Policing the Powerless: How Black Political Power Reduces Racial Disparities in Traffic Stop Outcomes

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ABSTRACT: What factors predict higher and lower levels of racial disparities in traffic stops outcomes? Looking at all North Carolina cities where the data allow, and controlling for poverty, crime, and population size, we find powerful evidence that black political mobilization is the key. In cities with low black population share, low black share of voting in the most recent elections, and low black share of elected seats on the city council or in the mayor's office, disparities are higher. Police in such cities may feel less pressure to accommodate a large and politically powerful black community. By contrast, where blacks are more powerful politically, disparities are significantly lower. At the higher end of racial disparities, many members of the minority community may be driven to anger not only at the police but toward government in general, withdrawing from participation in politics and not voting. At the higher end of political representation and power among blacks, police may be more careful to avoid alienating such an important part of the local community. Either way, political representation of blacks is strongly associated with reduced bias in the behavior of the local police.

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Since the shooting of Trayvon Martin in 2012 and the organization of the Black Lives Matter movement in 2013, police–community relations have been in the news. Of course, friction between police departments and the communities they serve is a perennial issue in urban America. The 1992 Los Angeles riots were in response to the acquittal of police officers for the beating of Rodney King, an unarmed black man. The 1967 Detroit riots were sparked by a police raid of a black nightclub. Many of the riots of the 1960s erupted in communities where black neighborhoods were policed by largely white police forces and where trust eroded beyond the breaking point. There is nothing new, in other words, about problems of trust between the black community and the men in blue. However, the last several years have seen unprecedented and consistently high levels of concern, media discussion, and community engagement that have forced or allowed many difficult conversations about race, policing, and citizenship.

In this paper, we ask what explains higher and lower levels of racial disparities in policing across communities. We find striking and powerful evidence that it is black political power. In communities such as Ferguson, Missouri, with little black political representation on the city council or in local government, police were found to target the large black community for more aggressive actions without apparent fear of political repercussion (see US DOJ 2015). Our analysis of North Carolina communities suggests that Ferguson was no anomaly. First, the degree of disparity, with blacks 107 percent more likely to be searched after a traffic stop than whites (US DOJ 2015, 62), would put Ferguson just above average for North Carolina cities; it would be no outlier. Second, the correlation between disparate treatment of whites and blacks and low political representation of blacks in important local government positions, given their share of the population, is in fact typical. Our study shows the key role of political representation and voice in ensuring equitable treatment of blacks and whites. As such, we take the tragedy of

Ferguson, and seek the broader lessons. One key lesson: Voice matters. Voting matters. Where blacks do not vote or gain electoral success, police are significantly more likely to target them for disproportionate enforcement actions. While our study points to some significant problems, it also points to two routes to improvement. One is political mobilization and representation. But another is fully within the control of the police: Control the targeting of police "investigatory" stops on black motorists.

Since the 1960s, aggressive police targeting of minority communities has been justified by the "war on crime." Even routine traffic stops were seen as a means by which the police could target drug couriers and put an end to the epidemic of drug abuse that has long generated so much concern. In declaring a "war on crime" and a "war on drugs" political leaders asked our police forces to target those responsible for crime and to use all means to inhibit their actions. The Court declared in its 1968 *Terry v. Ohio* decision that the police could briefly detain and conduct a limited search (e.g., "pat down") any individual they reasonably suspected might be involved in crime. The "reasonable suspicion" threshold is considerably lower than the "probable cause" threshold typically required for a search. Most importantly, criminal justice research provided few clear guidelines about what might exactly constitute a "reasonable suspicion." In the lack of clear guidelines, police were essentially asked to use their intuition, instincts, training, and best judgment. While an officer's best judgment might be accurate, questions remain if the vast discretion afforded an individual police officer to detain this or that individual might allow unwarranted racial biases.

Routine traffic safety patrols, like other police activities, have been dramatically affected by these changes, of course. In particular, the war on crime saw the introduction of the "investigatory stop," which are stops where an officer pulls a driver over because they look

suspicious or out-of-place, rather than in response to a serious traffic violation. Investigatory stops are legal because there are so many traffic laws that virtually every driver is routinely guilty of breaking one or another of them. The Court ruled in its unanimous 1996 *Whren v. United States* decision that any traffic violation provided the opportunity for an officer to pull over a car. Crucially, there was no requirement that the officers act in an equitable manner when deciding which car to pull over. If 10 cars are speeding, the officer may decide to pull over that one driver who seems otherwise to be of interest, perhaps because of how they look. By the Court's logic, it is unreasonable to arrest all the speeders, so the police must have discretion to pull over this driver rather than that one. And, by breaking the speed limit, all drivers opened themselves up to the possibility of a traffic ticket and a conversation with an officer. Of course, once that conversation starts, the officer may decide that they would like to search the driver or the vehicle, and they may seek probable cause or ask for consent. In *Whren*, the Court essentially declared that all drivers were subject to police stop, and that the stops need not be distributed in an equitable manner. Police could use their best judgment in deciding whom to stop.

The police were not expected to stop all speeders, all those veering slightly out of their lane as they drive, all those driving in the passing lane of a freeway, or all of those with a cracked brake light, a dangling mirror, or an obscured license tag. Officers could pick and choose those offenders who seemed to be of greater interest. And, with hundreds of traffic laws and great discretion in their interpretation, officers could pull over virtually any car. Writing for the unanimous majority, Justice Scalia wrote:

> Petitioners urge as an extraordinary factor in this case that the "multitude of applicable traffic and equipment regulations" is so large and so difficult to obey perfectly that virtually everyone is guilty of violation, permitting the police to single out almost whomever they wish for a stop. But we are aware of no principle that would allow us to decide at what point a code of law becomes so expansive and so commonly violated that

> infraction itself can no longer be the ordinary measure of the lawfulness of enforcement (*Whren*, p. 818).

Once pulled over, officers could seek consent or use probable cause to conduct a search of the driver, passengers, or the vehicle. Effectively, the Court permitted the use of routine traffic stops for targeted criminal investigations. Police chiefs and politicians justified these actions as necessary to fight the war on crime and the Supreme Court did not see any viable route to standing in their way.

Consistently through the war on crime, police agencies have made clear that "you have to kiss a lot of frogs before you find your prince"—very large numbers of traffic stops would have to occur before an officer might find a large cache of drugs, contraband, or a felon on the run. Unstated in that calculation was that many Americans would be subjected to police investigations so that a small number could be searched or arrested. Those who were momentarily detained were said by the Court to have suffered only a trivial inconvenience. The key element in this targeting, which kept it hidden for so long from those who might have objected, was that middle-class white Americans were largely exempt from its consequences. On the other hand, members of minority groups, especially young men, were subjected to a lot more than just an occasional trivial inconvenience. Police routinely targeted poor neighborhoods, individuals with certain forms of dress, males rather than females, younger people rather than older ones, and minorities rather than whites. Thus, millions of Americans have been targeted for more intensive police attention outside of the gaze or knowledge of most middle-class whites.

We propose that these differences manifest most clearly in the level of discrepancy between how a police agency treats the black members of its community and how an agency treats the white members of its community. Two possible sources of agency-level variation in policing behavior toward white and black drivers are examined here. These are: 1) the level of

discretion officers have because of investigatory stops, and 2) the political power of black communities. So, agencies can affect their disparities through simple reforms by restricting discretion among officers, and we suspect that areas where black community members can make their voices heard will encourage agencies to take these steps.

We look at differences in outcomes following traffic stops across 86 police agencies in North Carolina.[2] Comparing the level of disparity by social groups, we find that in those communities where blacks have the lowest level of political power, racial disparities are greatest. In the communities where the black population is larger, has more voice in elections, and controls more seats on the city council, disparities in policy are lower. Police targeting is greater where the targets are powerless.

Theoretical Expectations

Disparate policing is the differential treatment of communities by police officers and agencies. Here we focus on differences in policing of white and black communities and the potential disparities in policing that occur. Specifically, as this relates to traffic stops, disparate policing is observable and can be felt in a number of ways. In the course of this paper, we discuss disparate policing as it manifests in two ways: during and at the conclusion of a stop. During a traffic stop, a police officer may or may not choose to search a driver. At the conclusion of a traffic stop, a police officer may choose to let the driver go without given them a warning, ticket, searching or arresting them, the officer may issue a verbal warning, the officer may issue a written warning,

[2] We exclude state police, county sheriffs, and specialized police agencies (e.g., university or hospital police forces) in order to focus exclusively on those cases where the political environment of the municipal government may affect policing. In future analyses, we may add county sheriff agencies to this analysis; sheriffs are elected officials and may be sensitive to the questions we explore in this analysis as well.

the officer may issue a ticket or citation, or the officer may search or arrest the driver. We group the first two outcomes (verbal and written warnings) into one category called "light outcome." Citations are the modal outcome of traffic stops and so we can consider this the "expected" outcome, leaving searches and arrests as the less common "harsh" outcomes.

Here we develop and explore two possible sources of agency-level variation in disparate policing behavior. First, we propose that the level of discretion allocated to officers influences outcomes. Police departments can choose to emphasize or to deemphasize investigatory stops as compared to safety-related stops, and they can choose whom to target with investigatory stops. We find that those agencies which target the black community with investigatory stops have higher racial disparities. Second, we find that those agencies operating in municipalities where blacks are a large share of the population, of the electorate, and where blacks are highly represented among elected officials show lower racial disparities.

Traffic Safety v. Criminal Investigation, A Key Distinction for Traffic Stops

A key element in the war on crime has been the diversion of all available police activities into the search for criminals, in particular those involved in the drug trade. This has had a dramatic impact on the enforcement of traffic laws. Where it is easy to train a police officer to operate a radar gun, to identify someone running a red light or not stopping at a stop sign, or driving unsafely, identifying criminals as they drive is more nuanced. For this reason, we distinguish between traffic stops that are based on the enforcement of traffic safety laws and those which are more focused on investigations. North Carolina law distinguishes among ten reasons why a driver may be pulled over, as described in Table 1. The table shows how many drivers have been pulled over for each reason from 2002 through 2015, and shows the percent of black and white drivers stopped for each reason.

Table 1. North Carolina Traffic Stops by Purpose, Black and White Drivers

Purpose	Stops	Percentages			B:W
Safety		Total	White	Black	Ratio
Speed Limit	8,455,065	41.92	45.67	36.70	0.80
Stop Light/Sign	923,625	4.58	4.40	4.73	1.08
Driving Impaired	192,193	0.95	0.92	0.71	0.77
Safe Movement	1,074,490	5.33	5.11	5.25	1.03
Investigatory					
Vehicle Equipment	1,727,725	8.57	7.41	10.66	1.44
Vehicle Regulatory	3,297,960	16.35	14.68	20.61	1.40
Seat Belt	1,867,994	9.26	10.37	7.89	0.76
Investigation	1,368,208	6.78	6.18	6.88	1.11
Other Vehicle	1,021,994	5.07	4.39	5.51	1.26
Other					
Checkpoint	238,891	1.18	0.87	1.07	1.23
Total	20,168,145	100.00	100.00	100.00	

Note: Data includes only passengers. Total includes Hispanics as well, not shown separately. Checkpoint stops are excluded from any further analysis, as the law requires data to be collected only when an action is taken.

Across more than 20 million traffic stops, by far the most common reason to be pulled over is for speeding; over 40 percent of all traffic stops are for speeding. Just one percent involve the possibility of drunk driving. The table also shows how we distinguish "safety" stops: speeding, stop light violations, driving impaired, and safe movement violations. These are of course debatable; an officer may use "unsafe movement" as a pretext to pull over a driver after seeing their tire touch the white line at the edge of their traffic lane, or pull over a driver for travelling 27 MPH in a 25 MPH zone. On the other hand, equipment violations, regulatory issues (e.g., expired registration tags), seat belt violations, investigations, and "other" stops are more difficult to link to an issue of traffic safety. These are more likely to relate to a pretext or to an investigation, a reason why an officer wants to gain more information about that driver. Again, the distinction is not likely to be perfect, as driving without headlights (equipment) is certainly a safety concern, as can be a seat belt violation. While the data include a number of checkpoint stops, we do not analyze these data because in contrast to the other stop purposes, stops from

checkpoints are recorded only when the officer takes some action against the individual concerned. There is no record of the vast majority of checkpoint stops.

We show the percent of all drivers, whites, and blacks stopped for each of the reasons in Table 1, and the last column, B:W Ratio shows which types of stops tend to be more focused on one race or the other. A value of 1 there indicates that white and black drivers have the same rate of being stopped for that reason; numbers below 1 indicate a relative focus on white drivers, and numbers above 1 show a focus on blacks. The ratio is simply the black percentage divided by the white percentage.

Given that traffic safety stops tend to be based on more explicit criteria (e.g., observed speeding), but that investigatory stops may be more likely to be based on the uncertain search for criminal behavior, investigatory stops are subject to considerable officer discretion. In uncertain situations, individuals rely on heuristics and stereotypes to inform their decisions. As previous research has shown (Glaser, Spencer, Charbonneau 2014; Eberhardt, Dasgupta, and Banaszynski 2003; Eberhardt, Davies, Purdie-Vaughns, Johnson 2005; Correll, Judd, Wittenbrink 2002), use of stereotypes in determining suspicious individuals biases towards the identification of blacks rather than whites. As a result, when given discretion in uncertain situations then judgements will on average bias towards accusing – or at least investigating – blacks over whites. Further, in the aggregate this will appear when a governmental unit increases uses discretionary tactics at higher rates than others (Glaser, Spencer, Charbonneau 2014). Discretion, in other words, can be linked to implicit biases; factors which reduce discretion can also reduce such biases and the disparities they can create. All this is a result of the fact that felons and drug dealers often do not exhibit any systematic driving tendencies that would allow police to distinguish them from law-abiding motorists. It is with the absence of any useful indicators that biased heuristics come into play.

Police departments may use traffic stops to increase and maintain road safety, as supplemental tool for investigations, or both. As condoned by *Whren v United States* (1986), traffic stops can be used for investigatory purposes, and they often are. Traffic stops—specifically investigatory stops—have been a prominent tool in the war on crime since the 1960s. Investigatory stops (as well as DUI stops) result in higher rates of search than other types of safety stops (such as speeding or stop light / stop sign violations).

Where the police use traffic stops as an investigatory tool, targeted populations are subjected to more intense surveillance. This in turn leads to an increase in the proportion of stops that result in either light action being taken (no action, verbal warning, or written warning) or a search. Light outcomes follow when an officer wants to make their presence known or seeks to get a look inside a car. Searches also are more likely following investigatory stops, as the goal of the stop is to search for contraband. Safety-related stops, therefore, should lead to lower rates of "light outcomes" and searches, but correspondingly higher rates of citations. We compare the rates of white and black drivers in these three categories of stops. Where racially based profiling may be occurring, we expect to see it by high ratios of light outcome stops, high ratios of search rates, and low ratios of citations. Ratios are simply calculated as the rate for blacks divided by the rate for whites. Our key distinction between stops made for traffic safety reasons and those which are investigatory in nature focuses on the police interest in keeping the roads safe for other drivers (the traditional traffic safety function) and the diversion of traffic patrol into an avenue for more general criminal investigations. From keeping the roads safe to the war on crime, we have asked our patrol officers to engage in the impossible: find those with the proclivity to engage in criminal without unduly targeting any particular racial or other groups.

Political Power

A second driving force in explaining racial disparities is political power. By political power, we mean the extent to which a minority group is incorporated into the political process. Incorporation has three faces: presence, voice, and representation. We expect that all three of these variables, separately but especially in combination, will be associated with the degree of disparity in policing. The less the power, the greater the disparity.

First, a group has some power in the system merely due to its *presence* in the community. Numbers matter, and small minorities are easier to target for harsh treatment than larger groups or majorities. Elected officials aim to represent the interests of their communities. Bureaucratic agencies are attuned to their constituents. No local political leader would reasonably be expected to support policies that alienate a majority of the population. For smaller minorities, it may be easier to justify or ignore some problems. As a group's presence grows, then their political power grows. Because law enforcement is one aspect of local government, the presence and relative size of different groups in the population should influence its policies and practices. We would expect the same in schools or other local bureaucracies.

To be heard, a group must have voice, and in our system voice may be represented as the share of voters. Therefore, while the two are highly related, we look separately at the population share of white and black citizens as well as their respective shares in the electorate. Voters express their voice, and determine who is or is not elected or reelected. Citizens or other residents who are present, but who do not vote, can expect their interests to be less well represented. Voice is the share of the voters who come from each racial group.

Finally, descriptive representation matters. Cities with no black or minority representation on the city council, mayor's office, or other elected bodies may see less attention

to issues of racial equity during routine deliberations. Those with large numbers of minorities on the city council may see attention regularly paid to concerns of minority groups within the population and electorate. Descriptive representation amplifies concern for minority-relevant issues over and above what it might otherwise be. Scholars have previously found that the female share of seats in state legislatures is related to legislative attention to issues of particular concern to women (Branton 2005, Branton and Ray 2002, Cammisa and Reingold 2004), and the same has been found with regards to racial minorities, (Cannon 1999, Grose 2011), LGBT representatives (Hansen and Treul 2015), and blue-collar workers (Carnes 2013, Carnes 2012). Closely associated with our own interest in policing, but not focused on traffic stops, Salzstein (1989) and Stucky (2011) both investigated the linkage between having a black elected officials and the relative rates at which black men are arrested, across a number of cities. On average, these studies suggest that the presence of a black mayor and/or a majority black city council decreases the black arrest rate.

Taken together, community presence, political presence (voice), and presence in government (representation) make up the political power of a given group. As each increases, influence over policy grows. One such group that responds to these pressures because they are a part of the local government is the local police department. Public agencies cannot be expected to ignore the needs or preferences of large, loud, and well represented constituencies. They may or may not choose to do so for those with low values on the three variables we have enumerated.

Alternative Theories and Controls

While our understanding of the dynamics of political representation leads us to expect a linkage between presence, voice, and representation with racially disparate outcomes in policing, other social scientists have previously offered slightly different expectations. In particular, we consider

two alternative theories on how group presence—specifically the size of the black population in a community—influences policies and practices.

First, a number of social scientists have proposed that racial majority groups will implement social controls directed at minority groups to maintain dominance, which is known as the racial threat hypothesis. They do so because of a real or perceived risk that minority racial groups compete with them for economic and political power. To maintain dominance, elected officials and those organizations tasked with maintaining order will put in place policies that advantage the majority while disadvantaging or even demonizing the minority (Blalock 1967; Blauner 1972; Horowitz 1985; D'Alessio and Stolzenberg 2003; Stucky 2012). One such group charged with social control is the police department. As a result, police departments adopt policies and institute norms that favor and sometimes aggressively maintain the current balance of power (Stucky 2005, 2012). Racial threat theory also suggests a non-linear relationship between minority group share of the population and majority response: where minorities are very small in numbers, there is no threat at all. The theory suggests that majority response (or hostility) should be at its greatest as the minority group grows to a substantial share of the population. Different scholars have used different definitions of exactly what is the maximum threat level. After all, once the minority share is above 50, they are no longer a minority at all and the theory should suggest that its effects should be reversed.

Minority-threat theories typically have been tested in locations where the majority population is white, and provide little guidance on how measures and tests of the racial threat hypothesis should apply in majority-minority environments. In North Carolina, many local communities are in majority non-white. As a result, we propose that rather than racial threat being the cause of discrepant outcomes, it is the extent to which a community incorporates its

minority members. In testing the racial threat hypothesis, we found that our measure of black political power is highly correlated with it; that when we use racial threat rather than our measure of power in a similar regression the racial threat variable (whether measured as the difference in the black population from 20, 30, 40, or 50 percent of the population, or by including both percentage black and the square of that value in the model) is typically a significant predictor of racial disparities in traffic stops, but that it is substantively very low, with a value of zero to two decimal places. For these reasons, we estimate a model here using our political power index rather than a separate variable corresponding to the racial threat idea. Given that some of our communities include black majority populations, we believe that our index of political power is more appropriate for substantive reasons. Empirically, it performs better as well.

Second, as discussed in earlier chapters, one frequent explanation for discrepant patterns in policing is that police officers simply look for people who are out of place; at the institutional level, this might look like an order to investigate "fish out of water." However, we do not look at municipalities with extremely low numbers of white or black drivers because of concerns about the reliability of any calculations based on low numbers of drivers being stopped, especially since we are interested in what proportion of them are searched, an event that is relatively rare, statistically speaking. More generally, the "fish out of water" explanation can blend into the "powerless minority" explanation that we explore here. We do not assess the situations where blacks (or whites) are almost invisible in a given town, but we certainly do explore those towns where one group or the other might be only five or ten percent of the population. This is consistent with our main research focus, in fact.

Finally, we control for three important demographic variables in all of our models: the level of crime, poverty rate, and population size. Crime matters because traffic stops have been

used as a tool in the wars on crime and drugs: neighborhoods with high rates of crime, may lead to a more aggressive police presence. Readers should note, however, that levels of crime are correlated with race in North Carolina as elsewhere, because both higher levels of crime and greater numbers of black residents are found in cities. Poverty matters because it affects policing in many ways. People in poverty may drive cars with equipment or registration problems that generate more traffic stops. As these factors are not about race, we want to control for them in our analysis. Levels of poverty are of course correlated with race in North Carolina as elsewhere. Our findings below therefore should be interpreted with an awareness that any race effect we find is over and above whatever part of that effect that might be due to poverty. Similarly, we control for the population size in each municipality. Large municipalities feature many differences from small towns, including in the structure of their police departments (e.g., their institutionalization and bureaucratic structure), the ability of political leaders to respond to local neighborhood concerns, and sheer physical scope, making policing considerably more complex, and potentially more geographically distinct, in larger cities as compared to small towns.

Hypotheses

Based on the above, we formulate a series of observable implications to test. Understanding that our theory of political power relates individually but especially in combination to its three components, our expectations are very simple.

H1: Higher levels of political power are related to lower levels of racial disparity in traffic stops outcomes.

What is the mechanism by which disparities occur? Following from our discussion of investigatory versus safety-related stops, we expect that investigatory stops are the mechanism by which black drivers are targeted, compared to whites. In those towns where the ratio of blacks

to whites pulled over for investigatory stops is higher, we take this as an indicator of targeting, and expect it to be related to higher disparities. This leads to:

H2: The ratio of black drivers to white drivers pulled over for investigatory traffic stops is positively related to the degree of racial disparity in outcomes of those stops.

We test these two hypotheses with regard to a) investigatory stops, b) searches, c) "light outcomes", d) citation rates, and e) arrests. This progression moves from start to the end of the traffic stop.

The Test Case: North Carolina

We focus on traffic stops in the state of North Carolina conducted between 2008 and 2015. North Carolina was the first state in the nation to mandate the collection of demographic data following any traffic stop, passing the law in 1999. Beginning on January 1, 2000 for the State Highway Patrol, and in 2002 for all but the smallest police agencies, officers have recorded the age, race, and gender of every driver pulled over, why they were stopped, and the outcome of that stop.

We limit our analysis in two ways. First, we include only cities where at least 100 black drivers and 100 white drivers across the time period were stopped. These filters simply drop out agencies and years where too few traffic stops occurred in order to support robust conclusions about any patterns. Further, rather than looking at every year from 2002 through 2015, we study each year from 2008 onwards. This is because the data on population, voting turnout, representation in local elected office, and crime statistics, were not systematically available before 2008. Altogether, we use a dataset including 86 North Carolina municipalities, and 499 agency-year observations.

We look at rates of the different outcomes given a traffic stop for a particular reason and compare those rates across racial groups, yielding a disparity ratio. This differs from looking at

stop numbers, which we avoid because different police agencies of course deal with very different population groups by race. By looking at rates of outcomes after a stop occurs, and by limiting our analysis to those towns with a minimum number of traffic stops of blacks and whites, we avoid skewing our results by the fact that different agencies work with different mixes of drivers by race.

We measure disparities by rates of differential treatment by race. For each outcome – occurrence of searches, light outcomes, citations, and arrests – we calculate a black: white ratio to estimate the level of racially disparate treatment between the two communities.[3] Specifically, this is calculated using the following formula for each outcome:

$$Disparity = \frac{Rate\ of\ Occurence\ in\ Black\ Community}{Rate\ of\ Occurence\ in\ White\ Community}$$

If the disparity value is 1, then black and white drivers see equitable treatment. Values below 1 indicate that white drivers see that outcome more than black drivers, while values above indicate that black drivers see that outcome more than white drivers.[4,5,6] For summary statistics of these variables see Table 2.

[3] Black: white disparities are robust to the more enhanced specification (i.e. regression). For a discussion of this, see the appendix.
[4] There are 36 city-year instances of a search ratio lower than 1, and 23 cities account for this. They are: Boone, Butner, Claremont, Conover, Eden, Greenville, Holly Ridge, Kings Mountain, Kinston, Mebane, Mint Hill, Monroe, New Bern, Pineville, Rolesville, Sanford, Spring Lake, Tarboro, Troutman, Waxhaw, Weldon, and Youngsville. There are 8 city-year instances of a search ratio greater than 4.00, and 8 cities account for this. These are: Archdale, Asheboro, Carrboro, Durham Fletcher, Fuquay-Varina, Havelock, Morrisville, New Bern, Troutman, and Wilkesboro.
[5] 204 city-years have a light outcome ratio of less than 1.
[6] 203 city-years have a citation outcome ratio of less than 1.

Table 2. Summary Statistics of Traffic Stop Black: white Outcome Ratios

	Minimum	1st Qu.	Median	Mean	3rd Qu.	Maximum	N
Searches	0.17	1.36	1.76	1.93	2.22	10.32	499
Light Outcomes	0.53	0.94	1.00	1.01	1.08	1.79	499
Citations	0.59	0.92	0.99	0.98	1.04	1.38	499
Arrests	0.26	1.19	1.54	1.71	2.05	5.88	499

Note: Only agencies making at least 100 stops of black drivers and 100 stops of white drivers included in the analysis. Only observations included in regression included in the summary statistics.

Investigatory Focus

We use the black: white investigatory stops ratio to measure investigatory focus in a department. This ranges from 0.76 to 1.99 with a mean of 1.18. To distinguish between safety and investigatory stops, use the distinction made by Epp et al. (2014) to identify investigatory and safety stops. Traffic stops are deemed investigatory if the declared stop purpose is due to equipment violations, regulatory stops, seat belt stops, investigatory stops, and other types of stops, as described in Table 1. Safety stops include speeding violations, running a light or stop sign, driving under the influence, and movement violations. This distinction matters, because police departments can allocate only a finite amount of time to investigatory and safety stops. To focus greater attention on investigatory stops and to the war on crime, an agency must divert attention from ensuring safety on the streets.[7]

[7] This measure is blunt and obscures gradients within each category. For example, some number of speeding stops might be pretextual or investigatory in nature (ex. someone being stopped for going only 3 miles over the speed limit), while some number of stops due to equipment violations might be true safety hazards. Because we cannot distinguish between these, noise is introduced into the analysis. As a result, this presents as a hard test of our theory; If we find results congruent with our hypotheses here, they should be replicable elsewhere.

Building and Evaluating a Measure of Political Power

We build a measure of black political power. The three aspects of political empowerment that we discussed earlier are: 1) presence; 2) voice; and 3) descriptive representation. We operationalize each in the following ways: 1) percentage of the population that is black; 2) percentage of the voting population that is black; and 3) percentage of the local elected government that is black. Here we will discuss how each is measured, what each variable looks like, and why in isolation each only captures a portion of the broader concept we want to measure: political power. These elements were discussed above.

Population numbers come from the 2010 census. To provide a sense of what this variation looks like, let us turn to four North Carolina cities. In Cary, the population is 8.89% black, and 73.05% white; Cary is a moderately large urban town adjacent to the state's Research Triangle. In Durham, which is one of the three cities that comprise the Research Triangle, the population is 42.24% black and 42.57% white. A similar racial composition is found in Fayetteville (45.70% white and 44.83% black), which is home to one of the large military bases which are common in the state of North Carolina. In contrast to these three cities, Kinston, North Carolina has a minority white population comprising 28.56% of the community, and a majority black population comprising 69.01% of the community. Across all the communities in our study, the black share of the population ranges from 6.56% to 69.08%; the mean is 28.56%. Cary and Kinston therefore represent something close to the extremes, and Durham and Fayetteville represent situations of close to equal balance, therefore with a slightly higher black share than average across the state.

We measure voice by looking at voter turnout numbers. This is a key factor in translating numbers into power, of course. To measure political participation, we look at voting statistics by

race in each city for municipal elections from 2007, 2009, 2011, and 2013.[8] Share of voters from 2007 is used for 2008 and 2009; share of voters from 2009 is used for 2010 and 2011; share of voters from 2011 is used for 2012 and 2013; and finally share of voters from 2013 is used for 2014 and 2015. This is done to leverage the time element present in the dataset; disparate treatment in a future time period cannot cause voter turnout in a previous time period. For each election, we calculate the proportion of voters who are black in a given city in a given election. This measure captures the strength of the black voice within the electorate. The minimum black vote share in a community in our sample is 0.16%, the maximum is 96.90%, the mean is 20.53%, and the median is 14.90%.

We measure descriptive representation by looking at the share of local elected officials belonging to that group: the level of descriptive representation. This provides a direct seat at the table among those officials charged with overseeing local government, which includes local law enforcement. By local elected officials, we mean the city council and mayor of a town. As that group captures an increasing number of the seats at the table, their incorporation into the political system grows because the direct active power of that group grows. As with presence and vote share, practically this should result in lower disparities for those outcomes with high discretion: lower black-white search ratios and lower black-white light outcome ratios.

[8] To calculate voter turnout, we started with the voting history and voting registration information for each county in North Carolina from the Board of Election's website: http://www.ncsbe.gov/other-election-related-data. Each file was then merged together to identify in which elections each individual voted. This file was then collapsed by race of voter, election, and municipal description. The totals resulting from this are taken as the number of voters that turned out to vote in each election by race. We then compared voting turnout rates to the 2010 Census population estimates to calculate voter turnout by race. This process was automated and conducted in R.

To measure descriptive representation, we gathered information on the race of the mayor and city council members for each city in North Carolina for 2013 to 2014. To provide a contextual sense of what the type of variation that exists in North Carolina, we can turn to the four cities in our running example. In Cary, where the black population accounts for less than 10% of the community, 0% of the council is black. In Durham and Fayetteville, the black proportion of each city council is 29% and 50% respectively; in each city the black community comprises approximately 44% of the population. In Kinston, where the majority of the population is black, only 33% of the city council is black.[9]

We use factor analysis to construct a latent dimension of black political power in a given community that incorporates the shared variance across the measures. One factor was estimated; this factor explains 73% of the variance across the three variables.[10] The result is a variable measuring black political power that ranges from -1.06 to 2.79 with mean of 0.06 and median of -0.15.

To put this constructed measure in context, we can turn once again to the four cities that have been our ongoing examples. During this time span, Cary has an average black political power index score of -0.77; as a reminder Cary has small black population that makes up a

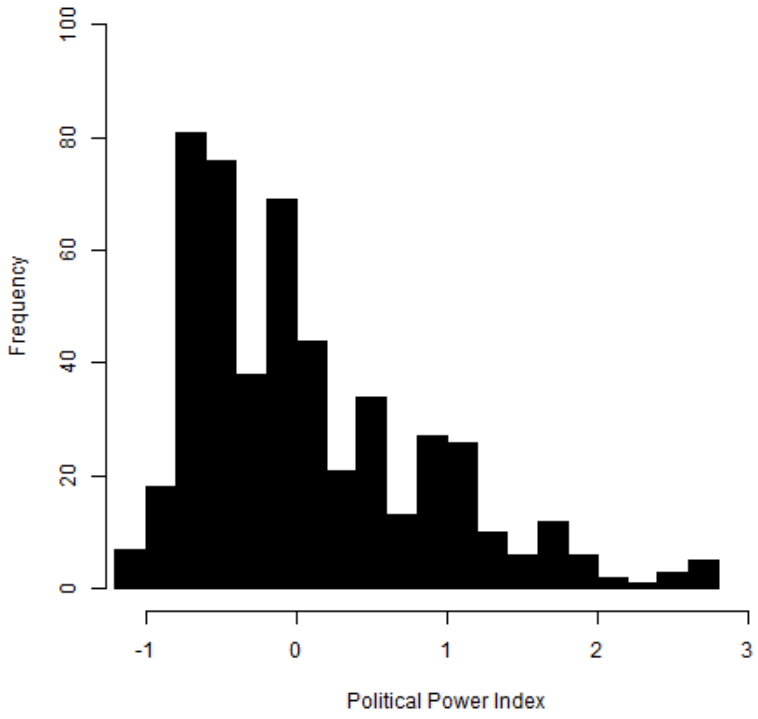
[9] While many studies that look at the relationship between police behavior and race use the race of the mayor as the key explanatory variable, we do not do so (for examples see: Stucky 2012, Saltzstein 1989). Rather we take a more holistic definition of city government to include both the city council and mayor. While this was done because we believe this is theoretically justified, it was also done because there are almost no Black mayors in North Carolina during the time period of our study.

[10] The factor analysis was completed in R using the fa command within the psych package. The factor analysis used an oblique minimizing rotation (oblimin) and minimum residual OLS to estimate the factor. The standardized factor loadings are: 0.70 for the percent of local government that is Black, 0.92 for the percent of the voting population that is Black, and 0.92 for the percent of the population that is Black. The correlation of scores with factors is 0.96. The multiple R square of score with factors is 0.92. The minimum correlation of possible factor scores is 0.85.

negligible proportion of voters and has no black local elected officials. In nearby Durham, which has a large black population that makes up a greater share of the voting population but holds only 29% of the local elected seats, the black political power index, on average, is 0.96. In Fayetteville, which has a similar demographic make-up but where a greater share of the local elected officials are black, the political power index, on average, is slightly higher than that of Durham at 1.15. Finally, in majority black community of Kinston, the black power index is near its maximum at 1.91.

Figure 1 shows the distribution of the black political power variable across the communities in our study over time. For the index, by definition the measure ranges from low to high political power with a mean of approximately zero and a standard deviation of one. There is a skewed distribution toward low levels of power and low levels of incorporation, with a few instances of high power and high incorporation. In most cities, the black community has little power.

Figure 1. Black Political Power



Municipal context

To operationalize the context within which agencies operate, we account for the size of a city, the level of poverty, and the level of crime. Population size and the percent of the population in a city living below the poverty line come from the 2010 census. The log of the population is used in the analysis. The level of crime comes from the annual FBI report on crime in the United States.[11] Specifically, only those crimes classified as felony ones are included. These are violent crime, murder and non-negligent manslaughter, rape, robbery, aggravated assault, property crime, burglary, larceny-theft, motor vehicle theft, and arson. The crime level is estimated per 1,000 people.

[11] For an example report see: https://ucr.fbi.gov/. The specific information comes from Table 8 in the annual Crime Report in the United States.

Analysis

We fit four hierarchical linear models[12] with varying intercepts by city. Our variables are used to predict one of the four traffic stop outcome variables: search rates and ratios, light outcome rates and ratios, citation rates and ratios, or arrest rates and ratios.[13] Additionally, as explained in the expectations section above, we control for the log of the population, the percent of the population below poverty, and the crime rate.

Table 3 shows the results of the regressions predicting the black-white light outcome ratios for all three of our indicators of disparity in outcomes following a stop. Following from our hypotheses, we expect that the coefficients for political power should be negative for the models predicting the black-white ratio of light outcomes and searches, but positive for citations. This is exactly what we find: For each one-unit increase in political power, the search rate ratio goes down by -0.234, the light outcomes ratio declines by -0.041, and the citation ratio increases by 0.033. Each of these is significant at the .05 level of confidence. Further, we confirm our expectations relating to the black-white ratio of investigatory stops. Where such stops are focused more on black drivers, the light outcomes ratio is more highly disparate as well, searches are more disparate, and citations are more likely to be given to whites as compared to blacks.

[12] We use HLM regression rather than OLS because observations are clustered by city as shown by the ANOVA presented in the appendix. However, each observation contains some information static at the agency level. As a result, an HLM rather than FE in an OLS are used.
[13] Two variables that might also influence outcomes, but are excluded in the analysis presented here, are the percent of police officers who are black working in a given city and the level of segregation in a given city. Inclusion of both variables excludes approximately half of the observations. This missingness appears to be directly related to the level of political power in a given city. As a result, neither variable is used in the heart of the analysis presented here. For further discussion, a presentation of the results in the restricted analysis, and a presentation of how the key variables of interest change given the observations included. See the appendix.

Table 3. Explaining Racial Disparities in NC Traffic Stop Outcomes.

	Searches	Light Outcome	Citation	Arrest
Intercept	-0.039	0.651**	1.310**	1.393**
	(0.742)	(0.086)	(0.068)	(0.514)
Political Power	-0.234**	-0.041**	0.033**	-0.030
	(0.114)	(0.013)	(0.011)	(0.079)
Investigatory Stops Ratio	0.935**	0.154**	-0.131**	0.446
	(0.348)	(0.043)	(0.032)	(0.276)
Log(Population)	0.094	0.016**	-0.015**	-0.034
	(0.066)	(0.008)	(0.006)	(0.045)
Crime	-0.005	-0.003	-0.000	-0.004
	(0.015)	(0.002)	(0.001)	(0.011)
% Below Poverty	0.388	0.202	-0.091	1.438*
	(1.123)	(0.129)	(0.104)	(0.771)
AIC	1383.126	-665.454	-985.731	1193.091
BIC	1416.827	-631.753	-952.03	1226.792
Log Likelihood	-683.563	340.727	500.865	-588.545
Num. obs.	499	499	499	499
Num. groups: City	86	86	86	86
Var: City (Intercept)	0.394	0.005	0.003	0.136
Var: Residual	0.694	0.011	0.006	0.512

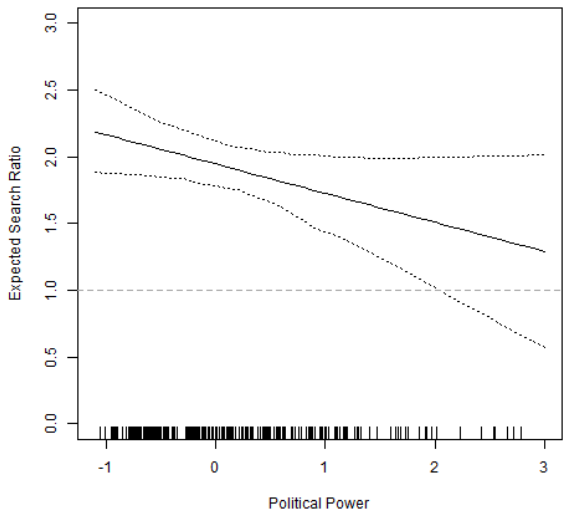
*Note: Entries are regression coefficients from a hierarchical linear model, with random city intercepts (standard errors in parentheses. ** denotes significance at the 0.05 level, and * denotes significance at the 0.10 level. The dependent variable is the black: white outcomes ratio (percent of black drivers with the outcome / percent of white drivers with the outcome).*

We can explore the impact of political power as well as the relative focus on investigatory stops among black and white drivers by looking at simple plots. Figure 2 compares each of the 499 agency-years from Table 3, showing how the outcome correlates with the degree of black political power. Four lines are also presented: the equality (or baseline) ratio of 1.0 indicating no racial differences as a dashed grey line; the regression line, which is the predicted value from the regression in Table 3, as a solid black line; and the 95% confidence interval around the regression line as dashed black lines. A rug plot at the base of the plot presents the distribution of the political power variable. Three figures are presented in identical format. These are the light outcomes ratio, the citation ratio, and the search ratio. On the x-axis is the black political power index and on the y-axis the relevant ratio.

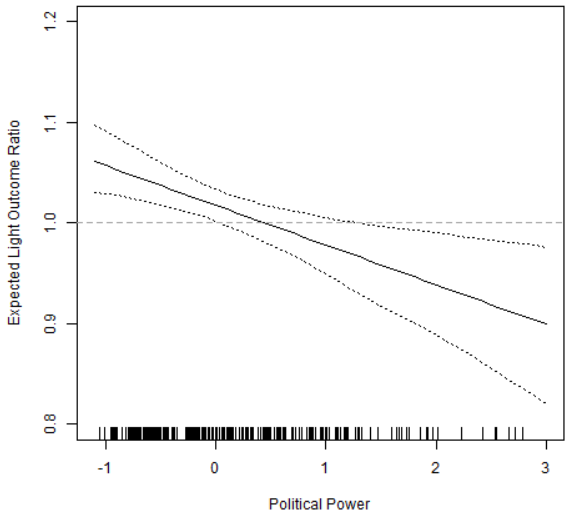
In each part of Figure 2, we see the relationship that is expected from the theory. For searches and light outcomes, the regression line declines, indicating that there is a negative relationship between power and the relevant ratio. In Figure 2a, focusing on searches, the regression line never crosses the equality line, but the confidence interval does include 0 at the highest levels of political power. The regression line declines from a value over 2 to very close to 1. The expected search rate for blacks declines from over twice that of whites to virtually the same. In Figure 2b, light outcomes, the regression line crosses the equality line, and is statistically distinct from one at the lowest and highest levels of political power. Regarding the relative rates at which black and white drivers are given a citation, in Figure 2c, equality comes more quickly as political power moves up. It may seem strange to suggest that a measure of black political power is that blacks get tickets just as often as whites, but this reflects a shift from targeting minorities for investigatory stops to instead pulling black drivers over for safety violations; if officers are pulling over cars for speeding, a ticket may be just what the driver deserves.

Figure 2. Effect of Change in Black Political Power on Outcome Ratios

a. Searches



b. Light Outcomes



c. Citations

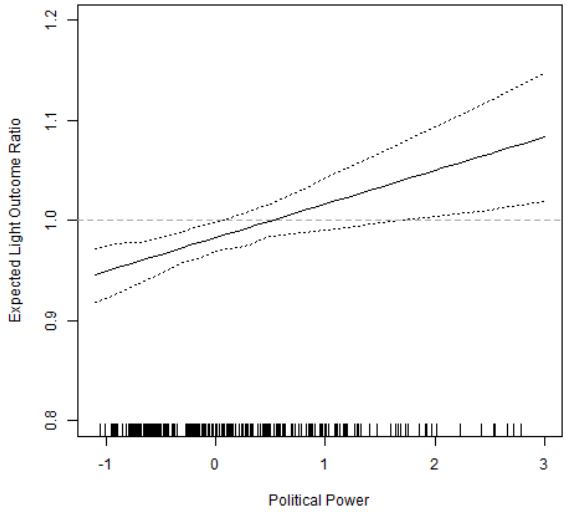


Figure 3 presents three identically formatted comparisons of the same outcomes with the other independent variable of interest: the percent of investigatory stops. The three parts of the figure again show each individual policy agency – year, with the regression line showing how the three variables of interest (the light outcome ratio, search ratio, and citation ratio) vary as the percent of investigatory stops moves from low to high. Here, our theoretical expectations are that as the percent of investigatory stops increases, racial disparity in outcomes should also increase. And the figures confirm these expectations.

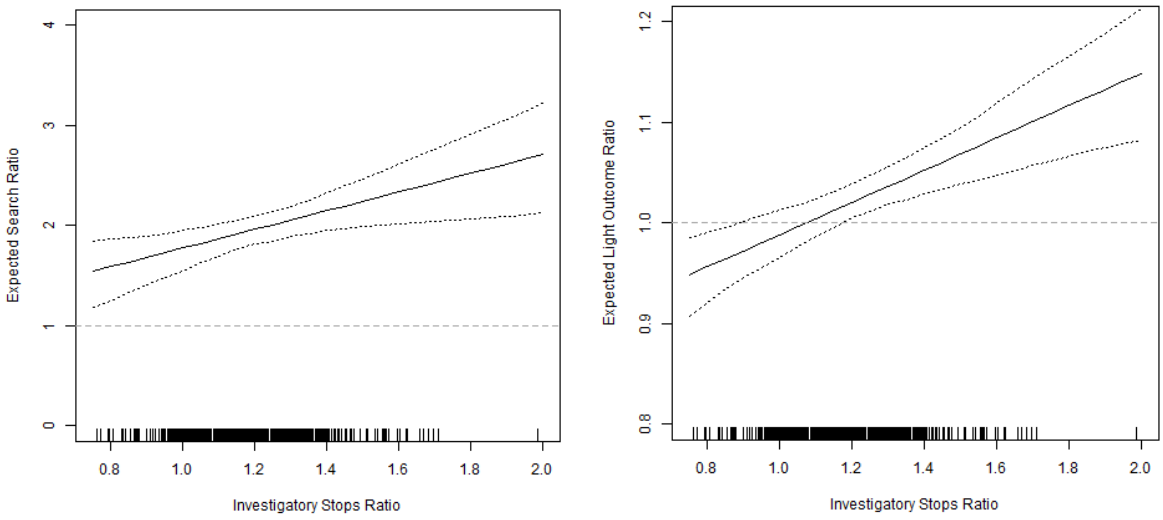
Light outcomes and searches increase in their relative focus on black drivers as we move from low to high on the investigatory stop ratio, and the citation ratio declines. For light outcomes and citations, there is only statistical evidence of racial difference in outcomes on average with all other values held at their means when the investigatory stop ratio is near its extreme values. For searches, the relationship is substantively stronger, apparent when the investigatory stop ratio goes above 1 – equality – on average while other variables are held at their means. Each coefficient is statistically different from 0 – no substantive effect – at the 0.05 level.

Across the controls, only those for population size reach statistical significance at the 0.05 level. As population increases, both the search ratio and the light outcome ratio decreases; as population increases, citation ratios increase. Additionally, the percent living below poverty appears to not be associated with the search ratios or citations ratios. However, it is weakly statistically significant at the 0.10 level as it relates to light outcome ratios. Crime per thousand does not appear statistically significant for these ratios. One interesting facet of these controls is that the only substantive variable that appears as statistically significant at the 0.10 level in the arrests regression is the level of poverty: as the level of poverty increases the disparity increases.

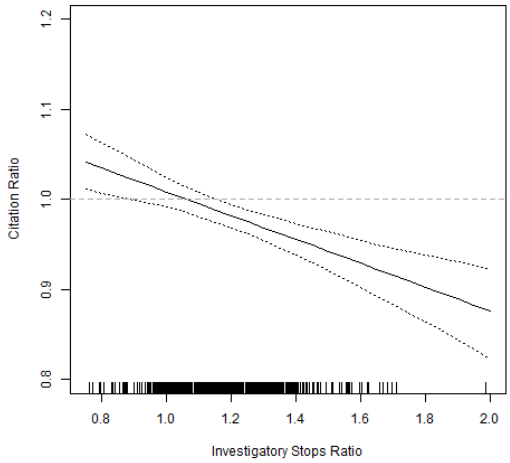
We present models in the Appendix showing results without these controls, and for the controls without our main political power index variable. Rates of crime and poverty may be expected strongly to affect policing behaviors, of course. However, poverty may affect the investigatory stops ratio, and crime rates may affect the overall search rate in general (for both races). One intervening variable (investigatory stops) is therefore already included in the model, and the other (crime) is incorporated into our hierarchical model with separate intercept terms for each city. These factors may explain a potentially surprising set of null findings for our control variables.

Figure 3. Effect of Change in Black-White Investigatory Stops Ratio on Outcomes

a. Searches b. Light Outcomes



c. Citations



Conclusion

A community's political power influences how they are treated. Where blacks are politically weak, disparities are strong; where blacks are politically strong, disparities shrink or disappear. The greater the visibility of those that have been in the shadows, of those that have been largely silenced, then the better the rest of the community can understand the disparate treatment those in the shadows have undergone. The greater their power in the community; then the greater their voice is heard. By occupying greater space, the voices of the black community can be better heard.

The data presented in this chapter document some disturbing trends: political power in most cities across North Carolina is firmly held away from the hands of the black community. Policing is typically targeted much more strongly at the black community; the ratio of black and white drivers searched is perhaps the simplest outcome indicator for police treatment of different demographic groups. In most cities across the state the ratio is quite high; Table 2 showed the median search rate for blacks is 73 percent higher than for whites, across North Carolina's cities.

Having looked systematically at three types of variables: who gets stopped for investigatory compared to traffic safety stops, who experiences which types of outcomes after a traffic stop, and who has political power, we showed that these all fit into a coherent picture. Power matters. It changes the behavior of the police.

Further, communities can directly address disparate policing by decreasing discretion in traffic stops. To do this, agencies can instruct officers to focus their attention on traffic safety rather than investigatory traffic stops. Simply by decreasing the use of investigatory stops, and ensuring that these are not targeted at black drivers, our findings suggest that an agency could see its traffic stop outcomes ratios converge to equality across the races. Further, when given the choice between stopping an unsafe driver who is speeding, driving drunk, or running a stop sign versus one with a cracked tail light or an expired tag, it should be clear that the former will increase community safety more than the latter. Traffic stops are an extremely inefficient manner of fighting the war on crime or the war on drugs, and police resources would be well spent on enhancing traffic safety rather than diverted into these less efficient uses of patrol time and energy.

The diversion of routine traffic stops into the war on crime has not only been extremely wasteful in terms of police resources, and diverting them away from public safety, but drivers can tell when they are unfairly targeted for a traffic stop based on a fishing expedition or a pretext. Epp and colleagues (2014) describe the frustration of minority drivers who know that they have been targeted. After all, when the other drivers continue on speeding but one is singled out for investigation, that driver may be acutely aware of the inequity, especially when it has happened to them in the past. At the same time, all drivers understand that when our driving habits are dangerous, when we roll through a stop sign, or when we are speeding excessively

(even if momentarily), we open ourselves up to a legitimate traffic safety stop. Citizens can tell the difference. Because investigatory stops tend to focus on minority drivers more than whites, and adverse outcomes even more strongly so, white drivers may not be aware of the toll this can take in the minority community. But, as Epp and colleagues (2014) point out, and as Lerman and Weaver (2014) have also described, encounters with the criminal justice system (even being questioned by an officer leading to being released immediately, as in a traffic stop) may have surprisingly large and lasting effects on citizens' sense of belonging, citizenship, trust in government, efficacy, and likelihood of voting. Thus, racial disparities in policing, as in other fields such as education or health care, can have lasting and corrosive effects on citizenship.

The results we have presented in this chapter may be troubling or inspiring depending on how one interprets them. On the one hand, we have documented some very significant (and, we think, troubling) disparities in policing. On the other hand, we have shown these to be potentially related to two factors over which local leaders may have some control. Of course, this control can be used either to exacerbate and continue the pattern of racial disparity that we see, or to reduce it. Political power can be affected through voting and organization. (It can also be suppressed by voter alienation and gerrymandering, we should point out.) Investigatory stops targeting minority drivers can certainly be changed by the actions and leadership of police executives. This suggests that there may be administrative reforms that police leaders can undertake, with or without the presence of high levels of political power for the minority population in their jurisdictions, which can have a significant impact on racial disparities in traffic stops outcomes.

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Appendix

Summary Statistics of Variables & Observations in the Regression

Table A1. Summary Statistics for Variables Included in Regression

	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	N
% Investigatory Stops	0.23	0.49	0.56	0.55	0.63	0.86	499
Investigatory Stops Ratio	0.76	1.08	1.17	1.18	1.27	1.99	499
Political Power	-1.06	-0.58	-0.15	0.06	0.50	2.79	499
Log(Population)	6.99	9.52	10.03	10.11	10.81	13.51	499
Crime per Thousand	13.06	62.47	94.49	100.50	133.20	369.90	499
% Below Poverty	0.03	0.10	0.18	0.17	0.22	0.49	499

Note: Only includes agencies where at least 100 white drivers and 100 black drivers were stopped, and observations included in the regressions presented in Table 3.

Political Power & Additional Variables

Two additional variables may influence disparities. These are the proportion of the police force that is black and the level of segregation in the city or town. Information on the proportion of the police force can be drawn from the Law Enforcement Management and Administrative Statistics (LEMAS) datasets, which is administered every few years. Information on the level of segregation in a city or town can be drawn from the diversity and disparities datasets provided by Brown University (https://s4.ad.brown.edu/projects/diversity/Data/data.htm). However, each variable is missing for a number of cities. This missingness is not random but rather linked to the level of political power of the black community of the city and the population of the city (Table A2). As a result, we exclude these two variables from the analysis presented in the paper.

Table A2. Changing Statistics Based on Changing Datasets

	N	Cities	Political Power	Log(Population)	Invest. Stops Ratio
Baseline	583	90	0.08	10.07	1.18
Baseline + Crime	499	86	0.06	10.11	1.18
Baseline + Crime + LEMAS	256	38	0.21	10.70	1.20
Baseline + Crime + Segregation	267	42	0.39	10.63	1.19
All	174	25	0.43	11.02	1.21

Additional diagnostics

Here we present a number of additional diagnostics, beginning with a correlation matrix (Table A3) for the variables included in our factor analysis. Clearly, each variable – minority population, minority electorate, and city council presence – are highly correlated with one another, and, in turn, are highly correlated with our factor index for black political power. This justifies our treatment of these variables as different dimensions of the same latent variable.

Table A3. Correlations between factor analysis components

	Index	Council %	Vote %	Population %
Index	1			
Council %	0.759	1		
Vote %	0.936	0.642	1	
Population %	0.966	0.688	0.828	1

Our units of observation in the paper are agency-year dyads. In Table A4, we use ANOVA regressions to estimate how much of the variance described in our models is explained by temporal versus municipal variation. That is, we want to know if our results are driven by differences across cities, differences across years, or both. The Table reveals that most of the variance explained can be attributed to municipal variation. The light outcomes model is the only one where temporal changes are a statistically significant factor at the 0.05 level.

Table A4. Variance explained by cities and years

	Search Ratios	Light Outcome Ratios	Citation Ratios	Arrest Ratios
By Year	0.16*	0.71**	0.10	0.00
By City	51.98**	46.2**	61.13**	60.01**
Residual	47.86	53.09	38.77	39.99

Note: * indicates significant at 0.10; ** indicates significant at 0.05

Next, we consider collinearity as a possible problem. Table A5 presents a correlation matrix for all the variables included in our models. None of the variables are very highly correlated with one another; the correlation between the percent of city residents in poverty and black political power is the highest at 0.440.

Table A5. Correlations between model variables

	Political Power	Invest. Stops Ratio	Log (Population)	% Below Poverty	Crime
Political Power	1	0.04	0.29	0.44	0.25
Invest. Stops Ratio	0.04	1	0.03	-0.01	0.02
Log(Population)	0.29	0.03	1	0.09	-0.15
% Below Poverty	0.44	-0.01	0.09	1	0.38
Crime Per 100	0.25	0.02	-0.15	0.38	1

In Table A6, we re-estimate our model from the paper using only the theoretically interesting variables (black political power and the investigatory stops ratio). Substantively, the results are identical to what we present in the paper, further reassuring use that their effects on the outcome variables are not confounded by the inclusion of other explanatory variables.

Table A6. Regressions with only theoretical variables

	Search Ratio	Light Outcome Ratio	Citation Ratio	Arrest Ratio
(Intercept)	0.76	0.82*	1.16*	1.27*
	(-0.40)	(-0.05)	(-0.04)	(-0.32)
Political Power	-0.20*	-0.03*	0.02*	0.01
	(-0.10)	(-0.10)	(-0.10)	(-0.07)
Invest. Stops Ratio	1.00*	0.17*	-0.15*	0.37
	(-0.34)	(-0.04)	(-0.03)	(-0.27)
AIC	1367.71	-690.58	-1012.19	1176.11
BIC	1388.77	-669.52	-991.13	1197.17
Log Likelihood	-678.85	350.29	511.1	-583.05
Num. obs.	499	499	499	499
Num. groups: clean_name	86	86	86	86
Var: clean_name	0.38	0.01	0	0.14

Note: * indicates significant at the 0.05 level

Finally, we estimate each model with only one component of political power, rather than our factored index measure. The idea is to see if each measure is individually useful in explaining traffic stop disparities. Of the three, the percent of a population that is black is the most reliable predictor.

Table A7. Predicting Search Ratios, Components of the Political Power Variable

	Model 1	Model 2	Model 3	Model 4
(Intercept)	0.15	0.29	0.09	-0.13
	(0.73)	(0.71)	(0.71)	(0.74)
Invest. Stops Ratio	0.93*	0.91*	0.89*	0.90*
	(0.35)	(0.35)	(0.35)	(0.35)
Log(Population)	0.09	0.08	0.11	0.1
	(0.07)	(0.07)	(0.07)	(0.07)
Crime per 100	-0.01	-0.01	0	0
	(0.02)	(0.02)	(0.02)	(0.01)
% Below Poverty	-0.06	-0.35	0.35	0.2
	(1.16)	(1.10)	(1.15)	(1.14)
% Council, Black	-0.67			
	(0.43)			
% Vote, Black		-0.59		
		(0.43)		
% Population, Black			-1.42*	
			(0.61)	
Political Power				-0.24*
				(0.11)
AIC	1378.37	1378.96	1374.98	1379.15
BIC	1412.07	1412.66	1408.68	1412.85
Log Likelihood	-681.18	-681.48	-679.49	-681.58
Num. obs.	499	499	499	499
Num. groups: City	86	86	86	86
Var: City(Intercept)	0.42	0.41	0.39	0.39

Note: * indicates significant at the 0.05 level

Table A8. Predicting Light Outcome Ratios, Components of the Political Power Variable

	Model 1	Model 2	Model 3	Model 4
(Intercept)	0.72*	0.73*	0.70*	0.67*
	(0.09)	(0.08)	(0.08)	(0.09)
Invest. Stops Ratio	0.16*	0.16*	0.16*	0.16*
	(0.04)	(0.04)	(0.04)	(0.04)
Log(Population)	0.01	0.01	0.02*	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
Crime per 100	0	0	0	0
	(0.00)	(0.00)	(0.00)	(0.00)
% Below Poverty	0.2	0.17	0.27*	0.25
	(0.14)	(0.13)	(0.13)	(0.13)
% Council, Black	-0.10			
	(0.05)			
% Vote, Black		-0.11*		
		(0.05)		
% Population, Black			-0.22*	
			(0.07)	
Political Power				-0.04*
				(0.01)
AIC	-670.48	-670.72	-676.84	-672.26
BIC	-636.78	-637.02	-643.14	-638.56
Log Likelihood	343.24	343.36	346.42	344.13
Num. obs.	499	499	499	499
Num. groups: City	86	86	86	86
Var: City(Intercept)	0.01	0	0	0

Note: * indicates significant at the 0.05 level

Table A9. Predicting Citations Ratios, Components of the Political Power Variable

	Model 1	Model 2	Model 3	Model 4
(Intercept)	1.26*	1.24*	1.27*	1.30*
	(0.07)	(0.07)	(0.07)	(0.07)
Invest. Stops Ratio	-0.14*	-0.14*	-0.13*	-0.13*
	(0.03)	(0.03)	(0.03)	(0.03)
Log(Population)	-0.01	-0.01	-0.01*	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
Crime per 100	0	0	0	0
	(0.00)	(0.00)	(0.00)	(0.00)
% Below Poverty	-0.06	-0.03	-0.14	-0.11
	(0.11)	(0.10)	(0.11)	(0.10)
% Council, Black	0.08			
	(0.04)			
% Vote, Black		0.08		
		(0.04)		
% Population, Black			0.20*	
			(0.06)	
Political Power				0.03*
				(0.01)
AIC	-987.11	-986.87	-996.25	-989.83
BIC	-953.4	-953.17	-962.55	-956.13
Log Likelihood	501.55	501.44	506.13	502.92
Num. obs.	499	499	499	499
Num. groups: City	86	86	86	86
Var: City(Intercept)	0	0	0	0

Note: * indicates significant at the 0.05 level

Table 10A. Predicting Arrest Ratios, Components of the Political Power Variable

	Model 1	Model 2	Model 3	Model 4
(Intercept)	1.26*	1.42*	1.30*	1.31*
	(0.49)	(0.49)	(0.49)	(0.51)
Invest. Stops Ratio	0.44	0.44	0.42	0.42
	(0.27)	(0.27)	(0.27)	(0.27)
Log(Population)	-0.02	-0.04	-0.02	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)
Crime per 100	0	-0.01	0	0
	(0.01)	(0.01)	(0.01)	(0.01)
% Below Poverty	1.51	1.04	1.47	1.28
	(0.77)	(0.75)	(0.78)	(0.78)
% Council, Black	-0.35			
	(0.28)			
% Vote, Black		0.15		
		(0.32)		
% Population, Black			-0.43	
			(0.41)	
Political Power				-0.04
				(0.08)
AIC	1185.43	1186.53	1185.16	1189.32
BIC	1219.14	1220.23	1218.86	1223.02
Log Likelihood	-584.72	-585.26	-584.58	-586.66
Num. obs.	499	499	499	499
Num. groups: City	86	86	86	86
Var: City(Intercept)	0.13	0.13	0.13	0.13

Note: * indicates significant at the 0.05 level