark therefore includes a smaller estimate of the relative representation of Latinx residents and a higher estimate of the relative representation of Asian residents than we utilized for vehicle stops.

Despite our selective use of either commuting-area or municipal demographic data, we still cannot know, for example, whether miles driven or walked differ between racial groups. It is not possible to estimate with precision what the racial distribution of police encounters might be if these encounters accurately reflected the relative population sizes of the different racial groups walking and driving in the city of San Francisco. Nonetheless, we find the population benchmarking presented in Section II instructive for contextualizing SFPD vehicle stops, pedestrian stops, and use-of-force data against a proxy of the population with which SFPD officers are likely to have contact.

The second caveat is that disparities do not necessarily indicate that police officers have engaged in biased or discriminatory behavior. We cannot know, for example, the racial distribution of drivers or pedestrians who engage in behaviors that might result in a police stop or in use of force. There is reason to suspect that racial disparities observed in law enforcement might be related to the racial disparities in education, housing, employment, healthcare, and other socioeconomic indicators that characterize American society and are outside of SFPD control. Accordingly, racial differences in policing data must be contextualized with other contributing factors, including neighborhood characteristics, crime rates, and other factors, some of which are modeled in the regression analysis presented in Section III of this report.

15 Estimates were produced using the 2006–2010 “Bay Area by County of Residence” dataset, filtered to include only rows where the workplace county is San Francisco, available via the Bay Area Census (n.d.). <http://www.bayareacensus.ca.gov/transportation.htm>

Recommendations: Data Collection

We recommend that SFPD undertake the following steps to build on and improve current departmental data collection efforts:

- 1. Adopt a unified policy on data collection.** We recommend that SFPD adopt a single, comprehensive general order addressing collection of data on stops and compliance with the Racial and Identity Profiling Act of 2015 (RIPA). At present, SFPD addresses data collection requirements in individual department bulletins, such as Department Bulletins 18-247 and 18-105, both of which are entitled “Stop Data Collection System (SDCS) Implementation.”
- 2. Expand the definition of reportable force.** We recommend that SFPD amend the definition of reportable force in Department General Order 5.01 (Use of Force) to include all force used to overcome resistance, regardless of injury or complaint of injury or pain. SFPD’s current definition of reportable force does not appear to encompass control holds or pain compliance techniques used to overcome resistance unless they result in injury

or report of pain that persists beyond the use of the control hold.¹⁶

- 3. Collect more detailed use-of-force information.** We recommend that SFPD collect and share more detailed data with respect to each use-of-force incident. In particular, we recommend that the department collect and analyze data in a tabular format (to facilitate ease of statistical analysis) for the following fields:
 - Resistance (specifying type)
 - Whether any officer or the individual involved in the incident died
 - Nature of offense leading to arrest or citation (which may be distinct from call type)
- 4. Utilize the *COPS Stop Data Guidebook*.** We recommend that SFPD implement the recommendations for RIPA compliance outlined in the *COPS Stop Data Guidebook*, which was drafted by CPE and the Policing Project.

¹⁶ San Francisco Police Department General Order 5.01 (Use of Force) (rev. 12/21/16) reads as follows: “REPORTABLE FORCE. Any use of force which is required to overcome subject resistance to gain compliance that results in death, injury, complaint of injury in the presence of an officer, or complaint of pain that persists beyond the use of a physical control hold. Any use of force involving the use of personal body weapons, chemical agents, impact weapons, extended range impact weapons, vehicle interventions, and firearms. Any intentional pointing of a firearm at a subject.”

SECTION II: STATISTICS AND RACIAL DISPARITIES

In this section, we describe and analyze the data pertaining to vehicle stops, pedestrian stops, and use of force provided by SFPD.

In Section IIA, we first present counts of vehicle stops per quarter, across a 4-year time span, to establish the frequency with which SFPD has had such contact with community members. We then examine the population-adjusted, or per capita, vehicle stop rates for each racial group to determine whether there are racial disparities in these stops. If disparities are observed, we examine evidence that they may have arisen from inequitable treatment by law enforcement. We present the same analysis for pedestrian stops and use of force in Sections IIB and IIC, respectively. We use descriptive statistical methods and multilevel modeling as modes of analysis as appropriate.

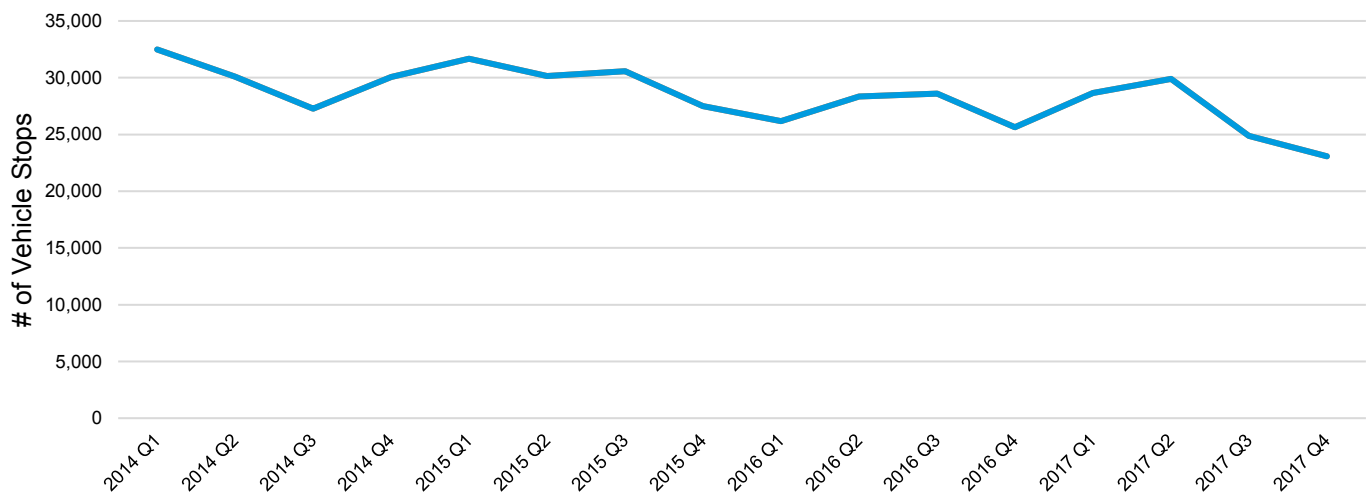
Section IIA: Vehicle Stops and Racial Disparities

For the purposes of this report, a vehicle stop is defined as a single event in which the driver of a vehicle is detained

by the police, regardless of the number of vehicle passengers and/or officers involved in the stop.¹⁷ Between 2014 and 2017, SFPD engaged in an average of 113,762 vehicle stops per year. A small proportion of stop records (between 1% and 2%) were excluded from specific analyses due to incomplete data.¹⁸ Figure 1 below shows the number of vehicle stops by quarter in this 4-year period.

The graph reveals considerable variation across quarters in the total number of vehicle stops, as well as an overall downward trend over time. In the first quarter of 2014, SFPD made 32,486 stops—the highest number of vehicle stops in the 4-year period. This was followed by fluctuating increases and decreases by quarter and a sharp decline in late 2017. SFPD made 23,075 stops in the last quarter of 2017, which was the lowest number of stops across the 4-year period.

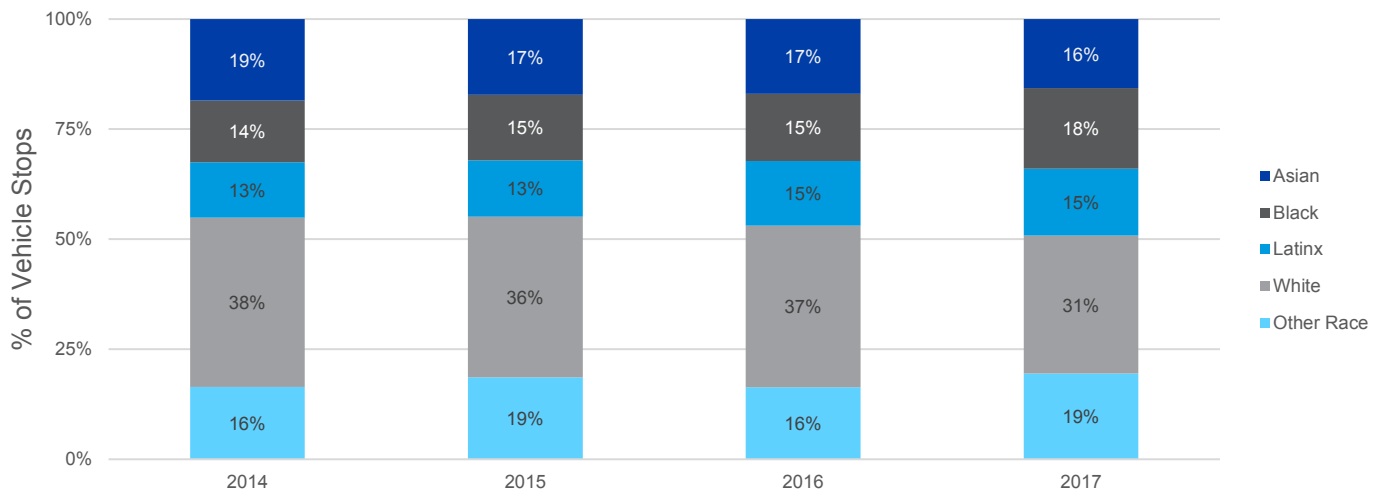
Figure 1. Number of Vehicle Stops per Quarter, 2014–2017



17 The vehicle stop data analyzed in this report include all vehicle stops recorded in the enhanced eStop application SFPD implemented in 2016 and adopted department-wide in 2017, as well vehicle stop records collected between 2014 and 2016 through electronic forms and citation devices (via the E585 and Crossroads systems, respectively).

18 A total of 115 stops were excluded from analysis due to missing data on community member race.

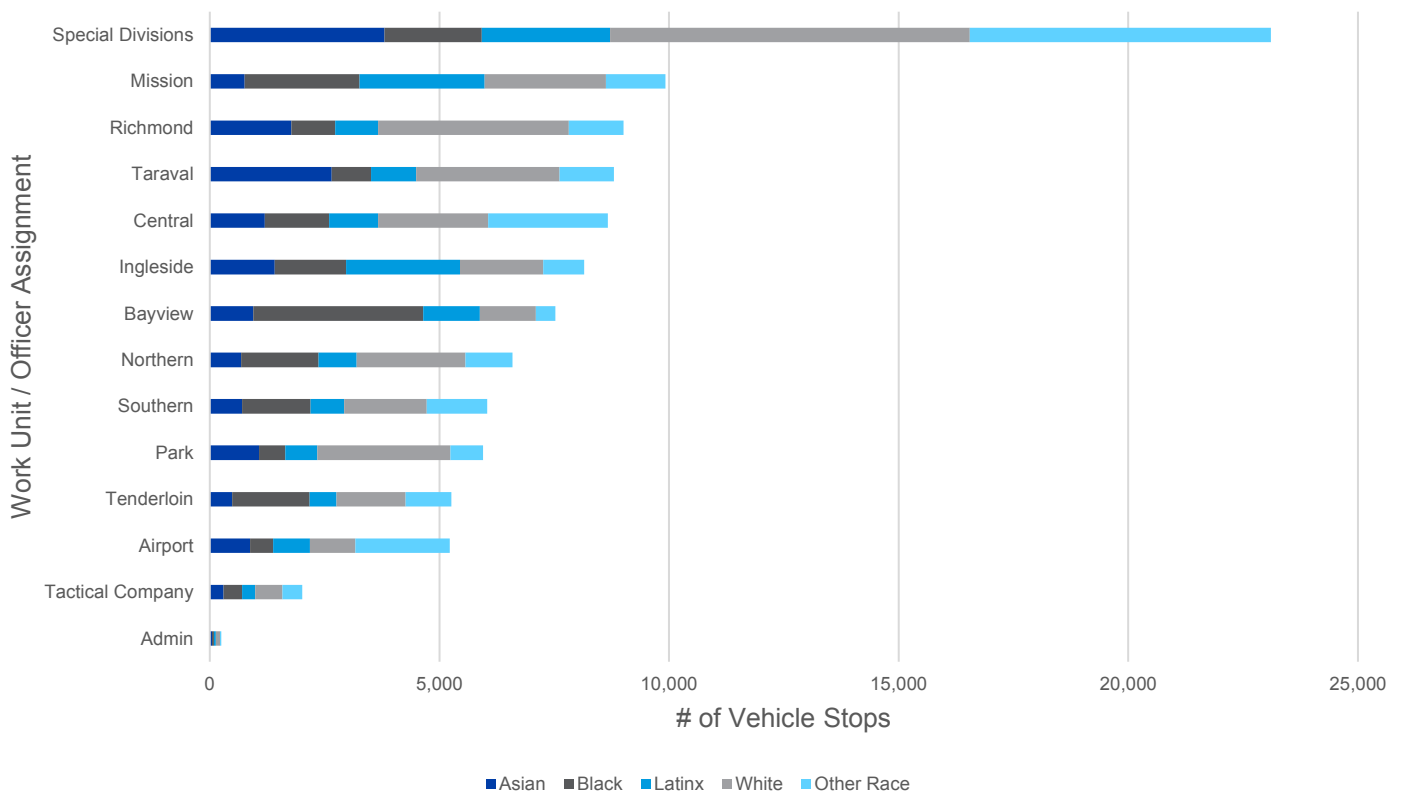
Figure 2. Percentage of Vehicle Stops by Driver Race and Year, 2014–2017



The breakdown of vehicle stops by the race of the driver for each year is illustrated in Figure 2 above. White drivers accounted for approximately 36% of all vehicle stops recorded across the 4-year period. That is slightly lower than the percentage of White drivers in the estimated San Francisco driving population (40%). Additionally, while Black people make up about 6% of San Francisco's

driving population, Black drivers accounted for about 16% of all vehicle stops made by SFPD across the study period. Like Whites, Asian drivers were underrepresented in SFPD stops: They account for about 30% of the commuting population, but made up an average of 17% of vehicle stops across the study period. Similarly, Latinx drivers were slightly underrepresented in the share of SFPD

Figure 3. Number of Vehicle Stops by Driver Race and Officer Work Unit, 2017



traffic stops. Although Latinx people make up 19% of San Francisco’s commuting population, they accounted for an average of 14% of vehicle stops across the 4-year period. Thus, Black drivers were the only group to be overrepresented in vehicle stops made by SFPD between 2014 and 2017.

The racial composition of stopped drivers changed over the study period. The proportion of stopped drivers who were White decreased from 38% of stops in 2014 to 31% in 2017, and the proportion of stops involving Black drivers increased from 14% to 18% over the same period. The proportion of stops involving Latinx and drivers classified as Other Race also increased over the study period, while the proportion involving Asian drivers declined.

Figure 3 shows the distribution of vehicle stops by racial group and police department work unit (such as a precinct, beat, or district) in 2017. This distribution is not presented for 2014–2016 because SFPD only collected officer assignment data for 2017.

Figure 3 reveals that in 2017 the count and dispersion of traffic stops across racial groups varied substantially by SFPD work unit/officer assignment. The largest number of stops was conducted by officers in Special Divisions, which includes officers assigned to the Traffic Company as well as to a number of other smaller units, such as K-9 and Explosive Ordnance Disposal. The racial composition of stops in a given work unit reflects the

community served by that work unit. For example, the population of individuals stopped by officers assigned to the Airport Division reflects the diverse population of tourists and residents traveling through San Francisco International Airport.

Overall, Black drivers accounted for the greatest percentage of stops by officers assigned to the Bayview, Tenderloin, and Northern San Francisco districts, making up 49%, 32%, and 26% of all drivers stopped in those districts, respectively. Latinx drivers were most represented in vehicle stops in the Ingleside and Mission districts, where they made up 30% and 28% of drivers stopped by officers assigned to those districts, respectively. White drivers made up the greatest proportion of stops made by officers assigned to the Park and Richmond districts, where they constituted about 47% of stops in each.

Because Whites are the largest racial group in the estimated San Francisco driver population, it is not surprising that SFPD officers stopped White drivers more frequently than drivers from other racial groups (see Figure 2). To determine whether there were racial disparities in vehicle stops and police actions following stops, it is important to adjust for differences in group population size. This is done in the Figure 4 below, which shows the population-adjusted, 4-year annual average of vehicle-related citations for each group. These rates were calculated by averaging the number

Figure 4. Rate of Vehicle Stops per 1,000 Population by Driver Race, 2014–2017

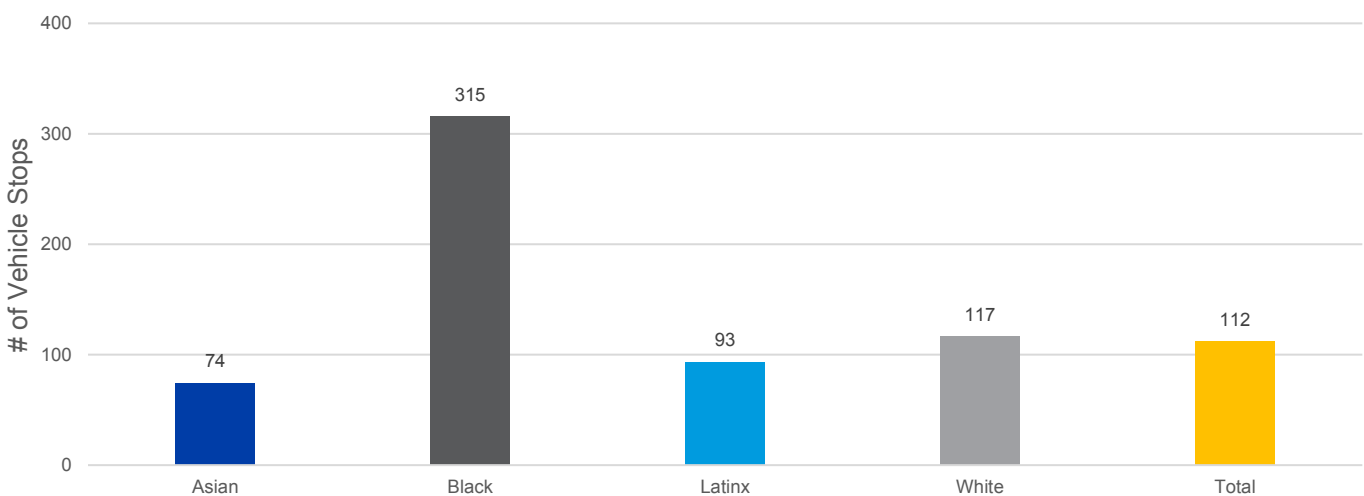


Table 2. Risk Ratios for Vehicle Stops by Driver Race and Year, 2014–2017

	2014	2015	2016	2017	Average
Asian	0.64	0.63	0.62	0.67	0.64
Black	2.28	2.55	2.60	3.63	2.71
Latinx	0.68	0.74	0.83	1.01	0.80
White	1.00	1.00	1.00	1.00	1.00

of vehicle stops conducted by SFPD with individuals of each racial group during the study period. This number was then divided by the number of people of the same racial group within the estimated population of drivers in San Francisco during the study period.¹⁹

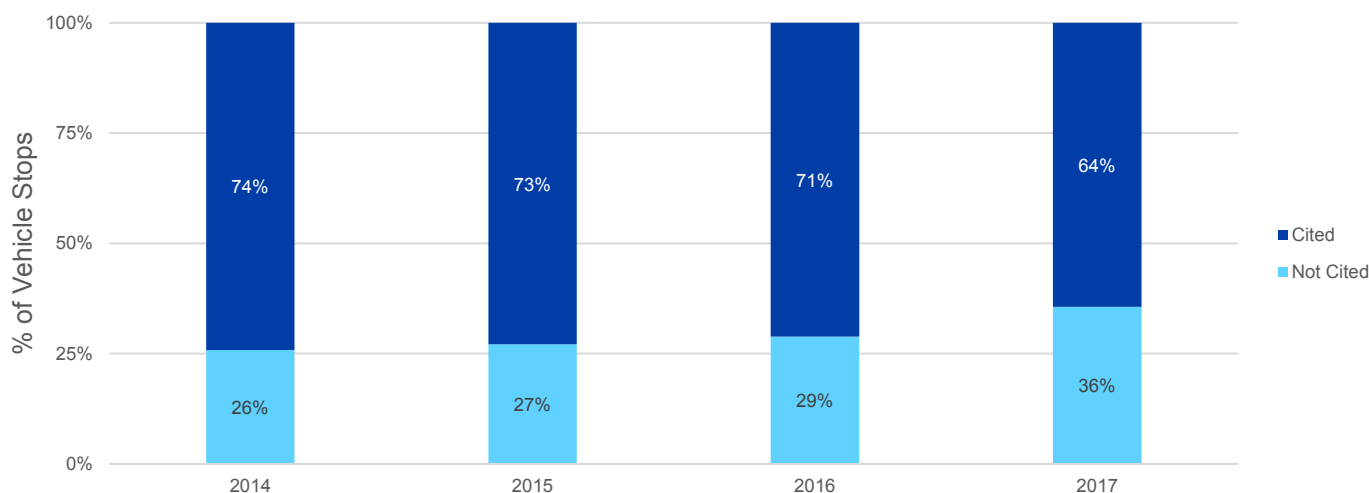
Figure 4 reveals that there were 315 stops of Black drivers made by SFPD for every 1,000 Black individuals in the estimated San Francisco driving population. In comparison, there were 117 stops per 1,000 for Whites, 93 stops per 1,000 for Latinx individuals, and 74 stops per 1,000 for Asians.

In Table 2, we show the risk ratios of the number of stops per capita for each racial group as it compares to Whites for each year in the data sample. These ratios divide the

per capita rate of stops for drivers of a given race by the per capita rate for White drivers during each year. The ratio for White drivers is reported as 1.00, and this serves as the baseline for comparison against which other risk ratios are calculated.

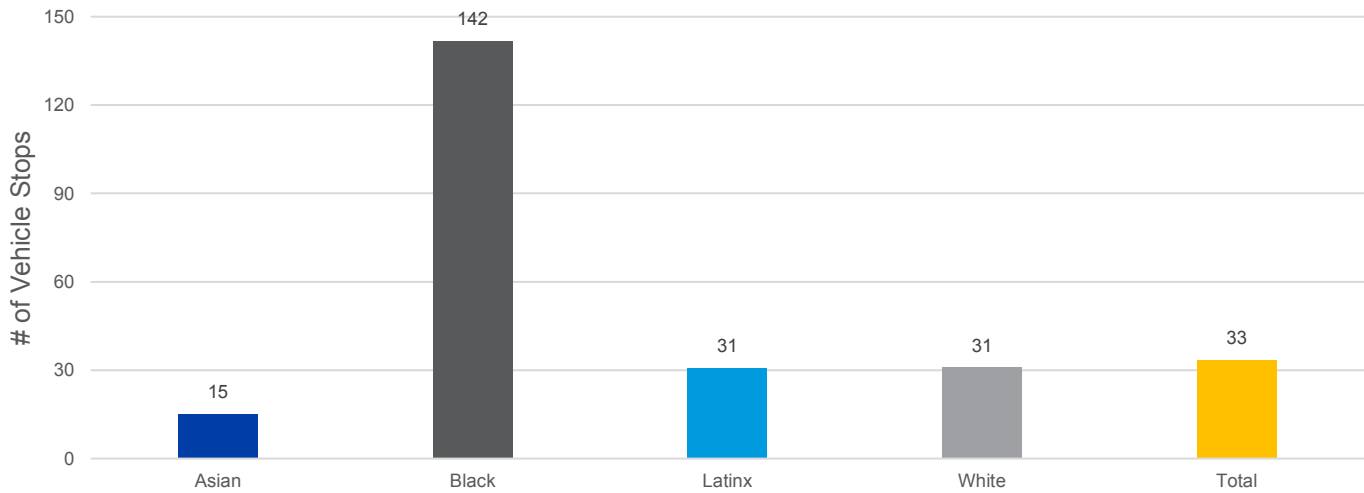
The risk ratios in Table 2 show that, on average, the per capita stop rate of Black drivers was about 3 times higher than the rate for White drivers. Moreover, the differences between Black and White stop rates increased steadily over time: In 2014, the per capita rate for Blacks was 2.28 times greater; in 2017, it was 3.63 times greater. These findings reveal that the per capita rate of vehicle stops of Black drivers relative to the estimated number of Black drivers in San Francisco is higher than the rate of stops for other racial groups.

Figure 5. Percentage of Vehicle Stops with Driver Cited and Not Cited by Year, 2014–2017



¹⁹ We do not produce per capita analysis of stops involving individuals included in the Other Race category, as we cannot accurately estimate the benchmark population for this aggregate category.

Figure 6. Vehicle Stops Without a Citation or Arrest per 1,000 Population by Driver Race, 2014–2017



We next consider evidence regarding whether this disparity is explained by a greater likelihood of such drivers to engage in motor vehicle or criminal code violations, which may warrant disproportionate contact. Reviewing data on citations can provide some initial clues and impressions, as these data can help support conclusions about the likelihood that misconduct by Black drivers is an explanatory factor.

Figure 5 shows the frequency with which motorists were stopped with no citation versus when they were stopped and received a citation. Over time, the percentage of drivers stopped who were not cited increased, making up 26% of all stops in 2014, compared to 36% of all stops in 2017.

Figure 6 shows the per capita rates of drivers being stopped without a subsequent citation or arrest resulting from the stop. Again, there is variation across racial groups. On average, Black drivers were stopped without being cited or arrested 142 times per 1,000 Black residents in San Francisco driving population, compared to 31 times per 1,000 residents for Latinx and White drivers, and 15 times per 1,000 Asian residents for Asian drivers.

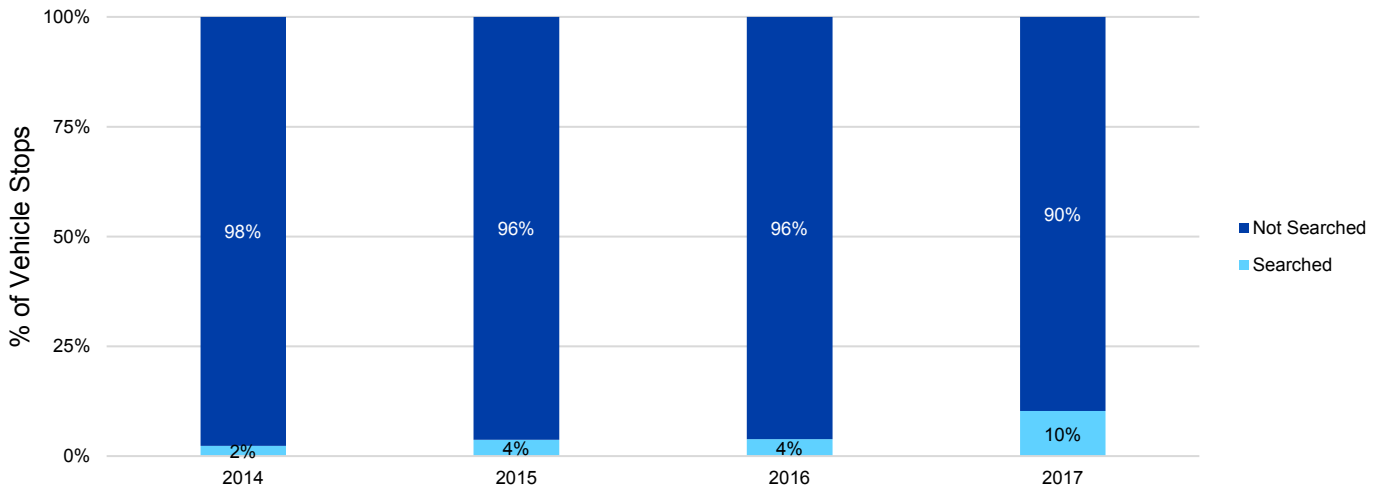
Viewed another way, a little over half (55%) of Black drivers who were stopped were cited or arrested. In contrast, 79% of stopped Asian drivers, 73% of stopped White drivers, and 67% of stopped Latinx drivers were cited or arrested after they were stopped.

These findings reflect both the higher rate of stops for Black drivers and the lower percentage of these stops that resulted in a citation or arrest. They suggest that disparities in the per capita rate of vehicle stops of Black and White drivers are not explained by a greater propensity among Black people to engage in motor vehicle or criminal code violations that result in citation or arrest. These findings suggest that Black drivers may bear a greater burden of vehicle stops relative to other racial groups.

We next analyze data on the percentage of stops that resulted in a search, as well as the contraband yield rates of these searches. Yield rates allow us to consider the extent to which disparities in search rates may be driven by racial differences in the likelihood of engaging in criminal code violations. This analysis includes all searches conducted during SFPD vehicle stops, some of which are dictated by policy rather than an officer's suspicion that the search will result in the discovery of contraband (e.g., searches incident to arrest are mandated by policy, while officers have more discretion in requesting a consent search).

Figure 7 shows the percentage of stops each year that resulted in a search for all people. It reveals that the percentage of stopped drivers who were searched increased over time, from a low of 2.3% of all stops in 2014, to a high of 10.2% in 2017. Figure 8 presents the percentage of stopped drivers from each racial group who were searched by SFPD. On average across the study period,

Figure 7. Percentage of Stopped Drivers Searched and Not Searched by Year, 2014–2017



about 2% of White and Asian drivers stopped by SFPD were searched, compared to 7.1% of Latinx drivers and 15.4% of Black drivers.

Next, we examine whether higher search rates are linked to disparities in arrests and yield of contraband, such as unlawful items or objects (including weapons) or drugs. The share of searches yielding contraband provides a related indicator that can help assess equality in police contact across racial groups. Specifically, disproportionate searches and lower yield rates are an indicator of a greater burden of police contact relative to other groups and may suggest that officers’ suspicion of illegal

activity is less likely to be accurate for a particular group, or it may reflect that officers use a lower threshold of suspicion for the group. A lower threshold refers to the possibility that officers interpret behaviors as suspicious more often when the person engaging in that behavior is a member of a given group than when the person engaging in that behavior is a member of another group. This language does not reflect a determination of the legality of a stop or search.

Table 3 presents the yield rates of contraband from SFPD vehicle searches by race over the 4-year period. This table reveals that stops of Black and Latinx drivers

Figure 8. Percentage of Stopped Drivers Searched by Race, 2014–2017

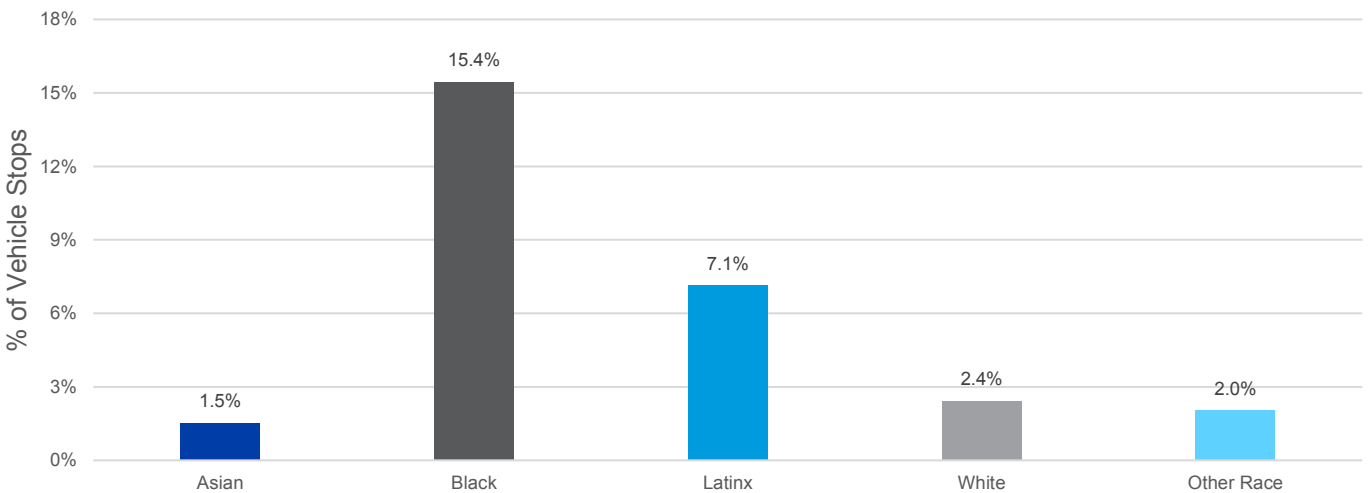


Table 3. Yield Rates of SFPD Vehicle Searches by Race, 2014–2017

	Stops	Searches		Contraband Found		
	#	#	%	#	% of searches	% of stops
Asian	77,984	1,208	1.6%	376	31.1%	0.48%
Black	70,710	10,932	15.5%	1,462	13.4%	2.1%
Latinx	62,633	4,485	7.2%	687	15.3%	1.1%
Native American	150	12	8.0%	1	8.3%	0.67%
White	163,034	3,971	2.4%	1,010	25.4%	0.62%
Other Race	80,422	1,633	2.0%	341	20.9%	0.42%

were most likely to result in a search (15.5% and 7.2% of stops, respectively). Moreover, searches of Black and Latinx drivers were the least likely to result in the discovery of contraband. Among drivers who were stopped and searched by SFPD, 13.4% of Black drivers and 15.3% of Latinx drivers were found with contraband, compared to 25.4% of White drivers and 31.1% of Asian drivers. The elevated search rates for Black and Latinx drivers and the lower rates of contraband found produced by these searches suggest that Black and Latinx drivers experience a greater burden of stops and searches relative to White drivers. Additionally, while the total counts of stops and searches are low for Native American drivers, this group is searched at the second highest rate, and these searches are least likely to result in the discovery of contraband.

SUMMARY OF FINDINGS

Our analysis reveals racial disparities in vehicle stops and post-stop actions taken by SFPD officers. Black people make up about 6% of the estimated population of San Francisco drivers but they made up about 16% of all vehicle stops made by SFPD from 2014 to 2017. On a per capita basis, Black drivers were about 2.5 times more likely to be stopped than White or Latinx drivers, and 4 times more likely than Asian drivers. Our analysis of citation and arrest rates suggests that these findings are not explained by a greater propensity among Black drivers to engage in motor vehicle or criminal violations

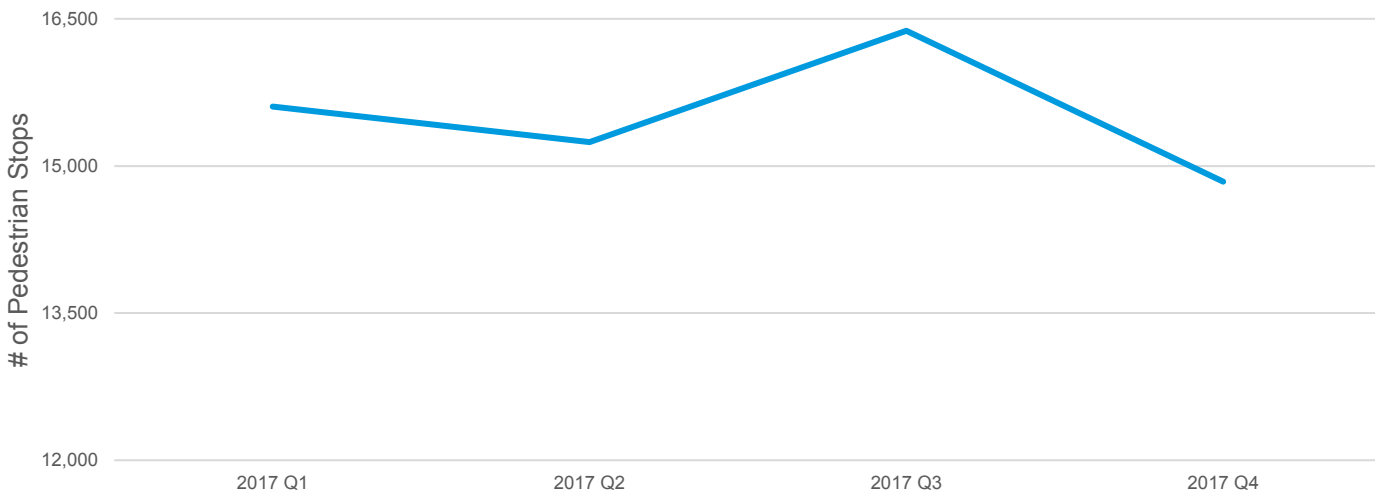
that result in citation or arrest. In fact, stops of Black drivers were the most likely to end without the issuance of a citation or arrest.

Additionally, once stopped, Black and Latinx drivers were most likely to be subject to a search (15.5% and 7.2% of stops, respectively) compared to White and Asian drivers (about 2% of stops); searches of Black and Latinx drivers were also the least likely to result in the discovery of contraband. These findings suggest that SFPD officers’ suspicion of illegal activity is less likely to be accurate for Black and Latinx drivers, or it may reflect that officers use a lower threshold of suspicion for these groups. As noted earlier, this language does not reflect a determination of the legality of a stop or search.

Section IIB: Pedestrian Stops and Racial Disparities

This section presents information gleaned from SFPD’s pedestrian stop data. A pedestrian stop is defined as a single event in which a pedestrian on foot is detained by police. Each detained individual counts as one pedestrian stop for the purposes of this report, regardless of the number of officers involved. Much like the analysis for vehicle stops, we use descriptive statistics to explore racial disparities and potential explanatory factors. As pedestrians are presumed to be less transient than motorists, this analysis also includes

Figure 9. Number of SFPD Pedestrian Stops per Quarter, 2017



multilevel modeling with demographic benchmarking at the census tract (or neighborhood) level. Because pedestrians are less likely than their motorist counterparts to traverse across large regions, characteristics of the surrounding environment where stops occur can be explored as possible contributors to their contacts with law enforcement.

In this section we analyze the 62,068 pedestrian stops SFPD made in 2017. This analysis was exclusively conducted for 2017 as this is the only year that reliable data on SFPD pedestrian stops were available.

Figure 9 shows the variation in the number of pedestrian stops made on a quarterly basis in 2017. SFPD stopped the highest number of pedestrians in the third quarter (16,378 stops) and the lowest number of pedestrians in the fourth quarter (14,840 stops). Figure 10, below, shows how SFPD pedestrian stops in 2017 were distributed by racial group.

White people made up the largest percentage, accounting for 40% of all individuals stopped, which is consistent with their representation in the San Francisco County population (41%). In contrast, Black people made up 5% of the San Francisco County population and accounted for 31.6% of

Figure 10. Number of Pedestrian Stops by Race, 2017

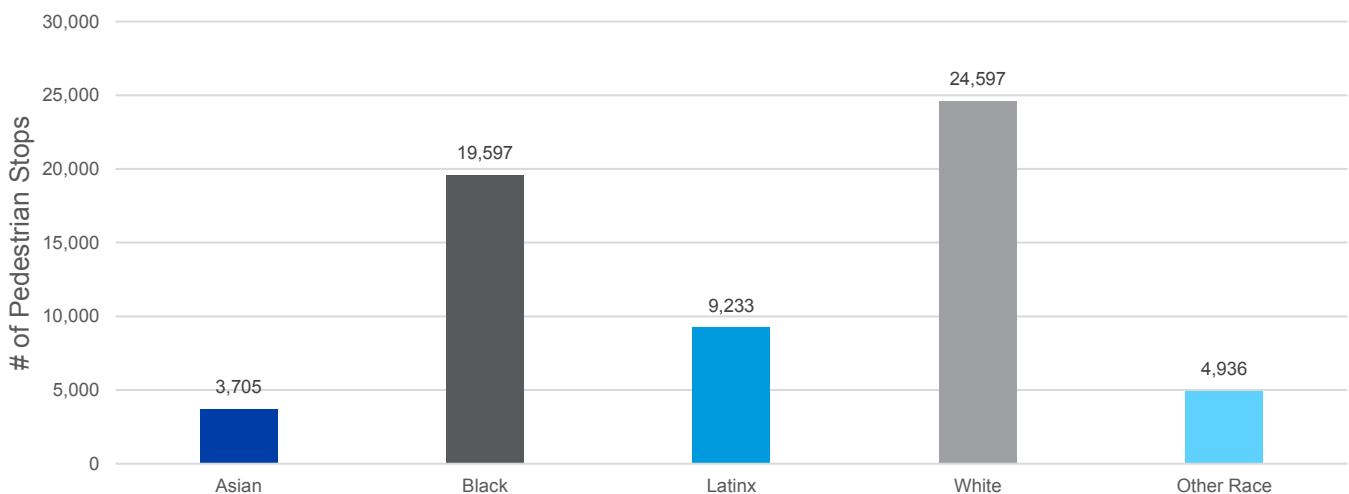
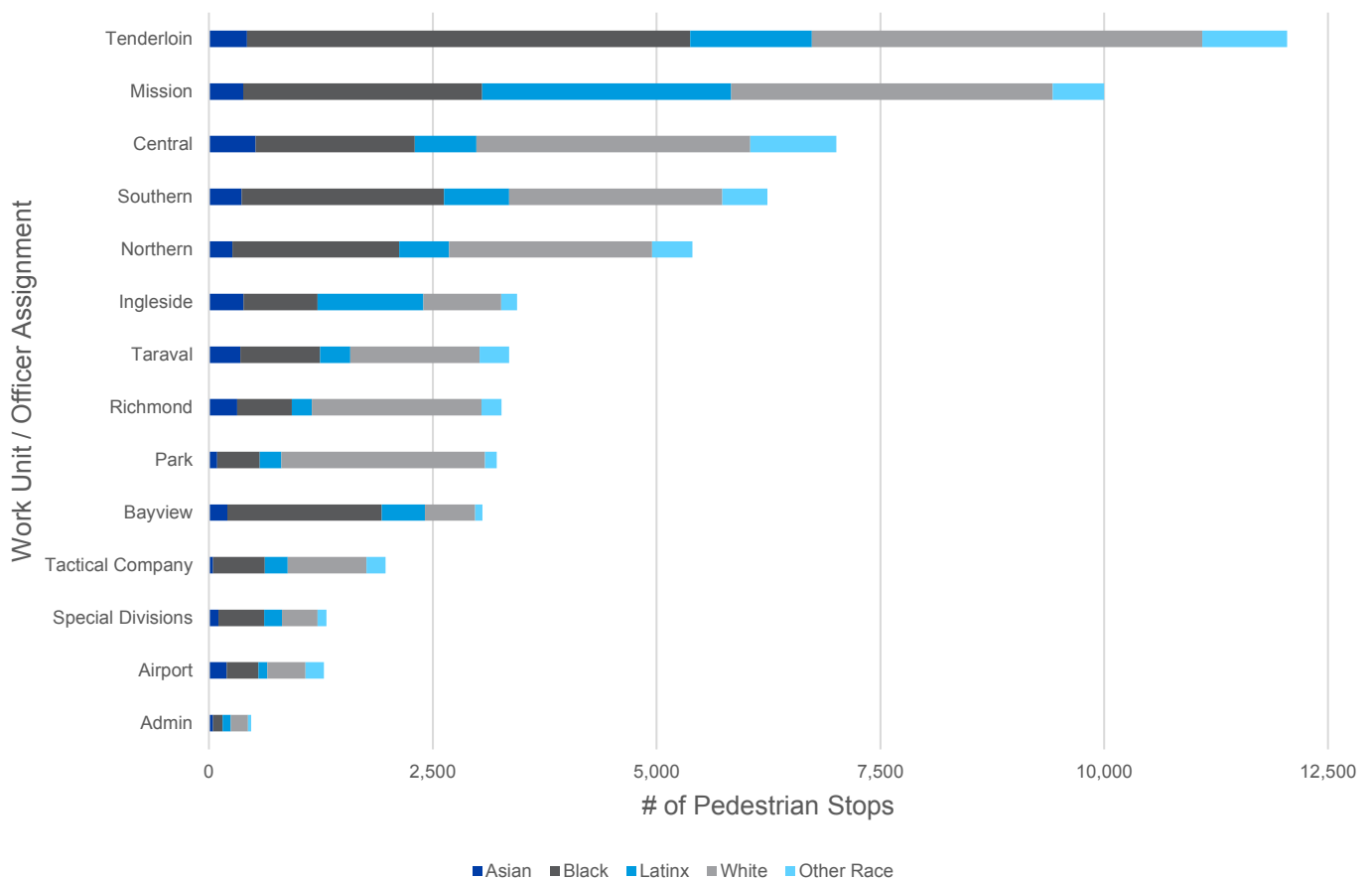


Figure 11. Number of Pedestrian Stops by Race and Officer Work Unit, 2017



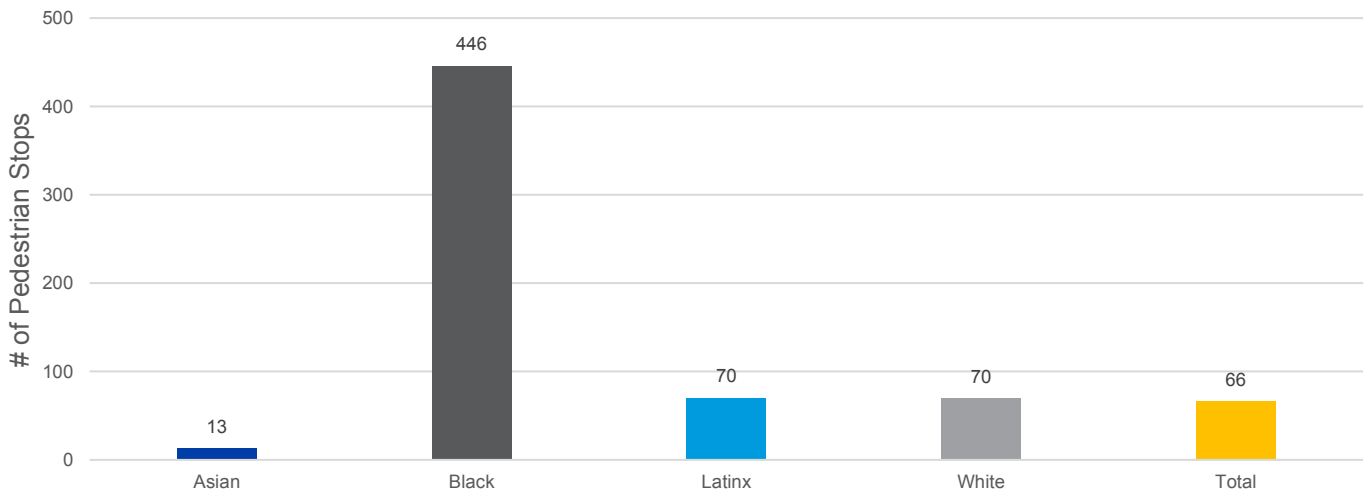
SFPD’s pedestrian stops. Latinx residents were stopped at a rate consistent with their share of the San Francisco County population (14.9% of stops and population), while Asian people made up 34% of the county population and accounted for only 6% of total pedestrian stops in 2017.

Figure 11 reveals that the count and relative distribution of pedestrian stops across racial groups varied substantially by officer assignment. As with the vehicle stop analysis the racial composition of pedestrian stops may be influenced by the demographics of the community served by officers in a given assignment (e.g., Airport Division). Indeed, the pattern of racial distribution of pedestrian stops by work unit was very similar to the pattern observed for vehicle stops:

stops) of all pedestrians stopped by officers in those districts, respectively. Additionally, Black people were overrepresented in stops made by officers across every district relative to their representation in the resident population.

- Black residents accounted for the largest share of stops among officers assigned to Bayview, Tenderloin, and Special Divisions (which includes Traffic Company and other smaller units), accounting for 56% (1,725 stops), 41% (4,950 stops), and 39% (510 stops) of all pedestrians stopped by officers in those districts, respectively.
- Latinx residents accounted for the largest percentage of stops in the Ingleside and Mission districts, where they represented 34% and 28% of pedestrians stopped by officers assigned to those districts, respectively. The largest numbers of stops of Latinx pedestrians were made by SFPD officers assigned to the Mission district (2,781 stops), Tenderloin district (1,360 stops), and Ingleside district (1,184 stops).
- White residents accounted for the largest share of stops made by officers assigned to the Park and Richmond districts, where they constituted about 71% (2,276 stops) and 58% (1,894 stops) of stops, respectively. The largest numbers of stops of White

Figure 12. Rate of Pedestrian Stops Per 1,000 Population by Race, 2017



pedestrians were made by SFPD officers assigned to the Tenderloin district (4,360 stops), Mission district (3,590 stops), and Central district (3,059 stops).

- Asian residents did not account for the largest share of stops in any district. The greatest share of stops attributed to Asians was among stops made by officers assigned to Airport (15%) and Ingleside (11%). The largest numbers of stops of Asian pedestrians were made by SFPD officers assigned to the Central district (520 stops), Tenderloin district (425 stops), and Ingleside district (388 stops).

To identify any racial disparities in the frequency of pedestrian stops, Figure 12 adjusts stops by the relative population sizes of the different racial groups residing in the city of San Francisco. The graph demonstrates that Black pedestrians were stopped 446 times per 1,000 San Francisco county residents, compared to 70 stops per 1,000 for White and Latinx individuals, and 13 stops per 1,000 for Asians. Thus, in 2017, a Black resident was 6 times more likely to be stopped than a White resident (risk ratio = 6.2), while a Latinx resident was about equally likely (risk ratio = 1.0), and an Asian person was 80% less likely (risk ratio = 0.2).

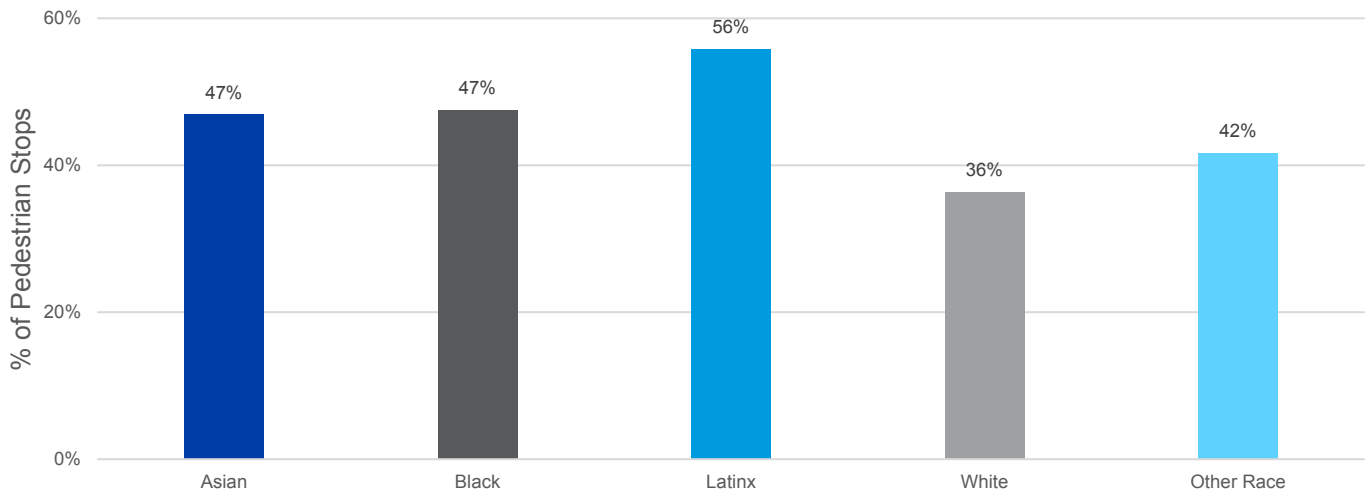
With Black pedestrians observed to be at greater risk of being stopped by SFPD officers, it is important to explore whether this disparity is explained by the increased likelihood of such pedestrians to engage in criminal code

violations, as such behavior would warrant the disproportionate contact experienced by this group. As with vehicle stops, reviewing data on searches and citations can provide some initial clues and impressions. This analysis includes all searches conducted during SFPD pedestrian stops, some of which are dictated by policy rather than an officer's suspicion that the search will result in the discovery of contraband (e.g., searches incident to arrest are mandated by policy, while officers have more discretion in requesting a consent search).

About 44% of all pedestrian stops made by SFPD officers involved a search but, as shown in Figure 13, the likelihood of a stop resulting in a search varied by racial group. Once stopped by SFPD, about 36% of White pedestrians were searched, compared to 47% of Black and Asian pedestrians and 56% of Latinx pedestrians.

It is useful to explore whether these higher search rates are linked to differences in contraband yield rates. The share of searches yielding contraband provides an indicator that can help assess equality in police contact across racial groups. Specifically, disproportionate searches and lower yield rates are an indicator of a greater burden of police contact relative to other groups and may suggest that officers' suspicion of illegal activity is less likely to be accurate for a particular group, or it may reflect that officers use a lower threshold of suspicion for the group. As noted earlier, a lower threshold refers to the possibility that officers interpret behaviors as

Figure 13. Percentage of Pedestrian Stops With Searches by Race, 2017



suspicious more often when the person engaging in that behavior is a member of a given group than when the person engaging in that behavior is a member of another group. This language does not reflect a determination of the legality of a stop or search.

also had the highest yield rate for contraband: Overall, 12.8% of searches of stopped Black pedestrians and 11.7% of searches of Latinx pedestrians resulted in the discovery of contraband, compared to 9.2% for White and Asian pedestrians.

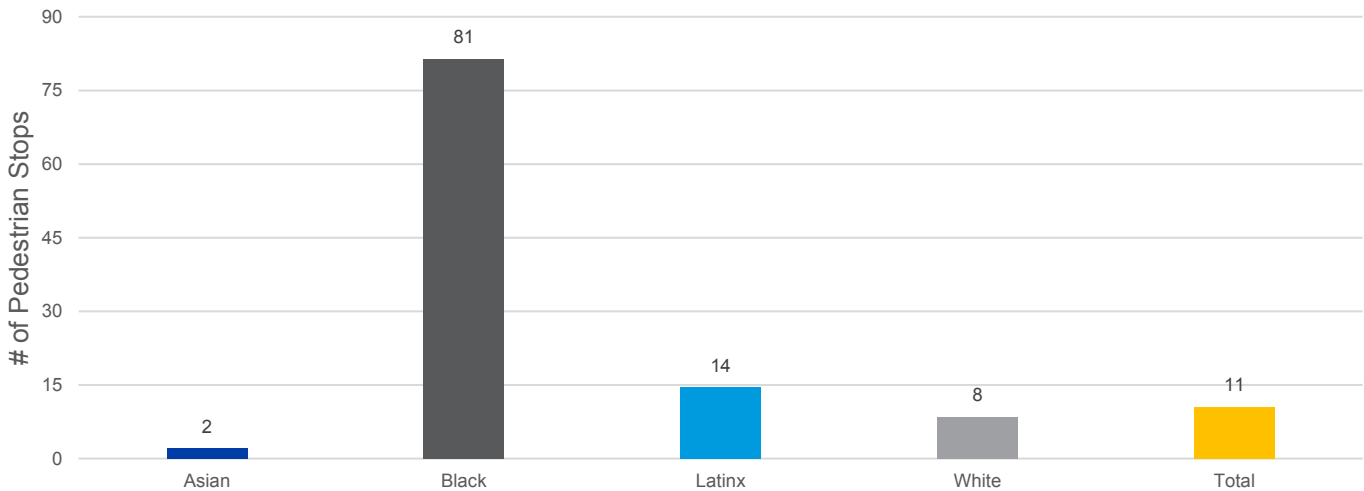
Table 4 presents the contraband yield rates from SFPD pedestrian searches for each racial group. The percentage of stops resulting in a search was highest for Latinx and Black pedestrians, and these two racial groups

As indicated in the previous analysis (see Figure 13), stopped Black pedestrians were significantly more likely to be searched by an SFPD officer than were stopped pedestrians from other racial groups. Figure 14 illustrates

Table 4. Yield Rates of Pedestrian Searches by Race, 2017

	Stops	Searches		Contraband Found		
	#	#	%	# of searches	% of searches	% of stops
Asian	3,705	1,737	46.9%	160	9.2%	4.3%
Black	19,597	9,306	47.5%	1,191	12.8%	6.1%
Latinx	9,233	5,154	55.8%	601	11.7%	6.5%
Native American	169	60	35.5%	7	11.7%	4.1%
White	24,597	8,947	36.3%	820	9.2%	3.3%
Other Race	4,767	1,985	41.6%	213	10.7%	4.5%

Figure 14. Rate of Pedestrian Stops With Search But No Arrest per 1,000 Population by Race, 2017



the differential burden of being stopped and searched without an arrest for major racial groups in San Francisco. On average, there were 81 searches without an arrest of Black pedestrians for every 1,000 Black residents, compared to 14 per 1,000 Latinx residents, 8 per 1,000 White residents, and 2 per 1,000 Asian residents.

Thus, while the per capita rate of pedestrian stops for Black residents was 6 times higher than for Whites, the per capita rate of being stopped and searched without a corresponding arrest was even greater (9.5 times higher for Black residents than for Whites). This suggests that the higher yield rates for searches of Black pedestrians does not eliminate the racial disparity in the greater risk of experiencing an unnecessary search (i.e., a stop and search that does not result in an arrest) for Black residents relative to White residents.

MULTILEVEL REGRESSION ANALYSIS

While the yield rate analysis does not provide clear evidence of racial disparities in decisions to search Black and Latinx pedestrians relative to other racial groups, the data do indicate higher stop rates for Black pedestrians relative to all other racial groups. To better understand what factors other than the race of the pedestrian might contribute to the observed racial disparities in the likelihood of a pedestrian stop, we turned to multilevel regression analysis. We used this technique to explore whether factors other than community member race—especially factors conceptualized as community characteristics in

Explanation 2 of the NJD analytic framework—might be statistically associated with the observed disparities. For example, higher crime rates in neighborhoods with larger shares of Black residents might explain, in part or in whole, the disproportionately large rate of Black encounters with the police.

Table 5 shows the results of this modeling exercise using census-tract-level data to capture neighborhood crime and socioeconomic characteristics that may influence policing practice in the field. The analysis examines whether community characteristics are related to the likelihood an individual is subject to a pedestrian stop in a given neighborhood as well as the extent to which these neighborhood characteristics explain the patterns observed above regarding the greater risk of pedestrian stops for Black residents in San Francisco.

Model 1 serves as a baseline, showing that a Black pedestrian, on a per capita basis, is almost 12 times more likely to be stopped than a White pedestrian who has contact with SFPD in the same neighborhood, while an Asian pedestrian is less likely to be stopped. Model 2 adds the neighborhood crime rate as a second independent variable. The coefficient for this new variable is positive, which indicates that pedestrian stops are more likely to occur in neighborhoods with higher crime rates. We can also examine how the inclusion of this variable impacts the statistical relationship between the likelihood of a pedestrian stop and the race of the community member.

Table 5. Regressions Predicting Pedestrian Stop Frequency

	Model 1	Model 2	Model 3	Model 4	Model 5
Parameter	Pedestrian Stop Incident Ratio (95% CI)	Pedestrian Stop Incident Ratio (95% CI)	Pedestrian Stop Incident Ratio (95% CI)	Pedestrian Stop Incident Ratio (95% CI)	Pedestrian Stop Incident Ratio (95% CI)
Asian	0.21* (0.17, 0.26)	0.21* (0.17, 0.27)	0.21* (0.17, 0.27)	0.21* (0.17, 0.26)	0.25* (0.21, 0.31)
Black	11.82* (9.68, 14.44)	11.82* (9.68, 14.44)	11.94* (9.68, 14.59)	11.82* (9.78, 14.59)	14.73* (12.31, 17.81)
Latinx	1.00 (0.83, 1.21)	0.99 (0.81, 1.20)	1.00 (0.84, 1.20)	1.00 (0.83, 1.21)	1.19 (0.99, 1.42)
White	1.0	1.0	1.0	1.0	1.0
# of Part 1 Crimes, +1 SD		6.62* (4.18, 10.59)			5.00* (3.25, 8.01)
% of Population That is Black, +1 SD			3.29* (1.95, 5.64)		1.22 (0.73, 2.12)
% Living Below Federal Poverty Level, +1 SD				5.81* (3.60, 9.68)	5.42* (3.13, 10.07)
Asian*Poverty					0.63* (0.52, 0.74)
Black*Poverty					0.41* (0.34, 0.49)
Latinx*Poverty					0.60* (0.50, 0.71)

*p < 0.05. This indicates statistical significance at the 95% confidence level.

Note: CI = confidence interval; SD = standard deviation. The confidence interval means that there is a 5% likelihood that the true value of the coefficient lies outside of the range of values shown in parentheses for each coefficient. The standard deviation measures the variation or dispersion in observed values of the variable.

If the higher rate of stops of Black pedestrians was driven by the crime rates in the neighborhoods where the stops occurred, we would expect to see a large decline in the coefficient for Black race. In fact, the coefficient does not change.

Subsequent models add the share of the neighborhood population that is Black and the neighborhood poverty rate as additional independent variables. Like the crime rate, these variables are associated with an increased frequency of pedestrian stops in a given neighborhood. After accounting for these factors, the Black coefficient does not decline; it actually increases in Model 5, which includes all four independent variables. In this model, a Black pedestrian is 14.73 times more likely to be stopped than a White pedestrian, adjusted for population numbers. While it is not possible to control for every conceivable contributing factor, this suggests that being Black is associated with an increased risk of a pedestrian stop, even after accounting for the possibility that there are systematic differences by race in the neighborhood characteristics and crime rates of the areas where the stops occur.

PARITY SCORE

We conducted additional analysis of pedestrian stops by examining estimated pedestrian stop “parity scores” for individual officers on the SFPD force. This analysis uses a technique called kernel density estimation to first map the geographical area (or “beat”) where a given officer most frequently engages in pedestrian stops. We then compared the racial distribution of an officer’s stops to the racial distribution of the population residing in that officer’s beat. A parity score is estimated for each officer for each racial group. The difference in the share of the officer’s stops of a given racial group from the share of population for a given racial group is the officer’s parity score for that group. A score above zero indicates that an officer is stopping members of a group at a disproportionately high rate relative to the resident population in the area they police. Importantly, the parity score is not a measure of bias but is a measure of disparity in enforcement and an indicator that biased behavior could be present.

In Figure 15, each dot represents the “parity” of pedestrian stops of a given racial group to the demographics

in the patrol area for an SFPD officer. Although each dot illustrates the stop behavior of an individual officer, the analysis is provided as a de-identified aggregate illustration of stop patterns across SFPD officers. This is useful for examining whether any observed disparities in per capita stop rates are driven by the stop practices of a small number of officers, or whether these disparities are present in the stop patterns of a larger proportion of SFPD officers.

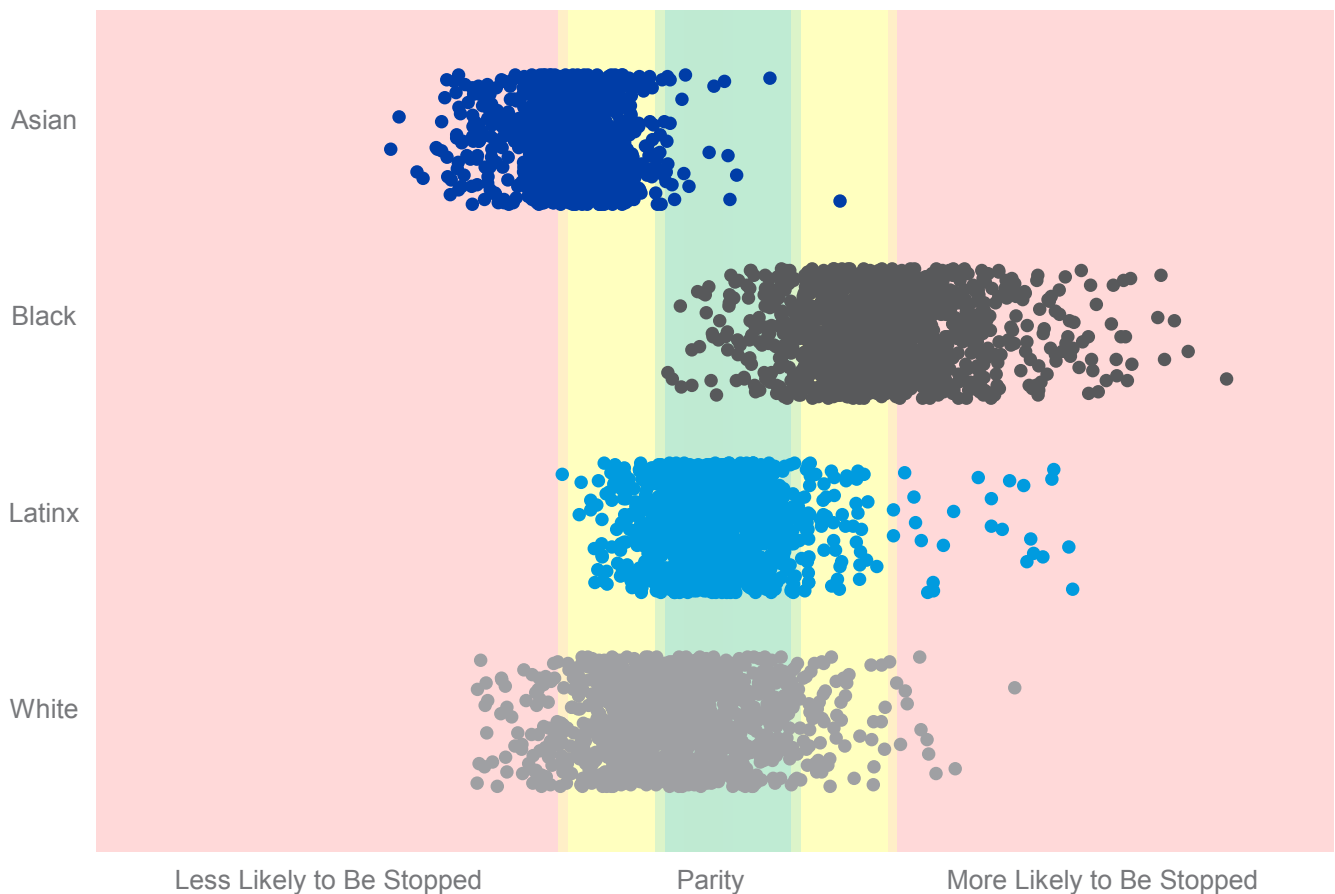
In the figure, dots in the green zone at the center reflect officers for whom the number of people they stopped was proportional to the racial makeup of the residents within the area they patrol. A dot to the right side of the green area indicates that the proportion of people that officer stopped from that racial group was significantly higher than the proportion of residents in that group in the officer’s patrol area.

Figure 15 reveals that the majority of SFPD officers stopped a higher number of Black pedestrians than we would expect given the demographic composition of residents in the officers’ patrol areas. For Latinx pedestrians, a small number of officers made a disproportionately low number of stops, and an even smaller number made a disproportionately high number of stops; most officers were in the green or yellow zones. The majority of SFPD officers stopped a roughly proportional to slightly less than proportional number of White pedestrians relative to the number of White residents in their patrol areas. Finally, a substantial number of SFPD officers stopped a disproportionately lower number of Asian pedestrians than we would expect given the demographics of the area the officer patrols. This analysis suggests that the higher per capita stop rates for Black pedestrians and the lower per capita stop rates for White and Asian pedestrians are not driven by the stop behavior of a small number of officers.

SUMMARY OF FINDINGS

The analysis described above reveals racial disparities in the frequency with which SFPD officers made pedestrian stops. Despite making up 5% of the resident population of San Francisco, Black pedestrians made up 31.6% of SFPD’s 2017 pedestrian stops. On a per capita basis, Black residents were 6 times more likely to be stopped than White residents. Statistical analysis that

Figure 15. Parity Scores for Pedestrian Stops, 2017



Note: Dots within a given racial group are spread out vertically for readability.

accounts for the neighborhood characteristics (including poverty and crime rates) in which pedestrian stops occurred showed that, averaging across all neighborhoods, the per capita rate of stops of Black pedestrians was over 14 times higher than the per capita rate for White pedestrians.

Additionally, stopped Latinx and Black pedestrians were more likely to be searched than White or Asian pedestrians. Even though SFPD officers discovered contraband slightly more often during searches of Black and Latinx pedestrians, this came at the expense of a substantial disparity in the risk of being stopped and searched without an associated arrest. Black pedestrians were over 9.5 times as likely as White pedestrians to be stopped and searched without an arrest, and Latinx pedestrians were over 1.5 times as likely as White pedestrians. This suggests that Black and Latinx residents face a greater burden of stops and searches without an arrest relative to White and Asian residents in San Francisco.

These findings are not explained by a greater propensity for Black pedestrians to engage in criminal violations that result in an arrest—once they were stopped, Black pedestrians were almost 10 times more likely than White pedestrians to be searched but not arrested, and Latinx pedestrians were almost twice as likely as White pedestrians to be searched but not arrested. Thus, similar to with vehicle stops, disparities in pedestrian stops made by SFPD officers suggest Black pedestrians experience a greater burden of stops compared to White pedestrians.

RECOMMENDATIONS: VEHICLE AND PEDESTRIAN STOPS

- 1. Require supervisor review of stop records.** We recommend that SFPD adopt a policy requiring officers to submit to their supervisors on a daily basis a brief narrative explanation of the basis for each stop they conduct. We recommend that this

policy also require supervisors to review these reports in a timely manner to ensure that stops are supported by reasonable suspicion and are consistent with SFPD policy and applicable law.

Section IIC: Use of Force and Racial Disparities

This section describes findings related to use-of-force incidents reported by SFPD. We present descriptive statistics and describe findings from multilevel regression models designed to assess whether any observed racial disparities in SFPD use of force can be explained by neighborhood characteristics, including poverty, crime rates, and racial demographics. When multiple types of force were reported to have been used on a single person during a given incident, or when multiple officers were involved in a given incident, our analysis counts the event as a single incident. A single incident, then, could include multiple force types, multiple applications of force, or multiple officers using force against a single individual.

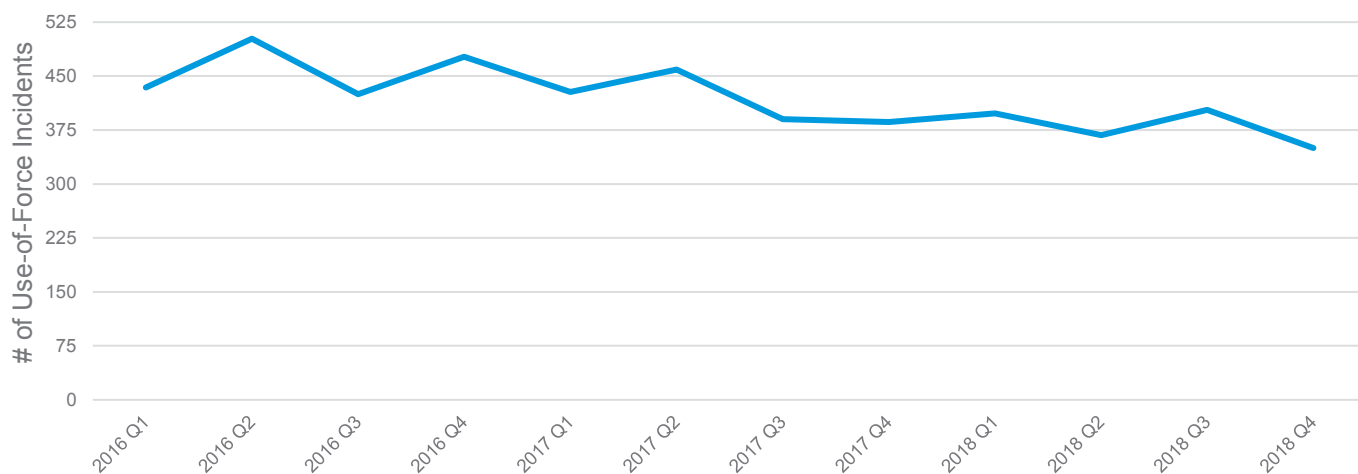
SFPD recorded a total of 5,020 use-of-force incidents over the 3-year period between 2016 and 2018. A small proportion of use-of-force records (under 5%) were excluded from specific analyses due to incomplete data.²⁰ Figure 16 shows the number of use-of-force incidents that SFPD recorded for all racial groups each quarter during the 2016 to 2018 period.

As can be seen in the graph, there was quarterly variation and an overall annual decline in SFPD use-of-force incidents from 2016 to 2018. The highest number of use-of-force incidents in the 3-year period was observed during the second quarter of 2016, with a total of 502 incidents. This was followed by fluctuating increases and decreases across each quarter, ending with the lowest number occurring during the last quarter of 2018, when SFPD had a total of 350 use-of-force incidents.

Figure 17 illustrates the proportion of all SFPD use-of-force records accounted for by each type of force. The most frequent type of force reported by SFPD officers over the 3-year period was the pointing of a firearm at a community member: SFPD reported 3,146 such records, which accounted for 57.4% of reported uses of force. This was followed by physical control, which made up 24% of reported uses of force (1,316 incidents); 10.6% involved strikes by an object or fists (580 incidents). Overall, 3.4% of uses of force involved impact weapons (187 incidents) and 2.2% involved Oleoresin Capsicum (OC) spray (120 incidents). SFPD reported 45 uses of extended range impact weapons (ERIW) and 14 incidents of a discharged firearm.

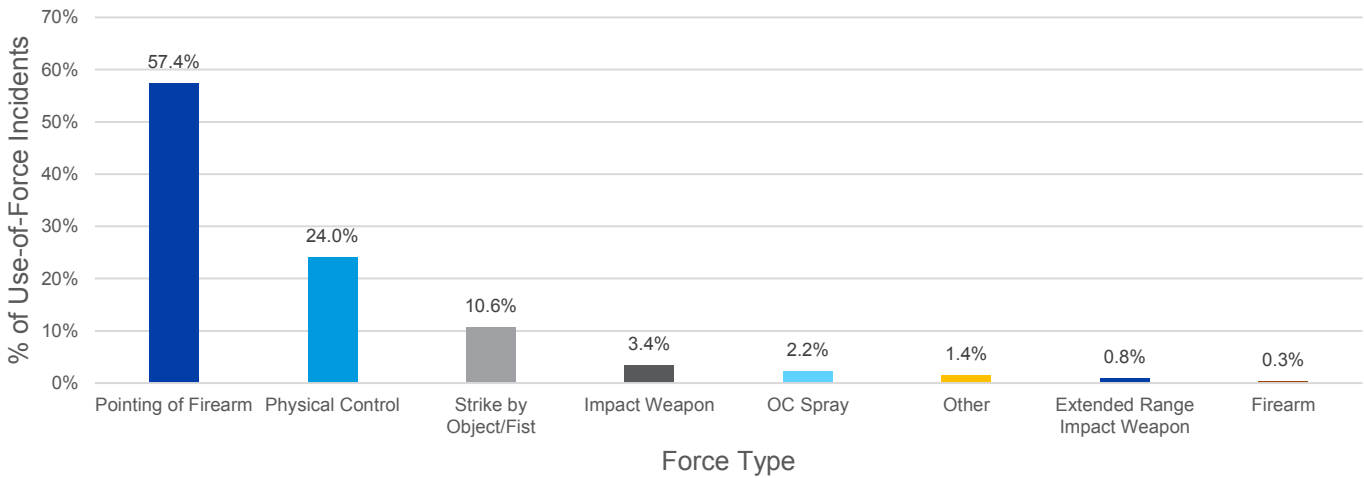
Figure 18 examines variation across racial groups with respect to experiencing each type of force. The greatest proportion of incidents where a firearm was pointed involved Black community members, accounting for just

Figure 16. Number of Use-of-Force Incidents per Quarter, 2016–2018



²⁰ A total of 178 incidents were excluded from some analyses due to missing data on community member race.

Figure 17. Force Types Recorded in Use-of-Force Incidents, 2016–2018



under 50% (1,481 incidents) of the total incidents where that type of force was used. Black people were also the most represented racial group among all other force types, with the exception of the small number of incidents involving ERIWs and those categorized as “other force.” Among incidents involving OC spray and the striking of a community member with an object or fist, approximately 43% involved Black community members (49 and 238 incidents, respectively).

The types of force that involved the largest share of White community members were use of an ERIW and “other” types of force. Whites made up 45% (20 incidents) and 42% (31 incidents) of the community members involved in incidents where those types of force were used, respectively. The types of force that involved the largest

share of Latinx community members were the use of an ERIW (27%, or 12 incidents) and the striking of a community member with an object or fist (25%, or 139 incidents).

Figure 19 shows the number of incidents of use of force by SFPD work unit and race of the community member over the 3-year period. This figure demonstrates that the distribution of use-of-force incidents across racial groups varied substantially by officer assignment.

- The incidents involving the greatest proportion of Black community members were those reported by officers assigned to Special Divisions (which includes the Traffic Company as well the K-9 Unit, Explosive Ordnance Disposal, and others), Bayview, and Tactical Company. Black individuals

Figure 18. Force Types Recorded in Use-of-Force Incidents by Race, 2016–2018

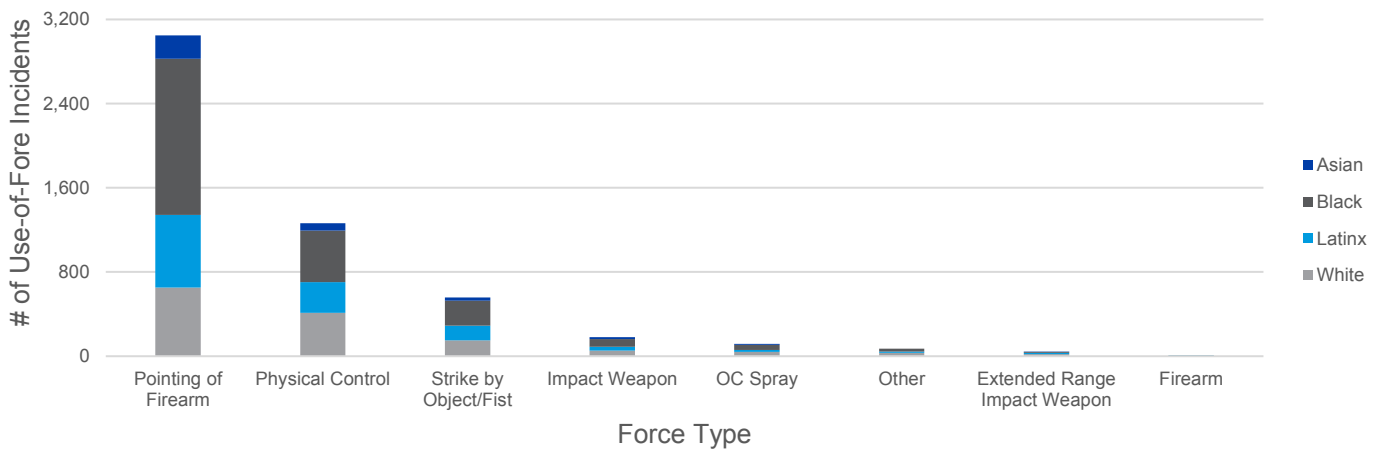
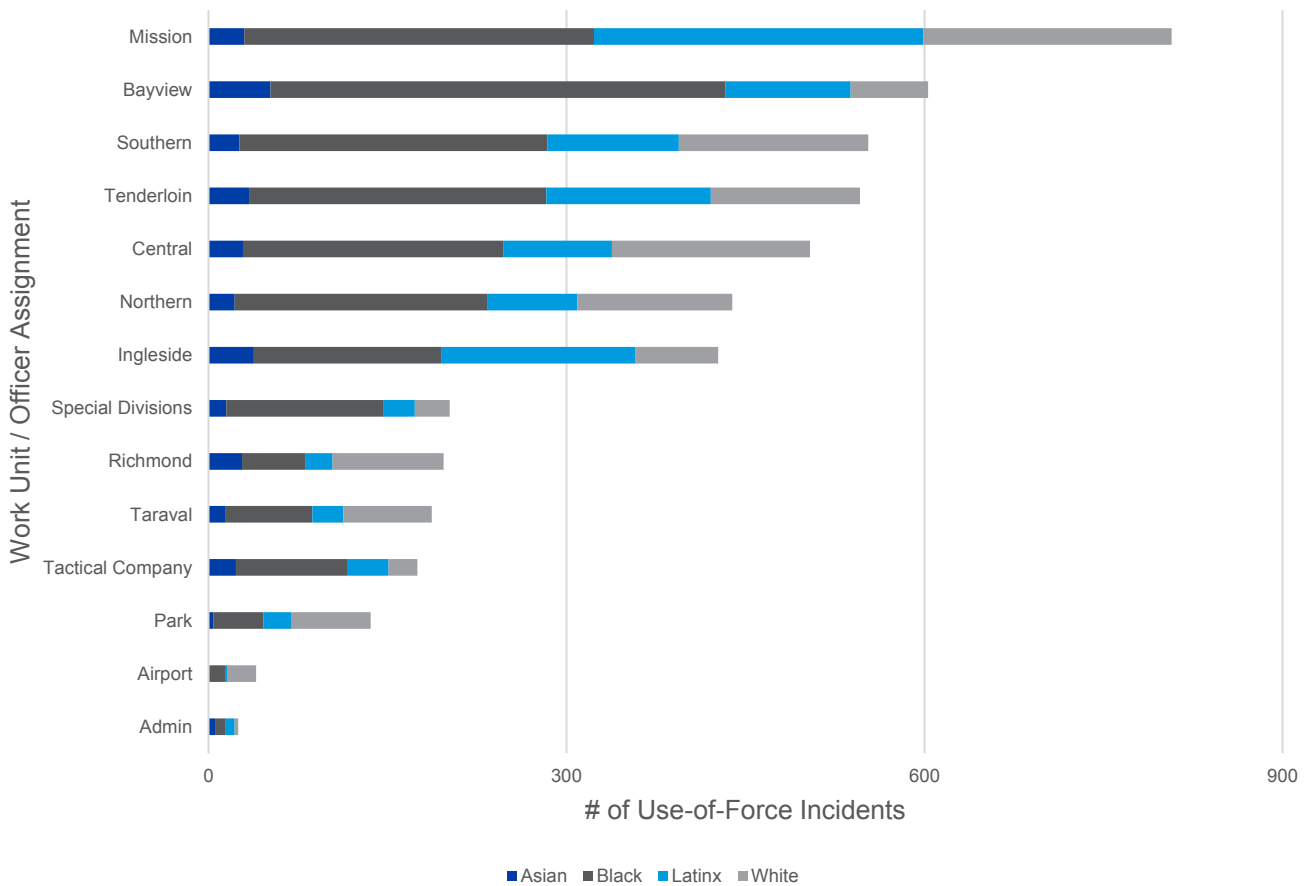


Figure 19. Number of Use-of-Force Incidents by Race and Officer Work Unit, 2016–2018



represented 65% (132 incidents), 63% (381 incidents), and 53% (93 incidents) of all community members experiencing use of force within those assignments, respectively. The highest numbers of use-of-force incidents involving Black community members were associated with officers assigned to Bayview (381 incidents), Mission (293 incidents), and Tenderloin (249 incidents).

- Use-of-force incidents involving the greatest numbers and proportions of Latinx community members were reported by officers assigned to the Ingleside and Mission districts, accounting for 38% (163 incidents) and 34% (276 incidents) of incidents involving officers assigned to those districts, respectively.
- White community members were most represented in use-of-force incidents with officers assigned to the Park and Richmond districts,

where they constituted 49% (67 incidents) and 47% (93 incidents) of community members involved in incidents. The highest volume of use-of-force incidents involving White community members was associated with officers assigned to the Mission (208 incidents), and Central (166 incidents) districts.

- There were only two work units in which the proportion of use-of-force incidents against Asian community members was greater than 10% of all incidents, including 28 incidents among officers assigned to Richmond (14%) and six incidents among officers assigned to Administration (24%).

Figure 20 shows the 3-year average of the incidence of SFPD use of force by racial group, adjusted for the population size of each group. The risk ratios for being subjected to use of force for each racial group relative to the risk for Whites are shown in Table 6.

Figure 20. Rate of Use-of-Force Incidents per 1,000 Population by Race, 2016–2018

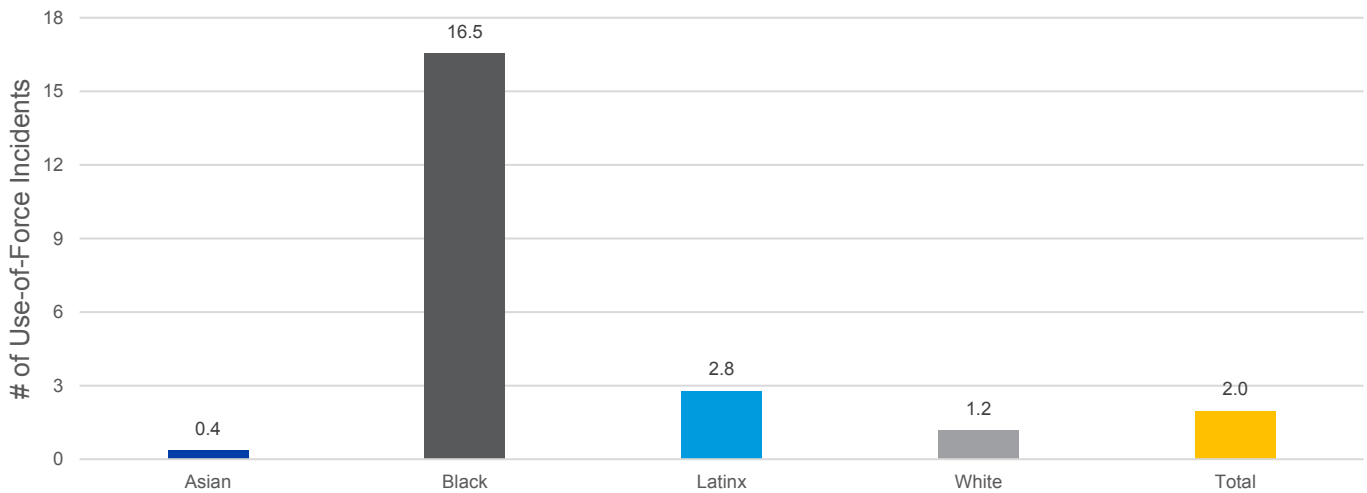


Figure 20 reveals that, between 2016 and 2018, Black people experienced use of force by an SFPD officer 16.5 times per 1,000 Black San Francisco residents, compared to 1.2 per 1,000 for Whites, 2.8 per 1,000 for Latinx individuals, and 0.37 per 1,000 for Asians. Thus, as reported in Table 6, a Black resident was 14.18 times more likely to have force used on them than a White resident, while a Latinx resident was 2.38 times more likely than a White resident to have force used on them by an SFPD officer. There was a small but consistent decline in the disparity between use-of-force rates for Black and Latinx residents relative to White residents over the 3-year period.

We were also interested in examining whether disparities in use of force may be related to racial differences in the likelihood of engaging in serious crime. Because complete data on the racial identity of those involved in reported crime is inevitably incomplete, this analysis instead

examines use of force incidents relative to Part 1 arrests (rather than Part 1 crimes). We note that this analysis tends to provide a conservative estimate of racial disparities in use of force, as racial disparities in enforcement can result in overestimates of racial differences in engaging in crime.

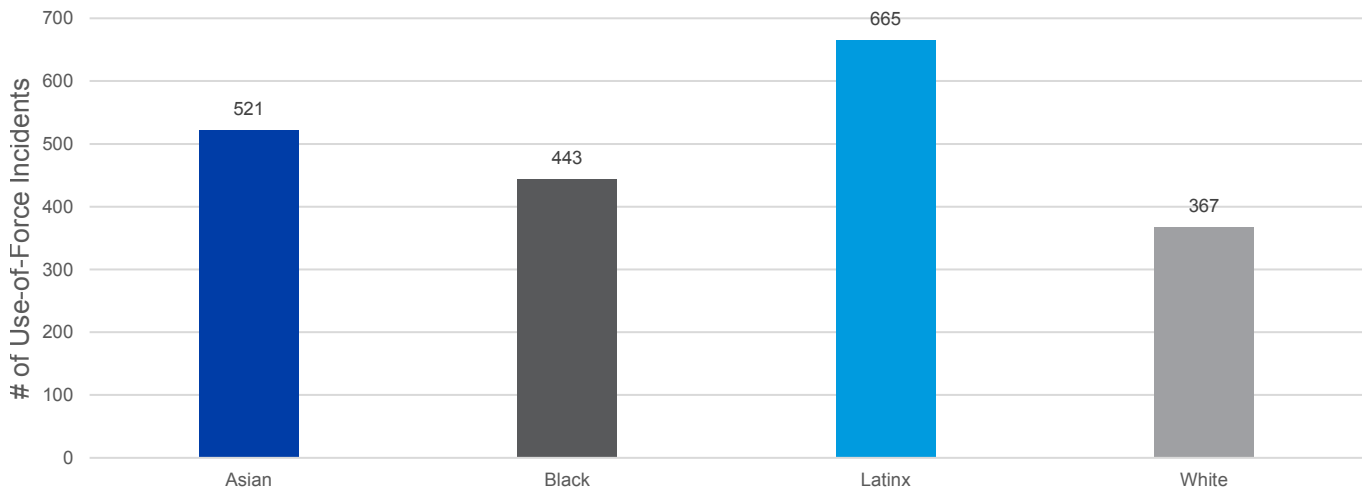
Figure 21 divides per capita use-of-force incidents for each racial group by per capita arrests for Part 1 crimes reported for that racial group in the municipality during the observation period. Due to limitations in availability of arrest data for 2018, this figure includes records for 2016 and 2017 only.

It shows that for every 1,000 Black individuals arrested for a Part 1 crime in 2016–2017 there were 443 use-of-force incidents involving Black individuals. It further illustrates that there were 665 uses of force per 1,000 Latinx people arrested for Part 1 crimes, 521 per 1,000 Asians arrested,

Table 6. Risk Ratios for Use of Force, 2016–2018

	2016	2017	2018	Average
Asian	0.42	0.27	0.25	0.31
Black	15.69	14.41	12.43	14.18
Latinx	2.60	2.60	1.96	2.38
White	1.00	1.00	1.00	1.00

Figure 21. Use-of-Force Incidents per 1,000 Part 1 Crime Arrests by Race, 2016–2017



and 367 per 1,000 Whites arrested. This analysis provides further evidence that White individuals are at the lowest risk of use of force by SFPD, including when arrest rates for Part 1 crimes are taken into account. It suggests that Latinx individuals, followed by Asian individuals, may be at the highest risk of use of force once arrest rates are accounted for.

The disparity in use-of-force rates between Black and White individuals is lower with this benchmarking approach than with per capita resident benchmarking. This may suggest that a portion (but not all) of the disparity between Black and White individuals in SFPD use of force can be explained by variation in arrests for serious crimes. As noted above, this analysis tends to provide a more conservative estimate of racial disparities in use of force, as racial disparities in enforcement can result in overestimates of racial differences in engaging in crime.

MULTILEVEL REGRESSION ANALYSIS

To better understand what factors other than race itself might contribute to the observed disparity in use of force by racial group, we turned again to multilevel regression analysis. As in our analysis of pedestrian stops, we used this technique to explore whether factors other than community member race might be statistically associated with observed disparities. For example, higher crime rates in neighborhoods with larger shares of Black residents might explain, in part or in whole, the higher rate of Black and Latinx encounters with the police.

Table 7 shows the results of this modeling exercise using census-tract-level data to capture neighborhood crime and socioeconomic characteristics that may influence policing practice in the field.

Model 1 serves as a baseline, showing that a Black community member, on a per capita basis, is 16.28 times more likely than a White community member to be subjected to use of force by an SFPD officer. The model also shows that a Latinx community member is 1.63 times as likely as a White community member to be subjected to use of force.

Model 2 adds the neighborhood crime rate as a second independent variable. The coefficient for this new variable is positive, which indicates that use-of-force incidents are more likely to occur in neighborhoods with higher crime rates. We can also examine how the inclusion of this variable impacts the statistical relationship between the likelihood of a person being subjected to use of force and the race of the community member. If the higher rate of police use of force on Black and Latinx community members is driven by the crime rates in the neighborhoods where the use of force occurs, we would expect to see a large decline in the coefficient for Black or Latinx race. In fact, those coefficients do not change. This suggests that when we take into account the impact of neighborhood crime on the likelihood of use-of-force incidents, the effect of a community member's race on the risk of force being used on them remains unchanged.

Table 7. Regressions Predicting Frequency of Use of Force

	Model 1	Model 2	Model 3	Model 4	Model 5
Parameter	Use-of-Force Incident Ratio (95% CI)	Use-of-Force Incident Ratio (95% CI)	Use-of-Force Incident Ratio (95% CI)	Use-of-Force Incident Ratio (95% CI)	Use-of-Force Incident Ratio (95% CI)
Asian	0.30* (0.24, 0.38)	0.31* (0.24, 0.39)	0.30* (0.24, 0.37)	0.30* (0.24, 0.38)	0.30* (0.24, 0.38)
Black	16.28* (13.46, 19.69)	16.28* (13.46, 19.89)	16.12* (13.46, 19.69)	16.12 (13.46, 19.69)	18.73* (15.64, 22.42)
Latinx	1.63* (1.35, 1.99)	1.62* (1.32, 1.95)	1.62* (1.35, 1.97)	1.62* (1.34, 1.92)	1.72* (1.41, 2.08)
White	1.0	1.0	1.0	1.0	1.0
# of Part 1 Crimes, +1 SD		3.16* (2.51, 4.02)			2.67* (2.14, 3.35)
% of Population That is Black, +1 SD			1.79* (1.38, 2.36)		1.03 (0.80, 1.34)
% Living Below Federal Poverty Level, +1 SD				2.67* (2.03, 3.52)	2.51* (1.86, 3.35)
Asian*Poverty					0.92 (0.76, 1.12)
Black*Poverty					0.63* (0.54, 0.73)
Latinx*Poverty					0.83* (0.71, 0.97)

*p < 0.05. This indicates statistical significance at the 95% confidence level.

Note: CI = confidence interval; SD = standard deviation. The confidence interval means that there is a 5% likelihood that the true value of the coefficient lies outside of the range of values shown in parentheses for each coefficient. The standard deviation measures the variation or dispersion in observed values of the variable.

Subsequent models add the share of the neighborhood population that is Black and the neighborhood poverty rate as additional independent variables. Like the crime rate, these variables are associated with an increased frequency of use-of-force incidents in a given neighborhood. After accounting for all four independent variables in Model 5, the Black coefficient

not only does not decline, but actually increases. In this model, a Black community member is nearly 19 times more likely than a White community member to be subjected to use of force, adjusted for population numbers. Latinx community members are also still 1.72 times as likely to experience use of force compared to White community members.

Table 8. Regression Predicting Likelihood of Experiencing the Pointing or Use of a Firearm

Parameter	Model 1 Use-of-Force Incident Ratio (95% CI)
Asian	0.31* (0.25, 0.39)
Black	18.54* (15.49, 22.20)
Latinx	1.82* (1.51, 2.18)
White	1.0
# of Part 1 Crimes, +1 SD	1.70* (1.49, 1.95)
% of Population That is Black, +1 SD	0.84* (0.74, 0.96)
% Living Below Federal Poverty Level, +1 SD	1.82* (1.55, 2.16)
Asian*Poverty	0.93 (0.78, 1.09)
Black*Poverty	0.64* (0.56, 0.73)
Latinx*Poverty	0.84 (0.73, 0.98)

*p < 0.05. This indicates statistical significance at the 95% confidence level.

Note: CI = confidence interval; SD = standard deviation. The confidence interval means that there is a 5% likelihood that the true value of the coefficient lies outside of the range of values shown in parentheses for each coefficient. The standard deviation measures the variation or dispersion in observed values of the variable.

Although it is not possible to control for every conceivable contributing factor, this analysis suggests that per capita use of force is significantly higher for Black residents than for White residents, after we account for differences in neighborhood characteristics and crime rates in the area where the force incident occurs.

SPECIAL ANALYSIS: POINTING AND USE OF FIREARMS

SFPD indicated specific interest in examining deadly force incidents more closely. Given that there were only 14 instances in the dataset in which a firearm was discharged (representing fewer than 0.5% of all records in the analysis), we provide additional analysis of incidents that had the potential for deadly force by focusing on those that involved the pointing or discharge of a firearm.

To better understand what factors other than race itself might contribute to the observed disparity in

firearm-related use-of-force incidents by racial group, we again utilized multilevel regression analysis. The first model, shown in Table 8, uses the same explanatory variables as in the regression model described above, but instead examines the number of incidents per capita by race of pointing or using a firearm in a given neighborhood (i.e., per census tract). This analysis examines whether the rate of use of a firearm on a community member varies by racial group and, if so, the extent to which the variation is explained by census-tract-level data on neighborhood crime and socioeconomic characteristics that may influence policing practice in the field.

In this modeling exercise we examined racial disparities after adjusting for population numbers and controlling for the characteristics of the neighborhood in which the use of force occurred (the number of Part 1 crimes, the percentage of residents in poverty, and the percentage

Table 9. Regression Predicting Likelihood of Experiencing the Pointing or Use of a Firearm Relative to All Types of Force

Parameter	Model 1 Use-of-Force Incident Ratio (95% CI)
Community Member Armed (Yes)	1.57* (1.25, 1.97)
Community Member Altered Mental State (Yes)	0.12* (0.10, 0.14)
Community Member Homeless (Yes)	0.58* (0.48, 0.69)
Officer Injury	0.03* (0.02, 0.05)
Officer Age	1.00 (0.99, 1.01)
Asian	1.31 (0.97, 1.79)
Black	1.21* (1.01, 1.45)
Latinx	1.11 (0.90, 1.37)
White	1.0

*p < 0.05. This indicates statistical significance at the 95% confidence level.

Note: CI = confidence interval; SD = standard deviation. The confidence interval means that there is a 5% likelihood that the true value of the coefficient lies outside of the range of values shown in parentheses for each coefficient. The standard deviation measures the variation or dispersion in observed values of the variable.

of the population that is Black) as well as for the interaction between the poverty rate and whether the community member subjected to force is Asian, Black, or Latinx. After accounting for these factors, we found that the per capita risk of having a firearm pointed or used by SFPD is more than 18 times higher for Black residents and nearly 2 times higher for Latinx residents than for White residents.

The interaction between race and neighborhood poverty also shows that the racial disparities are more pronounced in neighborhoods with lower levels of poverty. In other words, the disparity in the per capita risk of a firearm being pointed at or used on Black and Latinx residents (compared to Whites) is greater in wealthier neighborhoods in San Francisco than in more economically disadvantaged neighborhoods. Although it is not possible to control for every conceivable contributing factor, this analysis suggests that Black and Latinx residents are

at a higher risk of having a firearm pointed at or used on them by an SFPD officer. Moreover, this disparity is not explained by the neighborhood characteristics and crime rates in the area where the force incident occurs.

The model in Table 9 examines the likelihood of an officer pointing or using a firearm specifically within encounters in which a police officer uses some type of force. In this model, instead of examining the effect of neighborhood characteristics, we account for aspects of the encounters themselves, including whether the community member is armed, whether the community member is described as being in an altered mental state, whether the community member is homeless, whether the officer has sustained an injury, and the officer’s age.

As can be seen in Table 9, characteristics of the encounter are related to the likelihood a use-of-force incident will involve pointing or discharging a firearm. A use-of-force

encounter is 1.57 times as likely to involve an officer pointing or discharging a firearm if the community member is described as armed by officers. Community members who the officer reports to be in an altered mental state or to be homeless are less likely to have a firearm pointed at or used on them than those not in an altered state or homeless. This model suggests that when an encounter between a community member and an SFPD officer involves a use of force, Black individuals are 1.21 times more likely than White individuals to have a firearm pointed at or used on them, after taking into account whether the individual is armed, as well as characteristics of the individual (e.g., in an altered state, homeless) and the officer (e.g., age, reports being injured).²¹

SUMMARY OF FINDINGS

The analysis discussed above reveals racial disparities in use of force by SFPD officers, as well as a small but consistent decline in these disparities over the study period. After adjusting for the size of the resident population, there were 14.18 times more use-of-force incidents per Black resident and 2.38 times more per Latinx resident as compared to the rate for White residents.

The disparity in use-of-force rates between Black and White residents is smaller when we account for arrests for serious crime, which suggests racial differences in arrest rates may account for some but not all of the per capita disparities we observed. Arrest-rate benchmarking suggests Latinx and Asian individuals experienced more frequent uses of force relative to arrests for serious crimes than did White or Black individuals.

Statistical analysis taking into account neighborhood crime rate, poverty rate, and the share of the population that is Black, we find that per capita use-of-force rates are nearly 19 times higher for Black residents and almost 2

times higher for Latinx residents than for White residents in the same neighborhood. Additional analysis accounts for characteristics of incidents where officers used force (including whether the community member was armed); there, the likelihood that the incident involved pointing or discharging a firearm (rather than another force type) is 1.21 times higher for Black individuals than for Whites.

RECOMMENDATIONS: USE OF FORCE

- 1. Update policy on drawing firearms.** We recommend that SFPD update Department General Order 5.01 (Use of Force) to clarify the circumstances in which an officer may draw a firearm. General Order 5.01 currently states that an officer may *point* a firearm only when the officer has a "reasonable perception of a substantial risk that the situation may escalate to justify deadly force." General Order 5.01 provides, however, that an officer may *draw* a firearm whenever the officer "has reasonable cause to believe it may be necessary for [the officer's] own safety or for the safety of others." We recommend that SFPD update General Order 5.01 to align requirements for drawing a weapon with the existing higher standard for pointing a firearm. In other words, we recommend that SFPD amend General Order 5.01 policy to add that officers may only draw or point their firearms if they reasonably believe that there is a substantial risk that the situation may escalate to the point where deadly force may be justified.

21 A second model examining the likelihood of a community member being injured also showed Black community members were less likely to be injured in use-of-force incidents, likely because officers are more likely to point their firearms at Black community members, eliminating the need for officers to use physical force. Relatedly, community members described as being in an altered mental state were 4.7 times as likely as community members not in an altered mental state to be injured, and homeless community members were 1.5 times as likely as non-homeless community members to be injured.

A third model found that when an officer was injured, the community member was significantly less likely to have a firearm pointed at or used on them (-0.03 times as likely) than in incidents when the officer was not injured. These models are not causal. As such, this shows that in incidents involving an officer injury, the officer is less likely to draw their firearm. One potential explanation is that if an officer is pointing their firearm at a community member, there's less of a need to become physical with the community member, thus reducing the likelihood that they face injury. In other words, when an officer is injured, it may be because they have not used potentially deadly force, and they are instead likely to use a more physical (but less potentially deadly) type of force.

SECTION III: OFFICER CLIMATE SURVEY

We now turn to the results of the climate survey administered to SFPD officers. Decades of empirical research reveal that social attitudes, including those not consciously recognized or acknowledged by an individual, can make that individual vulnerable to enacting bias—sometimes more so than conscious intent. Accordingly, it is important to assess attitudes that can have implications for how officers operate in the field.

Attitudes are often interconnected with beliefs, so it is important to evaluate beliefs as well. Consequently, the climate survey measured attitudes and beliefs that social science has shown can:

- increase the risk that officers will engage in inequitable and burdensome policing practices;
- increase the likelihood that officers will be resistant to policies and procedures that enhance community trust; and
- undermine the optimal job performance of officers.

The climate survey assessed SFPD officers' implicit and explicit bias as well as perceptions of organizational justice, all of which may affect the risk that cognitive bias could result in racially disparate behavior. The presence of risk factors, or even the presence of biased perceptions, does not guarantee that officers will behave in biased ways. Rather, these factors signal cognitive vulnerabilities, which can be compounded or mitigated by situational factors such as departmental policy or customary norms and practices. Awareness and mitigation of these risks can help ensure more equitable treatment of community members by SFPD officers.

Each sworn SFPD officer was invited to complete the climate survey. The survey was administered electronically, and officers had the option to take it during or after work hours. In total, 633 officers completed the survey. For any

given question, between 287 and 550 officers provided analyzable responses.

Of the officers who chose to participate in the survey, 213 (33.7%) identified as male, 48 (7.6%) identified as female, 17 (2.7%) identified as other, and 355 (56.1%) did not report their gender. The racial demographics of the participants were as follows:

- 127 (20.1%) of participants identified as non-Latinx White (“White”)
- 16 (2.5%) identified as non-Latinx Black (“Black”)
- 21 (3.3%) identified as Latinx
- 31 (4.9%) identified as non-Latinx Asian (“Asian”)
- 48 (7.6%) identified as mixed race
- 26 (4.1%) self-identified as non-Latinx Other Race, American Indian/Native American, or Native Hawaiian/Other Pacific Islander
- 364 (57.5%) of participants did not report their race

Climate Survey Results

Below we outline the social constructs measured in relationship to inequitable and burdensome policing, community trust, and optimal job performance. A social construct is an idea or viewpoint constructed by a group of people to

Table 10. Constructs Related to Inequitable and Burdensome Policing

Construct	Definition	Mean	SD
Social Dominance Orientation	<p>The endorsement of social hierarchies in which some groups have power and privilege while others do not. Such a perspective can make individuals feel justified in treating others inequitably.</p> <p><i>[Measured on a scale from 1 to 7, with higher values indicating stronger endorsement of social hierarchies.]</i></p>	2.61	1.14
Stereotype Threat	<p>Anxiety that one will inadvertently confirm a stereotype related to a social group in which one has membership. This anxiety can cause individuals in positions of power to escalate tense interactions (particularly with marginalized groups) in ways that can be harmful to community members.</p> <p><i>[Measured on a scale from 1 to 7, with higher values indicating greater worry about confirming stereotypes about police officers.]</i></p>	4.98	1.39
Ambivalent Sexism	<p>Harboring prejudice toward women that can be either hostile or benevolent but ultimately leads to negative evaluations of women as a group.</p> <p><i>[Measured on a scale from 1 to 7, with higher values indicating stronger agreement with gender stereotypes and negative evaluations of women.]</i></p>	3.06	1.15
Toughness Norms	<p>Support of cultural views and practices that define masculinity as toughness, such as perceiving a need to dominate others or believing that violence can be an appropriate way to demonstrate masculinity.</p> <p><i>[Measured on a scale from 1 to 7, with higher values indicating greater endorsement of toughness norms.]</i></p>	4.29	1.15
Misconception of Juvenile Responsibility	<p>Perceptions about the ability of adolescents to function with the same level of maturity and rational thinking as adults. These perspectives run counter to the biological facts of adolescent development, wherein youth do not fully develop maturity and the understanding of long-term consequences until they have reached young adulthood. Such a misconception places one at risk of interacting with and punishing youth in inappropriate ways.</p> <p><i>[Measured on a scale from 1 to 7, with higher values indicating stronger agreement with statements about positive attitudes toward juveniles.]</i></p>	3.49	1.19

Continued on the next page

<p>Negative Associations with Blackness</p>	<p>Associating members of the Black racial group with negative concepts, such as being bad or criminal, as measured by the Implicit Association Test. <i>[Measured on a scale from -2.0 to 2.0, with scores diverging from 0 indicating negative associations. That is, a score of 0 indicates attitudinal neutrality, while a positive score indicates anti-Black bias, and a negative score indicates anti-White bias.]</i></p>	<p>0.27</p>	<p>0.55</p>
<p>Positive or Negative Feelings Toward Various Social Groups</p>	<p>Self-assessment of “warm” or “cold” feelings toward a particular social group. <i>[Measured on a scale from 0 (cold) to 100 (warm).]</i></p>		
	<p>Black persons</p>	<p>68.29</p>	<p>23.07</p>
	<p>White persons</p>	<p>68.01</p>	<p>22.67</p>
	<p>Latinx persons</p>	<p>69.42</p>	<p>22.25</p>
	<p>Asian persons</p>	<p>70.89</p>	<p>21.84</p>
	<p>Immigrants</p>	<p>68.97</p>	<p>23.42</p>
	<p>Muslims</p>	<p>68.14</p>	<p>24.20</p>
	<p>Gay men</p>	<p>71.01</p>	<p>22.59</p>
	<p>Lesbians</p>	<p>70.17</p>	<p>22.87</p>
	<p>Transgender women</p>	<p>67.75</p>	<p>24.43</p>
	<p>Transgender men</p>	<p>67.48</p>	<p>24.50</p>
	<p>Persons with mental illness</p>	<p>67.75</p>	<p>23.29</p>
<p>Perceptions of Community Attitudes Toward Police</p>	<p>Self-assessment of “warm” or “cold” feelings that a particular social group has toward police. <i>[Measured on a scale from 0 (cold) to 100 (warm).]</i></p>		
	<p>Whites toward police</p>	<p>57.59</p>	<p>21.70</p>
	<p>Blacks toward police</p>	<p>40.34</p>	<p>22.70</p>
	<p>Latinos toward police</p>	<p>45.82</p>	<p>21.74</p>
	<p>Asians toward police</p>	<p>60.17</p>	<p>21.11</p>

Table 11. Constructs Related to Community Trust

Construct	Definition	Mean	SD
Trust in Community	Perceptions of the level of trustworthiness of community members. Officers who feel they cannot trust the community are likely to be less inclined to support practices or policies that will build community trust overall. <i>[Measured on a scale from 1 to 7, with higher values indicating greater trust in the community.]</i>	3.15	1.10
Support for Procedurally Just Policing	Procedurally just policing is characterized by respectful interactions with community members and objective decision making on the part of law enforcement. Officers who support these practices are likely to be more inclined to support policies and practices that enhance community trust; the opposite would be the case for officers who do not support procedurally just policing. <i>[Measured on a scale from 1 to 7, with higher values indicating stronger endorsement of procedurally just policing.]</i>	6.38	0.74
Effects of Publicity	The perspective that negative media coverage of police officers has made the job of law enforcement more dangerous and has depressed morale. Officers who feel this way may be apprehensive about engaging with community members, and therefore may be less inclined to engage in practices or support policies that enhance community trust. <i>[Measured on a scale from 1 to 7, with higher values indicating greater agreement with statements about the negative effects of media coverage on officer safety.]</i>	5.52	1.27

Table 12. Constructs Related to Workplace Well-Being and Optimal Job Performance

Construct	Definition	Mean	SD
Physical Health	A state of physical well-being. Those reporting sound physical health are better positioned to perform competently within their professional roles. <i>[Measured on a scale from 1 to 7, with higher values indicating better physical health.]</i>	5.23	1.17

Continued on the next page

Mental Health	A state of mental well-being. Those reporting sound mental health are better positioned to perform competently within their professional roles.		
	Positive affect <i>[Measured on a scale from 1 to 7, with higher values indicating the experience of positive emotions and/or a healthy self-concept.]</i>	4.67	1.28
	Negative affect <i>[Measured on a scale from 1 to 7, with higher values indicating the experience of negative emotions and/or a poor self-concept.]</i>	2.06	1.01
	Overall affect <i>[A cumulative score summing a respondent's positive affect scale with a reverse scoring of the negative affect scale. Measured on a scale from 1 to 7, with higher values indicating the experience of greater positive emotions relative to negative emotions.]</i>	5.48	0.81
Job Stress	Mental or emotional strain caused by the workplace environment. Those reporting low levels of job stress are better positioned to perform competently within their professional roles. <i>[Measured on a scale from 1 to 7, with higher values indicating higher levels of stress.]</i>	4.40	1.21
Job Satisfaction	Satisfaction in response to the workplace environment. Those reporting high levels of job satisfaction are better positioned to perform competently within their professional roles. <i>[Measured on a scale from 1 to 7, with higher values indicating greater job satisfaction.]</i>	4.17	1.08
Organizational Distributive Justice	Perceptions by individuals within an organization that they are treated fairly with regard to the outcomes of decisions and the distribution of organizational resources. Individuals who perceive a lack of organizational distributive justice are at risk of engaging in inappropriate and unethical behaviors. <i>[Measured on a scale from 1 to 7, with higher values indicating stronger perceptions of organizational distributive justice.]</i>	2.61	1.22
Organizational Interactional Justice	Perceptions by individuals within an organization that they are treated with dignity and respect within the organization, especially by their supervisor(s). Individuals who perceive a lack of organizational interactional justice are at risk of engaging in inappropriate and unethical behaviors. <i>[Measured on a scale from 1 to 7, with higher values indicating stronger perceptions of organizational interactional justice.]</i>	5.18	1.38

make sense of the world; it is held as true, whether or not it reflects actual reality. The beliefs and attitudes measured by these constructs are described in this section, as is their relevance to the enhancement of equitable policing practices. All were assessed in the officer climate survey.

The tables that follow define the survey measures that addressed each outcome of interest and present the mean (average) scores and standard deviations for all respondents who provided usable answers to the survey questions. The discussion following each table summarizes the results, emphasizing responses to questions with average scores that tend toward the high or low side of the measurement scale, which may indicate attitudes or beliefs that could substantially influence officers' behavior in the field.

INEQUITABLE AND BURDENSOME POLICING

The inequitable or burdensome policing of others is characterized by biased judgments and behaviors, as well as engaging with community members in ways that are unnecessarily confrontational, demeaning, or otherwise taxing. The beliefs and attitudes in Table 10 are considered risk factors for engaging in inequitable or burdensome policing.

With respect to **social dominance orientation**, officers expressed low endorsement of social hierarchy, with the mean score being 2.61. The mean score for **stereotype threat** was 4.98, suggesting that a substantial number of SFPD officers experience stereotype threat in their interactions with community members. Experiencing anxiety as a result of stereotype threat can be mentally taxing, trigger officer defensiveness that undermines respectful officer–community member communications, and prompt inadvertent errors in judgment or behaviors by officers that can be unjust.

The mean score on the **ambivalent sexism** scale was 3.06, indicating moderate disagreement with gender stereotypes. Officers expressed moderate endorsement of **toughness norms** (averaging 4.29), and suggesting that SFPD officers may be at increased risk of engaging in aggressive policing tactics.

The mean score for **misconception of juvenile responsibility** was 3.49, suggesting SFPD officers tended not to agree with misconceptions about juveniles.

As part of the survey, officers completed the **Implicit Association Test** (IAT) to measure implicit racial bias against Black people. The IAT measures the strength of associations between social groups (e.g., Black people, gay people) and concepts or stereotypes (e.g., goodness, badness, criminality, clumsiness). The IAT included in the survey measured associations for Black and White social groups. Overall, officers' IAT scores averaged 0.27, indicating that, on average, officers demonstrated a slight but consistent unconscious bias against Black people.

SFPD officers were also asked to provide ratings on a series of **feelings thermometers** that serve as measures of explicit bias toward various social groups. SFPD officers reported generally warm feelings toward all of the groups included in the survey, and differences in levels of warmth expressed toward groups were relatively minor: The mean scores for all groups ranged between approximately 68 and 71.

COMMUNITY TRUST

Community trust is present when community members perceive police officers to be reliable stewards of goodwill and guardians of public safety in whom they have confidence. Trust is earned, and law enforcement officials must continually demonstrate their trustworthiness through policies and daily interactions with the public. However, there are certain perspectives and attitudes that may make individual officers more or less inclined to support policies or practices that create or enhance community trust. Such perspectives and attitudes are captured in the constructs in Table 11.

On average, officers expressed neutral to moderately low **trust in the community** (the mean score was 3.15). Additionally, a considerable number of SFPD officers perceived **negative media coverage** of police officers as a danger to the job of law enforcement (the mean score was 5.52). Officers generally affirmed strong support for **procedurally just policing** (the mean score was 6.38).

WORKPLACE WELL-BEING AND OPTIMAL JOB PERFORMANCE

Workplace well-being and optimal job performance empower officers to police in ways that are equitable and enhance public safety. Optimal job performance requires mental and physical well-being as well as trust in the fairness of the workplace. Thus, the climate survey measured officers' perceptions of their physical, mental and emotional health as well as their stress levels, job satisfaction, and perceptions of workplace fairness, all of which can affect performance in the workplace and commitment and ability to behave in accordance with institutional rules and policies.

SFPD officers were asked a number of questions about their **mental and physical health and well-being**. While they rated their jobs as moderately stressful (averaging 4.40), officers reported relatively low scores for negative affect and relatively high scores for positive and overall affect (with mean scores of 4.67 and 5.48, respectively). Officer ratings of their physical health were relatively high too, with an average score of 5.23.

SFPD officers were asked a number of questions about their **satisfaction** with their current work placement and at SFPD more generally (such as "Rate your satisfaction with your current job," "How much pressure are you under at work," "When I talk about this police department I usually say 'we' instead of 'they'"). The mean score on such measures was 4.17, indicating somewhat positive job satisfaction.

For officers' perceptions of **distributive justice**, the mean score was 2.61, indicating a general belief that officers are not treated very fairly with regard to the how procedures are followed in the department. While respondents ranked organizational distributive justice rather low, ratings of **interactional justice**, or the degree to which officers believe they are treated with dignity and respect by their supervisors, were much higher (the mean score was 5.18).

Multilevel Regression Analysis

As the perspectives and attitudes measured in the climate survey do not operate in isolation, we used multilevel regressions to test the relationships between survey constructs. We specifically examined the degree to which constructs related to optimal job performance and inequitable policing practices relate to one another. By exploring such relationships, police departments can understand how enhancing experiences in the workplace might lead to better job performance.

In the table below, we report the results of linear regression models exploring the associations between officer reports of job satisfaction, job stress, and stereotype threat and their self-reported physical and emotional health. In addition to the explanatory variable of interest (job satisfaction, job stress, or stereotype threat), each model included controls for officer rank, officer race, and a constructed variable measuring how strongly the officer identified with the job

Table 13. Results of Linear Regressions of Climate Survey Constructs

Dependent Variable	Explanatory Variable	Coefficient	Standard Error	Statistical Significance Level
Physical Health	Job Satisfaction	0.25	0.06	p < 0.001
Physical Health	Job Stress	-0.19	0.06	p < 0.01
Physical Health	Stereotype Threat	-0.18	0.05	p < 0.001
Positive Affect	Job Satisfaction	0.19	0.05	p < 0.01
Positive Affect	Job Stress	-0.18	0.04	p < 0.01
Positive Affect	Stereotype Threat	-0.14	0.04	p < 0.01

of policing. The table shows only the results for the explanatory variables of interest. Because of missing observations, models investigating physical health had 277 respondents, and models investigating positive affect had 266 respondents.

The findings in Table 13 demonstrate that SFPD officers who were more satisfied with their jobs were more likely to report better physical health and more positive affect. Additionally, SFPD officers who reported higher levels of job stress tended to report worse physical health and more negative affect. Furthermore, SFPD officers who report higher levels of stereotype threat also reported worse physical health and more negative affect.

Summary of Climate Survey Findings

Overall, the results of the climate survey revealed a number of departmental strengths as well as attitudes or beliefs that may serve as risk factors for biased behavior. While the survey found that officers generally believed they are not treated very fairly in terms of departmental processes, their ratings of interactional justice—or the degree to which they believe they are treated with dignity and respect by their supervisors—were much higher. Officers also generally expressed strong support for procedurally just policing.

The climate survey findings also highlight a few risk factors for inequitable and burdensome policing by SFPD officers. SFPD officers ranked relatively high on the measure of stereotype threat, suggesting they may experience anxiety during interactions with community members, which could lead to negative outcomes for the community members they encounter. This may have

implications for SFPD officer well-being, as those who reported higher levels of stereotype threat also reported worse physical health and more negative affect. Officers also expressed moderate endorsement of toughness norms, indicating that SFPD officers may be at increased risk of engaging in aggressive policing tactics.

IAT scores also revealed that officers demonstrated slight but consistent unconscious bias against Black people. While findings on this measure of racial bias were modest in size, they are consistent with the disparities in stops and searches described in the sections above. While discretionary decisions such as stops and searches can be susceptible to the behavioral effects of implicit and explicit bias, these effects can be mitigated through policies, norms, and procedures that reduce discretion, encourage accountability, and require equitable treatment. We therefore encourage SFPD to adopt the recommendations provided in this report.

Recommendations: Climate Survey

- 1. Identify situational risk factors for discrimination.** We recommend that SFPD train its officers and supervisors on the situational risk factors that can increase the likelihood of racially disparate behavior, such as inexperience, time pressure, divided attention, hunger, stress, sleep deprivation, and the absence of clear norms regarding expected behavior. We further recommend that SFPD identify chronic risk factors for racially discriminatory outcomes and adopt policies to limit or eliminate these factors.

SECTION IV: SUMMARY AND RECOMMENDATIONS

Overall, the results of our analysis of SFPD data on stops and use-of-force incidents, as well as the policy review and climate survey, find reasons for optimism and identify opportunities for improvement toward the goal of equitable policing.

Based on the findings detailed in this report, we offer seven specific recommendations for the department. We additionally recommend SFPD draw on existing departmental strengths, including those revealed in the climate survey, when implementing these recommendations. For example, we encourage SFPD to leverage the existing positive relationships between officers and their direct supervisors when implementing the below recommendations and to draw on officers' expressed commitment to procedural justice by emphasizing the ways in which new practices further this goal.

While this is not an exhaustive list of possible solutions to the disparities and risk factors we have identified, we recommend that SFPD adopt the following actionable steps to enhance their commitment to fair and equitable policing:

- 1. Adopt a unified policy on data collection.** We recommend that SFPD adopt a single, comprehensive general order addressing collection of data on stops and compliance with the Racial and Identity Profiling Act of 2015 (RIPA). At present, SFPD addresses data collection requirements in individual department bulletins, such as Department Bulletins 18-247 and 18-105, both of which are entitled "Stop Data Collection System (SDCS) Implementation."
- 2. Expand the definition of reportable force.** We recommend that SFPD amend the definition of reportable force in Department General Order 5.01 (Use of Force) to include all force used to overcome resistance, regardless of injury or complaint of injury or pain. SFPD's current definition of reportable force does not appear to encompass control holds or pain compliance techniques used to overcome resistance unless they result injury or report of pain that persists beyond the use of the control hold.
- 3. Collect more detailed use-of-force information.** We recommend that SFPD collect and share more detailed data with respect to each use-of-force incident. In particular, we recommend that the department collect and analyze data in a tabular format (to facilitate ease of statistical analysis) for the following fields:
 - Resistance (specifying type)
 - Whether any officer or the individual involved in the incident died
 - Nature of offense leading to arrest or citation (which may be distinct from call type)
- 4. Utilize the *COPS Stop Data Guidebook*.** We recommend that SFPD implement the recommendations for RIPA compliance outlined in the *COPS Stop Data Guidebook*, which was drafted by CPE and the Policing Project.
- 5. Require supervisor review of stop records.** We recommend that SFPD adopt a policy requiring officers to submit to their supervisors on a daily basis a brief narrative explanation of the basis for each stop they conduct. We recommend that this

policy also require supervisors to review these reports in a timely manner to ensure that stops are supported by reasonable suspicion and are consistent with SFPD policy and applicable law.

6. Update policy on drawing firearms. We recommend that SFPD update Department General Order 5.01 (Use of Force) to clarify the circumstances in which an officer may draw a firearm. General Order 5.01 currently states that an officer may *point* a firearm only when the officer has a "reasonable perception of a substantial risk that the situation may escalate to justify deadly force." General Order 5.01 provides, however, that an officer may *draw* a firearm whenever the officer "has reasonable cause to believe it may be necessary for [the officer's] own safety or for the safety of others." We recommend that SFPD update General Order 5.01 to align requirements for drawing a weapon with the existing higher standard for pointing a firearm. In other words, we recommend that SFPD amend General Order 5.01 policy to add that officers may only draw or point their firearms if they reasonably believe that there

is a substantial risk that the situation may escalate to the point where deadly force may be justified

7. Identify situational risk factors for discrimination. We recommend that SFPD train its officers and supervisors on the situational risk factors that can increase the likelihood of racially disparate behavior, such as inexperience, time pressure, divided attention, hunger, stress, sleep deprivation and the absence of clear norms regarding expected behavior. We further recommend that SFPD identify chronic risk factors for racially discriminatory outcomes and adopt policies to limit or eliminate these factors.

Again, while this is not an exhaustive list of possible solutions to the issues raised in this report, these recommendations represent straightforward first steps toward addressing each of them. CPE appreciates SFPD's willingness to participate in the National Justice Database and encourages the department to continue to work with us to advance equitable policing in San Francisco.

BIBLIOGRAPHY

This report is informed by a wealth of research in diverse social sciences. Here we list some of the most relevant published works.

- Alpert, G. P., & Dunham, R. G. (2004). *Understanding police use of force: Officers, suspects, and reciprocity*. Cambridge University Press.
- Amendola, K. L., Weisburd, D., Hamilton, E. E., Jones, G., & Slipka, M. (2011). *The impact of shift length in policing on performance, health, quality of life, sleep, fatigue, and extra-duty employment*. National Institute of Justice. <https://www.ncjrs.gov/pdffiles1/nij/grants/237330.pdf>
- Ashby, M. P. J., & Tompson, L. (2017). Routine activities and proactive police activity: A macro-scale analysis of police searches in London and New York City. *Justice Quarterly*, 34(1), 109–135. <https://doi.org/10.1080/07418825.2015.1103380>
- Bandura, A. (1973). *Aggression: A social learning analysis*. Prentice-Hall.
- Bartol, C., Bergen, G. T., Volckens, J. S., & Knoras, K. M. (1992). Women in small-town policing: Job performance and stress. *Criminal Justice and Behavior*, 19(3), 240–259. <https://doi.org/10.1177/0093854892019003003>
- Beilock, S. L., Jellison, W. A., Rydell, R. J., McConnell, A. R., & Carr, T. H. (2006). On the causal mechanisms of stereotype threat: Can skills that don't rely heavily on working memory still be threatened? *Personality and Social Psychology Bulletin*, 32(8), 1059–1071. <https://doi.org/10.1177/0146167206288489>
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. McGraw-Hill.
- Bielby, W. T. (2000). Minimizing workplace gender and racial bias. *Contemporary Sociology*, 29(1), 120–129.
- Blair, I. V. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review*, 6(3), 242–261. https://doi.org/10.1207/S15327957PSPR0603_8
- Bodenhausen, G. V. (1990). Stereotypes as judgmental heuristics: Evidence of circadian variations in discrimination. *Psychological Science*, 1(5), 319–322. <https://doi.org/10.1111/j.1467-9280.1990.tb00226.x>
- Bodenhausen, G. V., & Wyer, R. S. (1985). Effects of stereotypes in decision making and information-processing strategies. *Journal of Personality and Social Psychology*, 48(2), 267–282. <https://doi.org/10.1037/0022-3514.48.2.267>
- Bosson, J. K., Haymovitz, E. L., & Piel, E. C. (2004). When saying and doing diverge: The effects of stereotype threat on self-reported versus non-verbal anxiety. *Journal of Experimental Social Psychology*, 40(2), 247–255. [https://doi.org/10.1016/S0022-1031\(03\)00099-4](https://doi.org/10.1016/S0022-1031(03)00099-4)
- Bosson, J. K., & Vandello, J. A. (2011). Precarious manhood and its links to action and aggression. *Current Directions in Psychological Science*, 20(2), 82–86. <https://doi.org/10.1177/0963721411402669>
- Bosson, J. K., Vandello, J. A., Burnaford, R. M., Weaver, J. R., & Wasti, S. A. (2009). Precarious manhood and displays of physical aggression. *Personality and Social Psychology Bulletin* 35(5), 623–634. <https://doi.org/10.1177/0146167208331161>
- Braga, A. A., & Weisburd, D. L. (2015). Focused deterrence and the prevention of violent gun injuries: Practice, theoretical principles, and scientific evidence. *Annual Review of Public*

- Health*, 36, 55–68. <https://doi.org/10.1146/annurev-publhealth-031914-122444>
- Broadbent, D. E. (1958). *Perception and communication*. Pergamon Press. (See Chapter 5, “The Effects of Noise on Behavior,” pp. 81–107.)
- Brunson, R. K., & Gau, J. M. (2015). Officer race versus macro-level context: A test of competing hypotheses about Black citizens’ experiences with and perceptions of Black police officers. *Crime and Delinquency*, 61(2), 213–242. <https://doi.org/10.1177/001128711398027>
- Bump, P. (2017, July 28). Trump’s speech encouraging police to be “rough,” annotated. *Washington Post*. <https://www.washingtonpost.com/news/politics/wp/2017/07/28/trumps-speech-encouraging-police-to-be-rough-annotated/>
- The Cato Institute. (2010). *National Police Misconduct Reporting Project, 2010 annual report*.
- Chaiyavej, S., & Morash, M. (2009). Reasons for policewomen’s assertive and passive reactions to sexual harassment. *Police Quarterly*, 12(1), 63–85. <https://doi.org/10.1177/1098611108327309>
- Chanin, J. M. (2015). Examining the sustainability of pattern or practice police misconduct reform. *Police Quarterly*, 18(2), 163–192. <https://doi.org/10.1177/1098611114561305>
- Clarke, R. V. (Ed.) (1997). *Situational crime prevention: Successful case studies* (2nd ed.). Harrow and Heston. <https://pdfs.semanticscholar.org/0abd/fe843d91de5b291d6ab3f8c30070d-8fbf711.pdf>
- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44(4), 588–608. <https://www.jstor.org/stable/2094589>
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2), 278–321. <https://doi.org/10.1006/obhd.2001.2958>
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C., & Hg, K. Y. (2001). Justice in the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425–445. <https://doi.org/10.1037/0021-9010.86.3.425>
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender and Society*, 19(6), 829–859. <https://doi.org/10.1177/0891243205278639>
- Cooper, F. R. (2009). “Who’s the man?”: Masculinities studies, Terry stops, and police training. *Columbia Journal of Gender and Law*, 18(3), 671–742. <https://scholars.law.unlv.edu/facpub/1122>
- Correll, J., Hudson, S. M., Guillermo, S., & Ma, D. S. (2014). The police officer’s dilemma: A decade of research on racial bias in the decision to shoot. *Social and Personality Psychology Compass*, 5(5), 201–213. <https://doi.org/10.1111/spc3.12099>
- Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2002). The police officer’s dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality and Social Psychology*, 83(6), 1314–1329. <https://doi.org/10.1037/0022-3514.83.6.1314>
- Correll, J., Park, B., Judd, C. M., Wittenbrink, B., Sadler, M. S., & Keesee, T. (2007). Across the thin blue line: Police officers and racial bias in the decision to shoot. *Journal of Personality and Social Psychology*, 92(6), 1006–1023. <https://doi.org/10.1037/0022-3514.92.6.1006>
- Correll, J., Urland, G. R., & Ito, T. A. (2006). Event-related potentials and the decision to shoot: The role of threat perception and cognitive control. *Journal of Experimental Social Psychology*

- chology, 42(1), 120–128. <https://doi.org/10.1016/j.jesp.2005.02.006>
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, 92(4), 631–648. <https://doi.org/10.1037/0022-3514.92.4.631>
- Cuddy, A. J. C., Fiske, S. T., Kwan, V. S. Y., Glick, P., Demoulin, S., Leyens, J.-P., Bond, M. H., Croizet, J.-C., Ellemers, N., Sleebos, E., Htun, T. T., Kim, H.-J., Maio, G., Perry, J., Petkova, K., Todorov, C., Rodríguez-Bailón, R., Morales, E., Moya, M.... Ziegler, R. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *The British Journal of Social Psychology*, 48(1), 1–33. <https://doi.org/10.1348/014466608X314935>
- Danziger, S., Levav, J., & Avnaim-Pesso, L. (2011). Extraneous factors in judicial decisions. *Proceedings of the National Academy of Sciences of the United States of America*, 108(17), 6889–6892. <https://doi.org/10.1073/pnas.1018033108>
- Dekker, I., & Barling, J. (1998). Personal and organizational predictors of workplace sexual harassment of women by men. *Journal of Occupational Health Psychology*, 3(1), 7–18. <https://doi.org/10.1037/1076-8998.3.1.7>
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56(1), 5–18. <https://doi.org/10.1037//0022-3514.56.1.5>
- Devine, P. G., & Elliot, A. J. (1995). Are racial stereotypes really fading? The Princeton Trilogy revisited. *Personality and Social Psychology Bulletin*, 21(11), 1139–1150. <https://doi.org/10.1177/01461672952111002>
- Dovidio, J. F. (2001). On the nature of contemporary prejudice: The third wave. *Journal of Social Issues*, 57(4), 829–849. <https://doi.org/10.1111/0022-4537.00244>
- Dovidio, J. F., & Gaertner, S. L. (1998). On the nature of contemporary prejudice: The causes, consequences, and challenges of aversive racism. In J. L. Eberhardt & S. T. Fiske (Eds.), *Confronting racism: The problem and the response* (pp. 3–32). Sage.
- Dovidio, J. F., & Gaertner, S. L. (2000). Aversive racism and selection decisions: 1989 and 1999. *Psychological Science*, 11(4), 315–319. <https://doi.org/10.1111/1467-9280.00262>
- Dovidio, J. F., & Gaertner, S. L. (2004). Aversive racism. *Advances in Experimental Social Psychology*, 36, 1–52. [https://doi.org/10.1016/S0065-2601\(04\)36001-6](https://doi.org/10.1016/S0065-2601(04)36001-6)
- Dovidio, J. F., Hewstone, M., Glick, P., & Esses, V. M. (2010). Prejudice, stereotyping, and discrimination: Theoretical and empirical overview. In J. F. Dovidio, M. Hewstone, P. Glick, & V. M. Esses (Eds.), *The SAGE handbook of prejudice, stereotyping and discrimination* (pp. 3–29). Sage. <http://dx.doi.org/10.4135/9781446200919.n1>
- Dovidio, J. F., Pearson, A. R., Gaertner, S. L., & Hodson, G. (2008). On the nature of contemporary prejudice: From subtle bias to severe consequences. In V. M. Esses & R. A. Vernon (Eds.), *Explaining the breakdown of ethnic relations: Why neighbors kill* (pp. 41–60). Blackwell.
- Duncan, B. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of Blacks. *Journal of Personality and Social Psychology*, 34(4), 590–598. <https://doi.org/10.1037/0022-3514.34.4.590>
- Fagan, J. A., Geller, A., Davies, G., & West, V. (2010). Street stops and *Broken windows* revisited: The demography and logic of proactive policing in a safe and changing city. In S. K. Rice & M. D. White (Eds.), *Race, ethnicity, and policing: New and essential readings* (pp. 309–348). NYU Press.
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating

- others. *Journal of Personality and Social Psychology*, 73(1), 31–44. <https://doi.org/10.1037/0022-3514.73.1.31>
- Felson, M. (1987). Routine activities and crime prevention in the developing metropolis. *Criminology*, 25(4), 911–932. <https://doi.org/10.1111/j.1745-9125.1987.tb00825.x>
- Fiske, A. P., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindze (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 915–981). McGraw-Hill.
- Fiske, S. T. (2012). Warmth and competence: Stereotype content issues for clinicians and researchers. *Canadian Psychology*, 53(1), 14–20. <https://doi.org/10.1037/a0026054>
- Fiske, S. T. (2013). Varieties of (de) humanization: Divided by competition and status. In S. J. Gervais (Ed.), *Objectification and (de)humanization: 60th Nebraska symposium on motivation* (pp. 53–71). <https://doi.org/10.1007/978-1-4614-6959-9>
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878–902. <https://doi.org/10.1037//0022-3514.82.6.878>
- Fiske, S. T., & Dupree, C. (2014). Gaining trust as well as respect in communicating to motivated audiences about science topics. *Proceedings of the National Academy of Sciences of the United States of America*, 111(Suppl. 4), 13593–13597. <https://doi.org/10.1073/pnas.1317505111>
- Ford, T. E., Gambino, F., Lee, H., Mayo, E., & Ferguson, M. A. (2004). The role of accountability in suppressing managers' preinterview bias against African-American sales job applicants. *Journal of Personal Selling & Sales Management*, 24(2), 113–124.
- Fyfe, J. J. (1979). Administrative interventions on police shooting discretion: An empirical examination. *Journal of Criminal Justice*, 7(4), 309–323. [https://doi.org/10.1016/0047-2352\(79\)90065-5](https://doi.org/10.1016/0047-2352(79)90065-5)
- Gaertner, S. L., & Dovidio, J. F. (1977). The subtlety of White racism, arousal, and helping behavior. *Journal of Personality and Social Psychology*, 35(10), 691–707. <https://doi.org/10.1037/0022-3514.35.10.691>
- Gaertner, S. L., & Dovidio, J. F. (1986). *The aversive form of racism*. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61–89). Academic Press.
- Gaertner, S. L., Dovidio, J. F., & Johnson, G. (1982). Race of victim, nonresponsive bystanders, and helping behavior. *Journal of Social Psychology*, 117(1), 69–77. <https://doi.org/10.1080/00224545.1982.9713409>
- Garrett, B. L., & Stoughton, S. W. (2017). A tactical fourth amendment. *Virginia Law Review* 103(2), 211–304. https://www.virginialawreview.org/sites/virginialawreview.org/files/Garrett-Stoughton_Online.pdf
- Gau, J. M., Corsaro, N., Stewart, E. A., & Brunson, R. K. (2012). Examining macro-level impacts on procedural justice and police legitimacy. *Journal of Criminal Justice*, 40(4), 333–343. <https://doi.org/10.1016/j.jcrimjus.2012.05.002>
- Goff, P. A., Di Leone, B. A. L., & Kahn, K. B. (2012). Racism leads to pushups: How racial discrimination threatens subordinate men's masculinity. *Journal of Experimental Social Psychology*, 48(5), 1111–1116. <https://doi.org/10.1016/j.jesp.2012.03.015>
- Goff, P. A., Jackson, M. C., DiLeone, B. A. L., Culotta, C. M., & DiTomasso, N. A. (2014). The essence of innocence: Consequences of dehumanizing Black children. *Journal of Personality and Social Psychology*, 106(4), 526–545. <http://dx.doi.org/10.1037/a0035663>
- Goff, P. A., & Martin, K. D. (2012). *Unity breeds fairness: The Consortium for Police Leadership in Equity*

- report on the Las Vegas Metropolitan Police Department. The Consortium for Police Leadership in Equity.
- Goff, P. A., Martin, K. D., & Gamson-Smiedt, M. (2012). *Protecting equity: The Consortium for Police Leadership in Equity report on the San Jose Police Department*. The Consortium for Police Leadership in Equity.
- Goff, P. A., Steele, C. M., & Davies, P. G. (2008). The space between us: Stereotype threat and distance in interracial contexts. *Journal of Personality and Social Psychology*, *94*(1), 91–107. <https://doi.org/10.1037/0022-3514.94.1.91>
- Govorun, O., & Payne, B. K. (2006). Ego-depletion and prejudice: Separating automatic and controlled components. *Social Cognition*, *24*(2), 111–136. <https://doi.org/10.1521/soco.2006.24.2.111>
- Hadden, B., Tolliver, W., Snowden, F., & Brown-Manning, R. (2016). An authentic discourse: Recentering race and racism as factors that contribute to police violence against unarmed Black or African American men. *Journal of Human Behavior in the Social Environment*, *26*(3–4), 336–349. <https://doi.org/10.1080/10911359.2015.1129252>
- Harris, A. P. (2000). Gender, violence, race, and criminal justice. *Stanford Law Review*, *52*(4), 777–807. <https://www.jstor.org/stable/1229430>
- Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups. *Psychological Science*, *17*(10), 847–853. <https://doi.org/10.1111/j.1467-9280.2006.01793.x>
- Hauenstein, N. M. A., McGonigle, T., & Flinder, S. W. (2001). A meta-analysis of the relationship between procedural justice and distributive justice: Implications for justice research. *Employee Responsibilities and Rights Journal*, *13*(1), 39–56. <https://doi.org/10.1023/A:1014482124497>
- Herbert, S. (2001). “Hard charger” or “station queen?” Policing and the masculinist state. *Gender, Place and Culture*, *8*(1), 55–71. <https://doi.org/10.1080/09663690120026325>
- Hitlan, R. T., Pryor, J. B., Hesson-McInnis, M. S., & Olson, M. (2009). Antecedents of gender harassment: An analysis of person and situation factors. *Sex Roles*, *61*(11–12), 794–807. <https://doi.org/10.1007/s11199-009-9689-2>
- Hollander-Blumoff, R., & Tyler, T. R. (2011). Procedural justice and the rule of law: Fostering legitimacy in alternative dispute resolution. *Journal of Dispute Resolution*, *2011*(1), 1–20. <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=1612&context=jdr>
- Hugenberg, K., & Bodenhausen, G. V. (2003). Facing prejudice: Implicit prejudice and the perception of facial threat. *Psychological Science*, *14*(6), 640–643. https://doi.org/10.1046/j.0956-7976.2003.psci_1478.x
- James, L., James, S., & Vila, B. (2018). The impact of work shift and fatigue on police officer response in simulated interactions with citizens. *Journal of Experimental Criminology*, *14*(1), 111–120. <https://doi.org/10.1007/s11292-017-9294-2>
- Jany, L. (2018, August 9). Minneapolis police taking a different approach to homelessness. *StarTribune*. <http://www.startribune.com/to-minneapolis-homeless-small-results-of-police-outreach-initiative-already-tangible/490405691/>
- Jones, N. (2004). “It’s not where you live, it’s how you live”: How young women negotiate conflict and violence in the inner city. *Annals of the American Academy of Political and Social Science*, *595*(1), 49–62. <https://doi.org/10.1177/0002716204267394>
- Jones, N. (2014). “The regular routine”: Proactive policing and adolescent development among young, poor Black men. *New Directions for Child and Adolescent Development*, *2014*(143), 33–54. <https://doi.org/10.1002/cad.20053>

- Kennedy, D. M. (2015, February 19). What you think about dangerous inner-city neighborhoods is wrong. *Washington Post*. https://www.washingtonpost.com/opinions/book-review-ghettoside-by-jill-leovy/2015/02/19/b7fbb2ae-b077-11e4-827f-93f454140e2b_story.html
- Kenrick, A. C., Sinclair, S., Richeson, J., Verosky, S. C., & Lun, J. (2016). Moving while Black: Intergroup attitudes influence judgments of speed. *Journal of Experimental Psychology: General*, *145*(2), 147–154. <https://doi.org/10.1037/xge0000115>
- Kerfoot, D., & Knights, D. (1996). “The best is yet to come?": The quest for embodiment in managerial work. In D. Collinson & J. Hearn (Eds.), *Men as managers, managers as men* (pp. 78–98). Sage.
- Kimmel, M. S. (2009). Masculinity as homophobia: Fear, shame, and silence in the construction of gender identity. In M. M. Gergen & S. N. Davis (Eds.), *Sex, gender, and sexuality: The new basics* (pp. 58–70). Oxford University Press.
- Knowles, J., Persico, N., & Todd, P. (2001). Racial bias in motor vehicle searches: Theory and evidence. *Journal of Political Economy*, *109*(1), 230–237. <https://www.journals.uchicago.edu/doi/10.1086/318603>
- Laniyonu, A., & Goff, P. A. (2019). *Policing the most vulnerable: Measuring disparities in police use of force and injury among persons with serious mental illness* (Unpublished manuscript). Center for Policing Equity.
- LaPiere, R. T. (1934). Attitudes vs. actions. *Social Forces*, *13*(2), 230–237. <https://www.jstor.org/stable/2570339>
- Lee, T. L., & Fiske, S. T. (2006). Not an outgroup, not yet an ingroup: Immigrants in the stereotype content model. *International Journal of Intercultural Relations*, *30*(6), 751–768. <https://doi.org/10.1016/j.ijintrel.2006.06.005>
- Lorenz, K. (2005). *On aggression*. Routledge.
- Maass, A., Cadinu, M., Guarnieri, G., & Grasselli, A. (2003). Sexual harassment under social identity threat: The computer harassment paradigm. *Journal of Personality and Social Psychology*, *85*(5), 853–870. <https://doi.org/10.1037/0022-3514.85.5.853>
- MacDonald, J., & Braga, A. A. (2018). Did post-Floyd et al. reforms reduce racial disparities in NYPD stop, question, and frisk practices? An exploratory analysis using external and internal benchmarks. *Justice Quarterly*, *36*(5), 954–983. <https://doi.org/10.1080/07418825.2018.1427278>
- Macintyre, S., Prenzler, T., & Chapman, J. (2008). Early intervention to reduce complaints: An Australian Victoria police initiative. *International Journal of Police Science & Management* *10*(2), 238–250. <https://doi.org/10.1350/ijps.2008.10.2.77>
- Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality & Social Psychology*, *66*(1), 37–47. <https://doi.org/10.1037/0022-3514.66.1.37>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. <https://doi.org/10.1037//0033-295X.98.2.224>
- McConnell, A., & Leibold, J. (2001). Relations among the Implicit Association Test, discriminatory behavior, and explicit measures of racial attitudes. *Journal of Experimental Social Psychology*, *37*(5), 435–442. <https://doi.org/10.1006/jesp.2000.1470>
- Mekawi, Y., & Bresin, K. (2015). Is the evidence from racial bias shooting task studies a smoking gun? Results from a meta-analysis. *Journal of Experimental Social Psychology*, *61*, 120–130. <https://doi.org/10.1016/j.jesp.2015.08.002>

- Mendes, W. B., Blascovich, J., Lickel, B., & Hunter, S. (2002). Challenge and threat during social interactions with White and Black men. *Personality and Social Psychology Bulletin*, 28(7), 939–952. https://www.researchgate.net/publication/230676410_Inter-group_threat_Challenge_and_threat_during_social_interactions_with_White_and_Black_men
- Messerschmidt, J. (2000). Becoming “real men”: Adolescent masculinity challenges and sexual violence. *Men and Masculinities*, 2(3), 286–307. <https://doi.org/10.1177/1097184X00002003003>
- Miller, E. K. (2000). The prefrontal cortex and cognitive control. *Nature Reviews Neuroscience*, 1(1), 59–65. <https://doi.org/10.1038/35036228>
- Miller, N., Pedersen, W. C., Earleywine, M., & Pollock, V. E. (2003). A theoretical model of triggered displaced aggression. *Personality and Social Psychology Review*, 7(1), 75–97. https://doi.org/10.1207/S15327957PSPR0701_5
- Mischel, W. (1968). *Personality and assessment*. Wiley.
- Mummolo, J. (2018). Modern police tactics, police–citizen interactions, and the prospects for reform. *The Journal of Politics*, 80(1), 1–15. <https://doi.org/10.1086/694393>
- Munsch, C. L., & Willer, R. (2012). The role of gender identity threat in perceptions of date rape and sexual coercion. *Violence Against Women*, 18(10), 1125–1146. <https://doi.org/10.1177/1077801212465151>
- Najdowski, C. J., Bottoms, B. L., & Goff, P. A. (2015). Stereotype threat and racial differences in citizens’ experiences of police encounters. *Law and Human Behavior*, 39(5), 463–477. <https://doi.org/10.1037/lhb0000140>
- National Academies of Sciences, Engineering, and Medicine. (2018). *Proactive policing: Effects on crime and communities*. National Academies Press. <https://doi.org/10.17226/24928>
- Navon, D., & Gopher, D. (1979). On the economy of the human-processing system. *Psychological Review*, 86(3), 214–255. <https://doi.org/10.1037/0033-295X.86.3.214>
- O’Brien, L. T., & Crandall, C. S. (2003). Stereotype threat and arousal: Effects on women’s math performance. *Personality and Social Psychology Bulletin*, 29(6), 782–789. <https://doi.org/10.1177/0146167203029006010>
- Pashler, H. (1994). Dual-task interference in simple tasks: Data and theory. *Psychological Bulletin*, 116(2), 220–244. <https://doi.org/10.1037/0033-2909.116.2.220>
- Payne, B. K. (2001). Prejudice and perception: The role of automatic and controlled processes in misperceiving a weapon. *Journal of Personality and Social Psychology*, 81(2), 181–192. <https://doi.org/10.1037/0022-3514.81.2.181>
- Payne, B. K. (2006). Weapon bias: Split-second decisions and unintended stereotyping. *Current Directions in Psychological Science*, 15(6), 287–291. <https://doi.org/10.1111/j.1467-8721.2006.00454.x>
- Peguero, A. A. (2008). Bullying victimization and extra-curricular activity. *Journal of School Violence*, 7(3), 71–85. <https://doi.org/10.1080/15388220801955570>
- Plant, E. A., & Peruche, B. M. (2005). The consequences of race for police officers’ responses to criminal suspects. *Psychological Science*, 16(3), 180–184. <https://doi.org/10.1111/j.0956-7976.2005.00800.x>
- Plant, E. A., Peruche, B. M., & Butz, D. A. (2005). Eliminating automatic racial bias: Making race non-diagnostic for responses to criminal suspects. *Journal of Experimental Social Psychology*, 41(2), 141–156. <https://doi.org/10.1016/j.jesp.2004.07.004>
- Plous, S., & Williams, T. (1995). Racial stereotypes from the days of American slavery: A continuing legacy. *Journal of Applied Social Psychology*, 25(9), 795–817. <https://doi.org/10.1111/j.1559-1816.1995.tb01776.x>

- Pogue, T. E., Michael, J. A., & Pérez, G. (2014). *An analysis of commuting patterns in the North San Joaquin Valley*. University of the Pacific, Eberhardt School of Business.
- Prokos, A., & Padavic, I. (2002). "There oughtta be a law against bitches": Masculinity lessons in police academy training. *Gender, Work & Organization*, 9(4), 439–459. <https://doi.org/10.1111/1468-0432.00168>
- Pryor, J. B., Giedd, J. L., & Williams, K. B. (1995). A social psychological model for predicting sexual harassment. *Journal of Social Issues*, 51(1), 69–84. <https://doi.org/10.1111/j.1540-4560.1995.tb01309.x>
- Pryor, J. B., LaVite, C. M., & Stoller, L. M. (1993). A social psychological analysis of sexual harassment: The person/situation interaction. *Journal of Vocational Behavior*, 42(1), 68–83. <https://doi.org/10.1006/jvbe.1993.1005>
- Reaves, B. A. (2015). Local police departments, 2013: Personnel, policies, and practices. *Bureau of Justice Statistics Bulletins* (NCJ 248677). U.S. Department of Justice. <https://www.bjs.gov/content/pub/pdf/lp-d13ppp.pdf>
- Richardson, L. S., & Goff, P. A. (2014). Interrogating racial violence. *Ohio State Journal of Criminal Law*, 12(1), 115–152. <https://static1.squarespace.com/static/55ad38b1e4b0185f0285195f/t/5c4918d37ba7fc52100bbfd7/1548294356226/InterrogatingRacialViolence.pdf>
- Richeson, J. A., & Shelton, J. N. (2003). When prejudice does not pay: Effects of interracial contact on executive function. *Psychological Science*, 14(3), 287–290. <https://doi.org/10.1111/1467-9280.03437>
- Robinson, M. D., Schmeichel, B. J., & Inzlicht, M. (2010). A cognitive control perspective of self-control strength and its depletion. *Social and Personality Psychology Compass*, 4(3), 189–200. <https://doi.org/10.1111/j.1751-9004.2009.00244.x>
- Rogers, R. W., & Prentice-Dunn, S. (1981). Deindividuation and anger-mediated interracial aggression: Unmasking regressive racism. *Journal of Personality and Social Psychology*, 41(1), 63–73. <https://doi.org/10.1037/0022-3514.41.1.63>
- Ross, C. T. (2015). A multi-level Bayesian analysis of racial bias in police shootings at the county-level in the United States, 2011–2014. *PLoS ONE*, 10(11), e0141854. <https://doi.org/10.1371/journal.pone.0141854>
- Ross, L., & Nisbett, R. E. (2011). *The person and the situation: Perspectives of social psychology*. Pinter & Martin.
- Schmader, T., & Johns, M. (2003). Converging evidence that stereotype threat reduces working memory capacity. *Journal of Personality and Social Psychology*, 85(3), 440–452. <https://doi.org/10.1037/0022-3514.85.3.440>
- Schoenfeld, H. (2005). Violated trust: Conceptualizing prosecutorial misconduct. *Journal of Contemporary Criminal Justice*, 21(3), 250–271. <https://doi.org/10.1177/1043986205278722>
- Sekaquaptewa, D., Espinoza, P., Thompson, M., Vargas, P., & von Hippel, W. (2003). Stereotypic explanatory bias: Implicit stereotyping as a predictor of discrimination. *Journal of Experimental Social Psychology*, 39(1), 75–82. [https://doi.org/10.1016/S0022-1031\(02\)00512-7](https://doi.org/10.1016/S0022-1031(02)00512-7)
- Shades of the "old" LAPD [Editorial]. (2010, November 16). *LA Times*. <https://www.latimes.com/archives/la-xpm-2010-nov-16-la-ed-lapd-20101116-story.html>
- Shelley, T. O., Morabito, M. S., & Tobin-Gurley, J. (2011). Gendered institutions and gender roles: Understanding the experiences of women in policing. *Criminal Justice Studies*, 24(4), 351–367. <https://doi.org/10.1080/1478601X.2011.625698>
- Sherman, L. W. (1980). Causes of police behavior: The current state of quantitative research. *Journal of*

- Research in Crime and Delinquency*, 17(1), 69–100. <https://doi.org/10.1177/002242788001700106>
- Sidanius, J., Liu, J. H., Shaw, J. S., & Pratto, F. (1994). Social dominance orientation, hierarchy attenuators and hierarchy enhancers: Social dominance theory and the criminal justice system. *Journal of Applied Social Psychology*, 24(4), 338–366. <https://doi.org/10.1111/j.1559-1816.1994.tb00586.x>
- Sigelman, L., & Tuch, S. A. (1997). Metastereotypes: Blacks' perceptions of Whites' stereotypes of Blacks. *Public Opinion Quarterly*, 61(1), 87–101. <https://doi.org/10.1086/297788>
- Sim, J. J., Correll, J., & Sadler, M. S. (2013). Understanding police and expert performance: When training attenuates (vs. exacerbates) stereotypic bias in the decision to shoot. *Personality and Social Psychology Bulletin*, 39(3), 291–304. <https://doi.org/10.1177/0146167212473157>
- Sniderman, P., & Piazza, T. (1993). *The scar of race*. Harvard University Press.
- Sommers, S. (2012). *Situations matter: Understanding how context transforms your world*. Riverhead Books.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797–811. <https://doi.org/10.1037/0022-3514.69.5.797>
- Steele, C. M., Spencer, S. J., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. *Advances in Experimental Social Psychology*, 34, 379–440. [https://doi.org/10.1016/S0065-2601\(02\)80009-0](https://doi.org/10.1016/S0065-2601(02)80009-0)
- Stoughton, S. W. (2014a). Policing facts. *Tulane Law Review*, 88(5), 847–898. https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=2020&context=law_facpub
- Stoughton, S. W. (2014b). How police training contributes to avoidable deaths. *The Atlantic*. <https://www.theatlantic.com/national/archive/2014/12/police-gun-shooting-training-ferguson/383681/>
- Stoughton, S. W. (2017). *Terry v. Ohio* and the (un)forgettable frisk. *Ohio State Journal of Criminal Law*, 15(19), 19–33. https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=2174&context=law_facpub
- Swencionis, J. K., & Goff, P. A. (2017). The psychological science of racial bias and policing. *Psychology, Public Policy, and Law*, 23(4), 398–409. <https://doi.org/10.1037/law0000130>
- Swencionis, J. K., Pouget, E. R., & Goff, P. A. (2020). *Hierarchy maintenance policing: Social dominance and police use of force* (Unpublished manuscript). Center for Policing Equity.
- Trinkner, R., Kerrison, E. M., & Goff, P. A. (2019). The force of fear: Police stereotype threat, self-legitimacy, and support for excessive force. *Law and Human Behavior*, 43(5), 421–435. <http://dx.doi.org/10.1037/lhb0000339>
- Trinkner, R., Tyler, T. R., & Goff, P. A. (2016). Justice from within: The relations between a procedurally just organizational climate and police organizational efficiency, endorsement of democratic policing, and officer well-being. *Psychology, Public Policy, and Law*, 22(2), 158–172. <https://doi.org/10.1037/law0000085>
- Tyler, T. R. (1988). What is procedural justice? Criteria used by citizens to assess the fairness of legal procedures. *Law Society Review*, 22(1), 103–135. <https://doi.org/10.2307/3053563>
- Tyler, T. R. (1990). *Why people obey the law*. Yale University Press. (See Chapter 1, “Procedural Justice, Legitimacy, and Compliance,” pp. 3–7.)
- Tyler, T. R. (2000). Social justice: Outcome and procedure. *International Journal of Psychology*, 35(2), 117–125. <https://doi.org/10.1080/002075900399411>

- Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. *Crime and Justice*, 30(2003), 283–357. <https://doi.org/10.1086/652233>
- Tyler, T. R. (2004). Enhancing police legitimacy. *The Annals of the American Academy of Political and Social Science*, 593(1), 84–99. <https://doi.org/10.1177/0002716203262627>
- Tyler, T. R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology*, 57, 375–400. <https://doi.org/10.1146/annurev.psych.57.102904.190038>
- Tyler, T. R., & Huo, Y. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.
- U.S. Department of Justice, Civil Rights Division. (2017). *The Civil Rights Division's pattern and practice police reform work: 1994–present*. <https://www.justice.gov/crt/file/922421/download>
- Vandello, J. A., Bosson, J. K., Cohen, D., Burnaford, R. M., Weaver, J. R. (2008). Precarious manhood. *Journal of Personality and Social Psychology*, 95(6), 1325–1339. <https://doi.org/10.1037/a0012453>
- Vorauer, J. D., Main, K. J., & O'Connell, G. B. (1998). How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *Journal of Personality and Social Psychology*, 75(4), 917–937. <https://doi.org/10.1037/0022-3514.75.4.917>
- Walker, S., Alpert, G. P., & Kenney, D. J. (2000). Early warning systems for police: Concept, history, and issues. *Police Quarterly*, 3(2), 132–152. <https://doi.org/10.1177/109861100003002001>
- Walker, S., & Katz, C. M. (2008). *The police in America: An introduction* (6th ed.). McGraw-Hill.
- Weitzer, R., & Tuch, S. A. (2004). Race and perceptions of police misconduct. *Social Problems*, 51(3), 305–325. <https://doi.org/10.1525/sp.2004.51.3.305>
- Wells, R. (2017, May 1). Lessons from the LA riots: How a consent decree helped a troubled police department change. *CNN*. <https://www.cnn.com/2017/04/28/us/lapd-change-since-la-riots/index.html>
- Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues*, 25(4), 41–78. <https://doi.org/10.1111/j.1540-4560.1969.tb00619.x>
- Wigon, C. (2014, December 18). The LAPD didn't catch an alleged serial killer for 30 years. Is it because the victims were Black? *Vanity Fair*. <https://www.vanityfair.com/hollywood/2014/12/tales-of-the-grim-sleeper-nick-broomfield>
- Wogan, J. B. (2016). How police chiefs plan to avoid “lawful but awful” shootings. *Governing.com*. <https://www.governing.com/topics/public-justice-safety/gov-police-chiefs-shootings.html>
- Wolfe, S. E., & Piquero, A. R. (2011). Organizational justice and police misconduct. *Criminal Justice and Behavior*, 38(4), 332–353. <https://doi.org/10.1177/0093854810397739>
- Worden, R. E. (2015). The “causes” of police brutality: Theory and evidence on police use of force. In E. R. Maguire & D. E. Duffee (Eds.), *Criminal justice theory: Explaining the nature and behavior of criminal justice* (2nd ed., pp. 149–204). Routledge.