Neighborhood Differences in Enforcement Activity in the City of St. Louis from 2002 – 2017: An Exploration of Neighborhood Arrest Trends and the Consequences of Concentrated Enforcement on Communities[1]

Lee Ann Slocum, Dale Dan-Irabor, Claire Greene
Department of Criminology & Criminal Justice, University of Missouri - St. Louis

In some communities, criminal justice system contact is the primary way people interact with the state (Weaver, Hacker, and Wildeman, 2014). Most police-citizen encounters are routine and are in response to violations of local ordinances or misdemeanors; however, enforcement of low-level offenses can have serious consequences for those involved and the broader community. For example, individuals may become more deeply entrenched in the criminal justice system if court dates are missed or fines go unpaid, and even short periods of detention can lead to job loss or gaps in child care (Kohler-Hausmann, 2018; Natapoff, 2018). High levels of enforcement also can harm communities by disrupting social networks, fostering political alienation, and leading to disengagement from the police and government institutions (Burch, 2013; Lerman and Weaver, 2014; National Academies of Sciences, Engineering, & Medicine, 2018). For these reasons, it is important to understand where enforcement is concentrated and how it has changed over time, as well as the impact it has on communities.

RESEARCH PROJECT BACKGROUND AND GOALS

This research describes trends in arrests in the City of St. Louis for 2002 – 2017 and examines how concentrated enforcement is related to resident engagement with the local and federal government. This research has three parts. First, we present trends in arrests for felony and low-level offenses for St. Louis and each of its 79 neighborhoods. Second, we examine how these trends vary across neighborhoods with different characteristics. Finally, we focus on the consequences of high levels of enforcement for communities by exploring the relationship between the number of arrests in a neighborhood and the extent to which residents engage with different government agencies/institutions.

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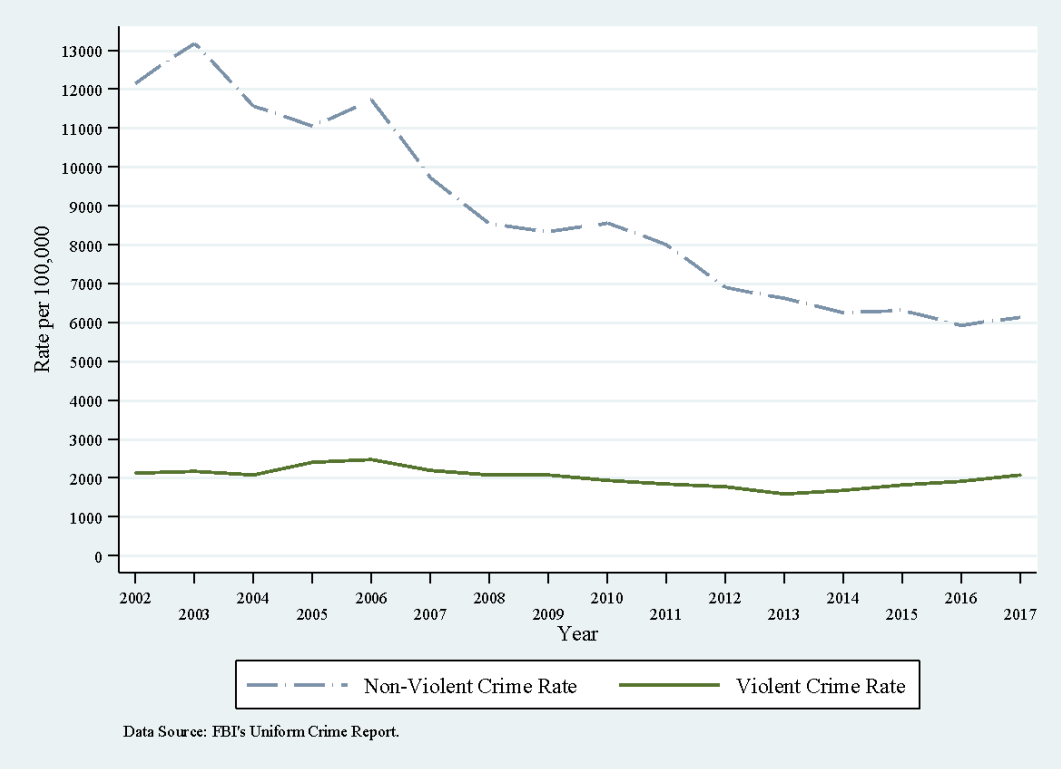
POLICING IN THE CITY OF ST. LOUIS

From 2002 – 2017, a number of important changes took place related to policing in St. Louis. First, like most U.S. cities, St. Louis experienced a decline in serious non-violent crime, which decreased by half from 2002 to 2017 (see Figure 1). In comparison, the serious violent crime rate remained steady, dropping by 2%. Second, the St. Louis Metropolitan Police Department (SLMPD) underwent a number of structural and organizational changes. For example, the number of officers declined from 1,103 in 2002 to 910 in 2017, a 17% decrease. Finally, the social context of policing shifted. The killing of Michael Brown by a Ferguson, Missouri police officer in August 2014 catalyzed protests throughout the nation and created immense pressure for police agencies to change the way they enforce the law. There were assertions that this increased scrutiny leads police officers to "pull back" their enforcement efforts, particularly in Black communities.[2]

Figure 1: Non-Violent and Violent Crime Rates for the City of St. Louis, 2002–2017



DATA

Several different sources of data were used to create neighborhood-level measures that capture police enforcement, government engagement, and other community characteristics.[3]

[2] See Slocum, Greene, Huebner, and Rosenfeld (2019) for an examination of the Ferguson Effect in St. Louis.
[3] In St. Louis, neighborhoods have distinct characteristics and hold meaning for residents. Therefore, when we describe trends in enforcement, we do so for each of the city's 79 neighborhoods. However, the U.S. Census uses a different set of boundaries to approximate communities—block groups. In the analyses that utilized Census data, block groups are used to approximate neighborhoods. The City of St. Louis contains 360 block groups.

Enforcement: We measure the number of arrests in each neighborhood, which are divided into four types based on the most serious charge: felony, misdemeanor, municipal violation, and bench warrant.

Engagement with Government Institutions: We examine the consequences of enforcement for residents' engagement with three different government agencies/institutions. For each neighborhood, measures were created to capture: 1) the percentage of registered voters who participated in the 2018 general election; 2) the percentage of households who responded to the 2010 US Census; and 3) the number of calls per 1,000 neighborhood residents that were made to the city's Citizen Service Bureau (CSB) in 2017, which handles complaints about neighborhood problems, such as potholes, trash, and broken lights.[4]

Neighborhood Characteristics: Information on the characteristics of communities was obtained from U.S. Census' American Community Survey (ACS). Measures were created to capture the number of people in each neighborhood, as well as racial composition, economic disadvantage, age of residents, homeownership, residential mobility, education, housing vacancy, and household composition.

Crime and Calls for Service to the Police: Data provided by SLMPD were used to create several measures to account for differences across neighborhoods in crime and resident demand for police services. Counts of serious violent and property crimes were generated using Uniform Crime Report (UCR) data. The number of calls made by residents to request police services for crime- and disorder-related issues was also provided.

ANALYZING THE DATA

We began by creating graphs and maps that display arrest trends for the City of St. Louis and each of its 79 neighborhoods for 2002 – 2017. Next, we examined how these arrest trends varied across neighborhoods with differing characteristics. Regression techniques that are appropriate for describing trends were used, and control variables were included to isolate the relationship between each neighborhood characteristic and arrests. Finally, we generated maps that describe how levels of government engagement varied across neighborhoods and used regression to assess whether engagement is related to the number of felony and non-felony arrests in the neighborhood. These analyses were cross-sectional, meaning that we assessed the neighborhood-level relationship between the number of arrests in one period and civic engagement in the following year.[5]

RESULTS

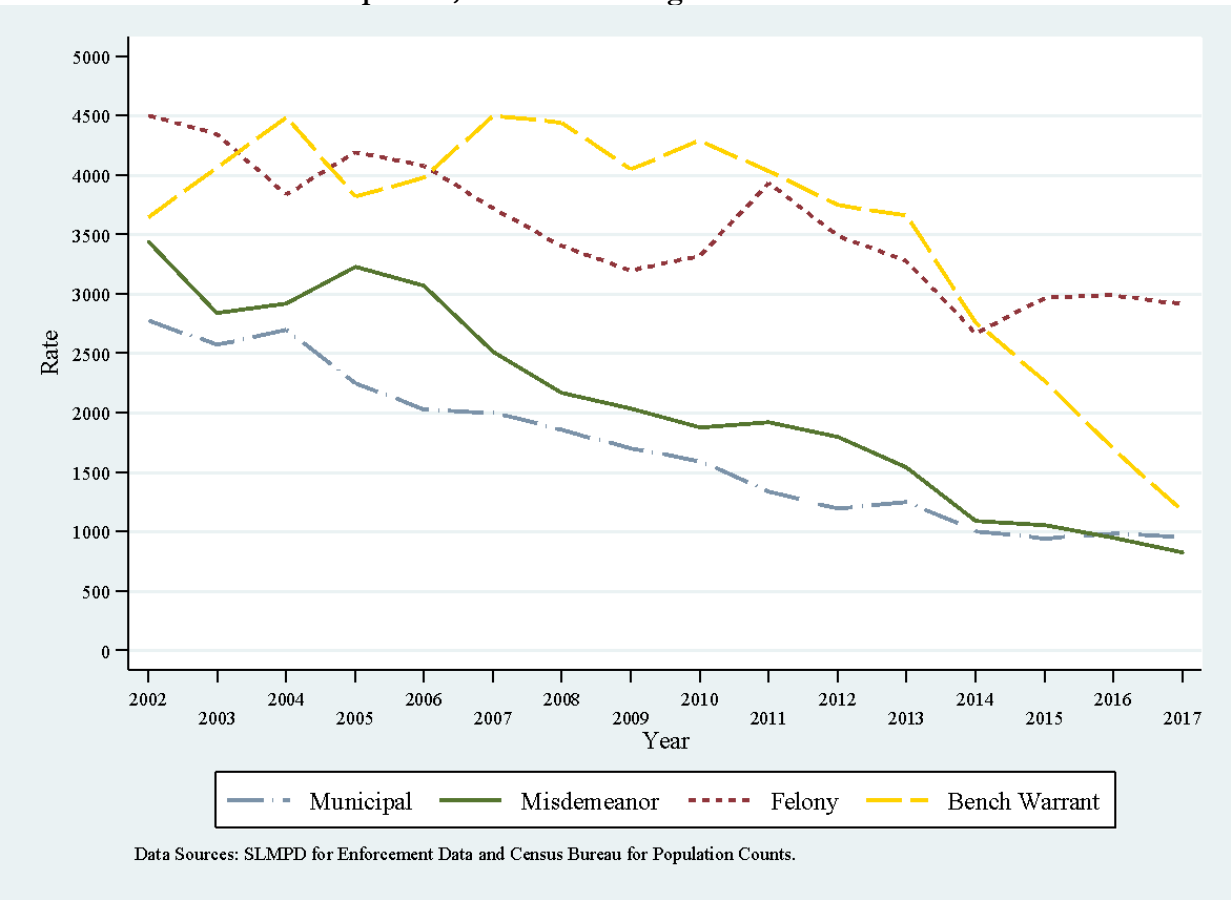
Trends in Enforcement for the City of St. Louis, 2002 – 2017

Figure 2 depicts changes in the rate of enforcement by offense type for St. Louis from 2002 to 2017. Arrests for both municipal violations and misdemeanor offenses decreased at a relatively steady rate during this period. Municipal arrests declined by approximately two-thirds. The reduction in misdemeanor enforcement (76%) was even more pronounced. Bench warrant arrests were the most common type of enforcement for most of the study period; however, they dropped sharply after 2013, and declined by 68% between 2002 and 2017. Felony arrests exhibited a more modest decline, dropping by 35% over the study period.[6]

[4] More information on the 2010 Census mail return rates can be found in Letourneau (2012) and can be accessed via the Census 2012 Planning Database at https://www.census.gov/topics/research/guidance/planning-databases.2012.html.

[5] The arrest measures are based on three-year averages in case a neighborhood had an unusually high number of arrests in a given year.

Figure 2: Enforcement Rates in St. Louis City, 2002 – 2017
per 100,000 Residents Age 17 and Older



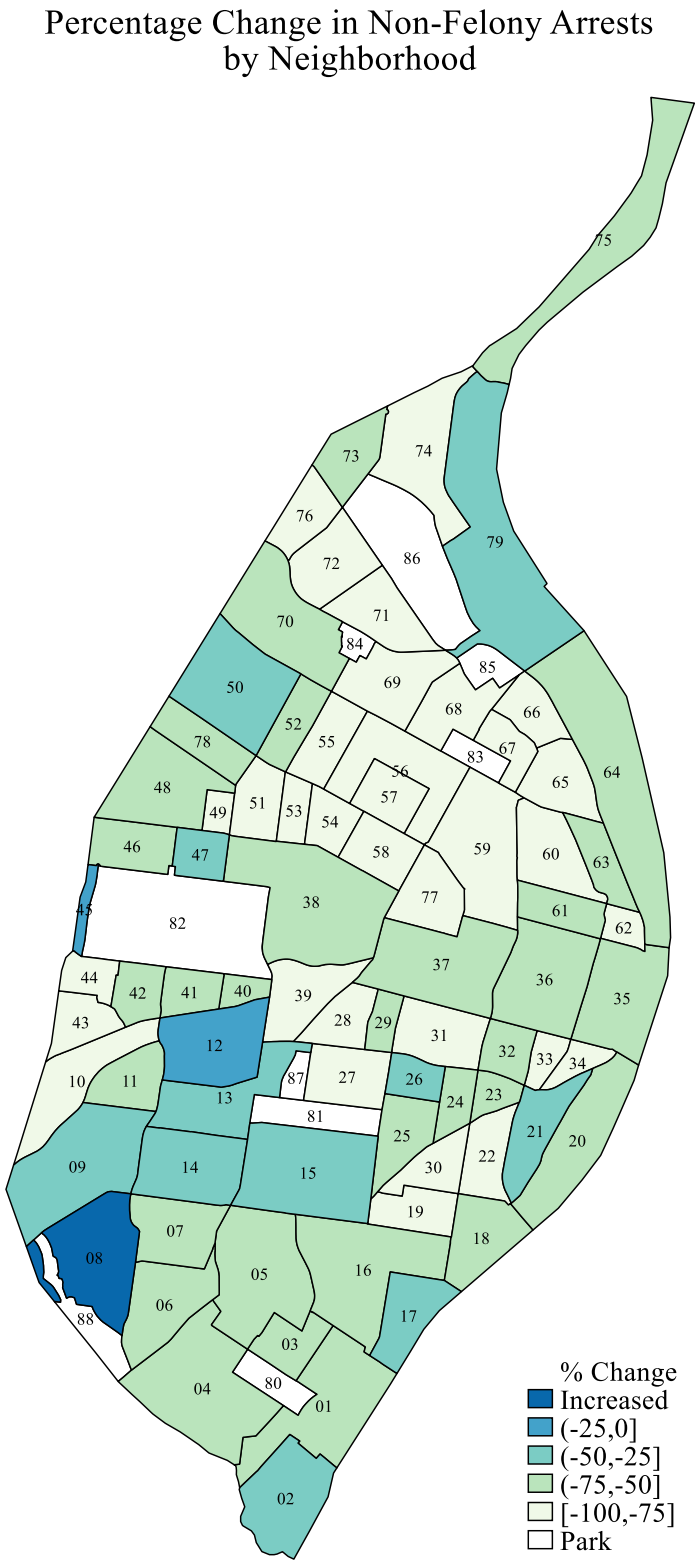
Differences in Neighborhood Enforcement Trends

Enforcement rates generally declined in neighborhoods across the city, but there was some variability in the trends. Figure 3 displays the percent change in the number of non-felony arrests (municipal, misdemeanor, and bench warrant) from 2002 to 2017 by neighborhood. This map indicates that with one exception, declines in non-felony arrests were universal; however, reductions in non-felony arrests tended to be larger in the northern part of the city. Figure 4 provides the same information for felony arrests. As compared to non-felony arrests, more neighborhoods exhibited increases in felony enforcement from 2002 to 2017, and increases tended to be more prevalent in the south, while neighborhoods in the north experienced greater declines. The Appendix presents trends in the number of enforcement actions and serious crimes separately for each neighborhood.

To better understand neighborhood variability in enforcement, we examined how trends in arrests differed by community characteristics using regression analyses. Several findings emerged. First, all else equal, neighborhoods with higher levels of socioeconomic disadvantage had more arrests for all offense types. Second, arrest levels and trends varied among neighborhoods depending on racial composition.

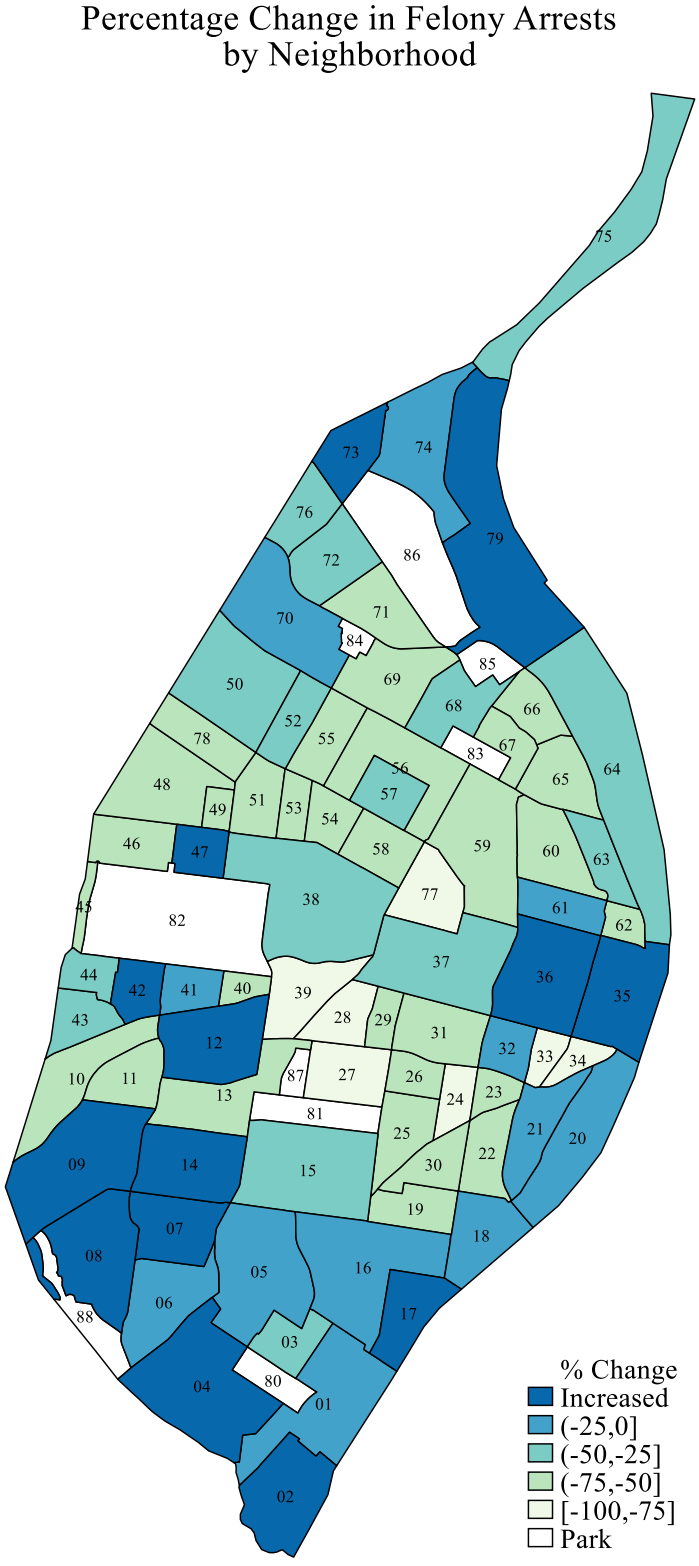
[6] For more information on arrest trends, including race-, age-, and sex-specific trends, see Slocum, Huebner, Rosenfeld, and Greene (2018).

Figure 3: Percentage Change in the Number of Non-Felony Arrests from 2002 to 2017 for Neighborhoods in St. Louis



1	Carondelet	45	Wydown Skinker
2	Patch	46	Skinker DeBaliviere
3	Holly Hills	47	DeBaliviere Place
4	Boulevard Heights	48	West End
5	Bevo Mill	49	Visitation Park
6	Princeton Heights	50	Wells Goodfellow
7	South Hampton	51	Academy
8	St. Louis Hills	52	Kingsway West
9	Lindenwood Park	53	Fountain Park
10	Ellendale	54	Lewis Place
11	Clifton Heights	55	Kingsway East
12	The Hill	56	Greater Ville
13	Southwest Garden	57	The Ville
14	North Hampton	58	Vandeventer
15	Tower Grove South	59	Jeff Vanderlou
16	Dutchtown	60	St. Louis Place
17	Mount Pleasant	61	Carr Square
18	Marine Villa	62	Columbus Square
19	Gravois Park	63	Old North St. Louis
20	Kosciusko	64	Near North Riverfront
21	Soulard	65	Hyde Park
22	Benton Park	66	College Hill
23	McKinley Heights	67	Fairground Neighborhood
24	Fox Park	68	O'Fallon
25	Tower Grove East	69	Penrose
26	Compton Heights	70	Mark Twain I-70 Industrial
27	Shaw	71	Mark Twain
28	Botanical Heights	72	Walnut Park East
29	Tiffany	73	North Pointe
30	Benton Park West	74	Baden
31	The Gate District	75	Riverview
32	Lafayette Square	76	Walnut Park West
33	Peabody Darst Webbe	77	Covenant Blu-Grand Center
34	LaSalle Park	78	Hamilton Heights
35	Downtown	79	North Riverfront
36	Downtown West	80	Carondelet Park
37	Midtown	81	Tower Grove Park
38	Central West End	82	Forest Park
39	Forest Park South East	83	Fairground Park
40	Kings Oak	84	Penrose Park
41	Cheltenham	85	O'Fallon Park
42	Clayton-Tamm	86	Belfontaine/Calvary Cemetery
43	Franz Park	87	Missouri Botanical Garden
44	Hi-Pointe	88	Wilmore Park

Figure 4: Percentage Change in the Number of Felony Arrests from 2002 to 2017 for Neighborhoods in St. Louis



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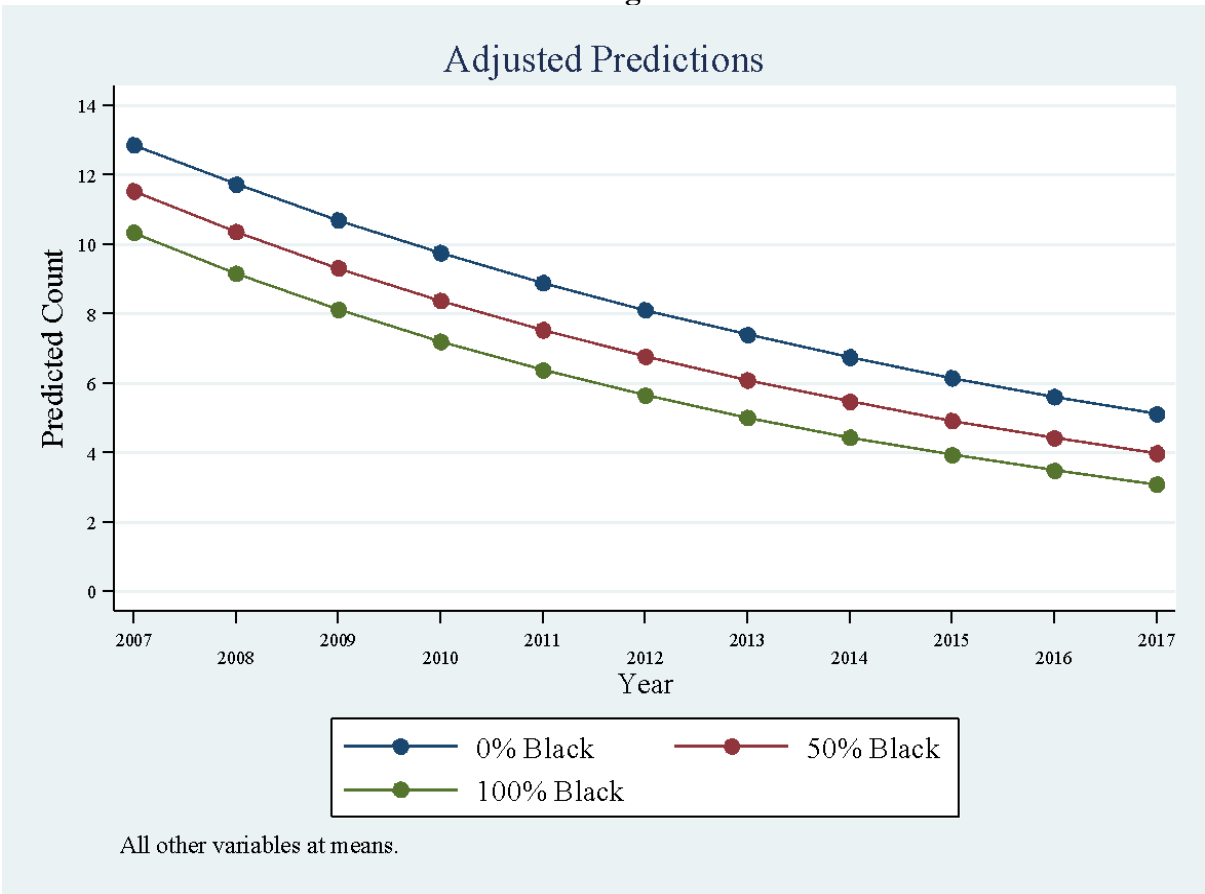
To better describe these differences, we used the results from the regression analyses to graph the number of arrests in neighborhoods in which 0%, 50%, and 100% of residents are Black, after controlling for other neighborhood characteristics, including calls for police services (see Figures 5 – 8). As depicted in Figure 5, municipal arrests declined over time at a relatively constant rate. Although neighborhoods with a higher percentage of Black residents had more municipal arrests overall (not shown), after controlling for differing levels of demand for police services and other community characteristics, neighborhoods with more Black residents had fewer arrests for violating municipal laws. These findings suggest there may be less vigorous police responses to resident calls related to minor crimes and disorder in predominantly Black areas (Klinger, 1997). Misdemeanor and bench warrant arrests also declined throughout the study period, although at varying rates (Figures 6 & 7). Both types of arrests were more prevalent in neighborhoods with more Black residents in 2007, but enforcement dropped at higher rates in minority communities, and arrest trends for neighborhoods of differing racial compositions converged for misdemeanors in 2013 and a few years later (2016) for bench warrants. Thus, by the end of the study period, the number of arrests for these offenses was similar in Black and White neighborhoods that had comparable characteristics. Unlike other types of enforcement, felony arrests remained more prevalent in Black communities throughout the study period, although the gap narrowed somewhat by 2017 due to greater declines in felony arrests in Black communities (Figure 8).[7]

Figure 5. Municipal Arrest Trends from 2007 – 2017 for St. Louis Neighborhoods with Different Percentages Black Residents



[7] More detail on these analyses can be found in Slocum, Huebner, Greene, and Rosenfeld (2019).

Figure 6. Misdemeanor Arrest Trends from 2007 – 2017 for St. Louis Neighborhoods with Different Percentages of Black Residents

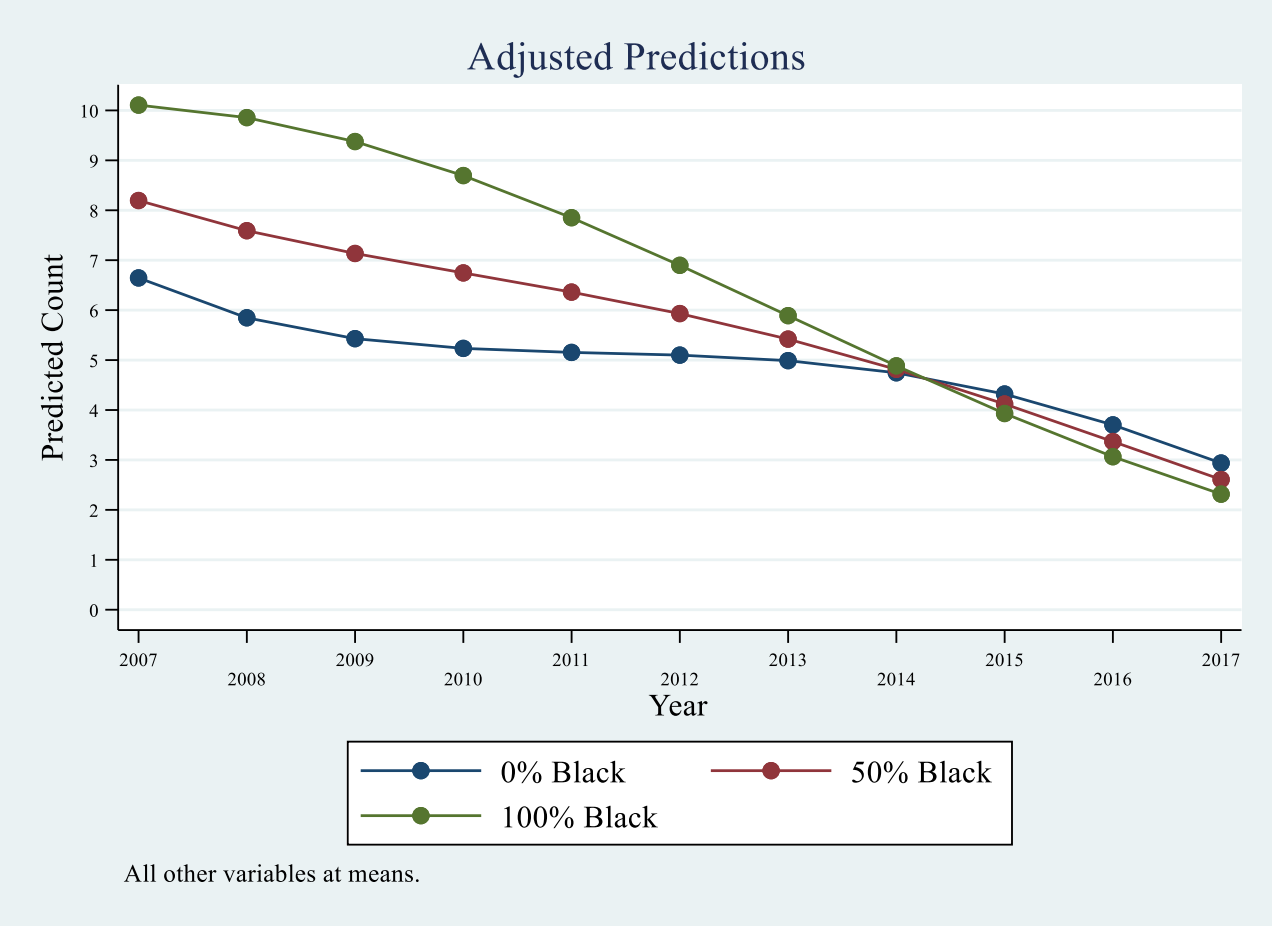


Figure 7. Bench Warrant Arrest Trends from 2007 – 2017 for St. Louis Neighborhoods with Different Percentages of Black Residents

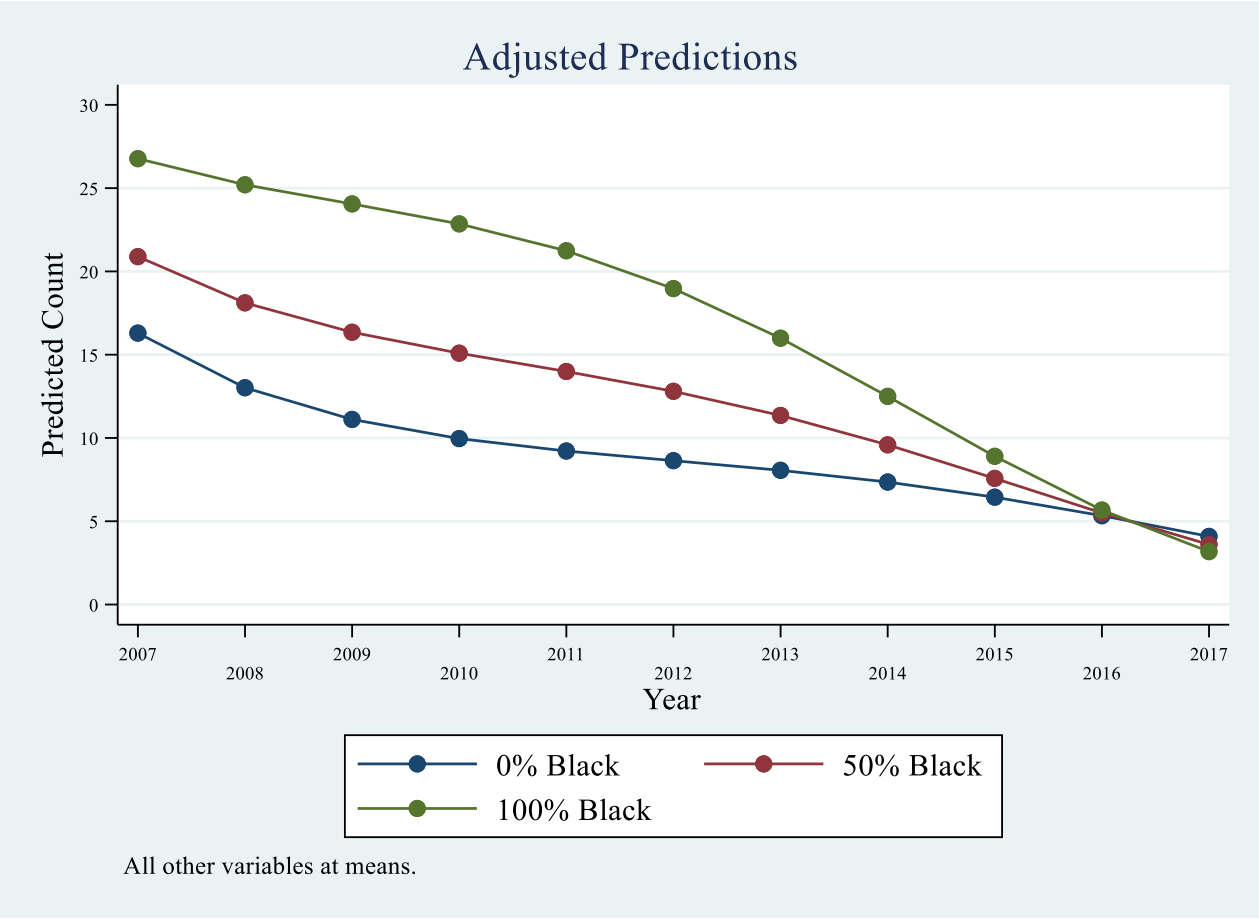
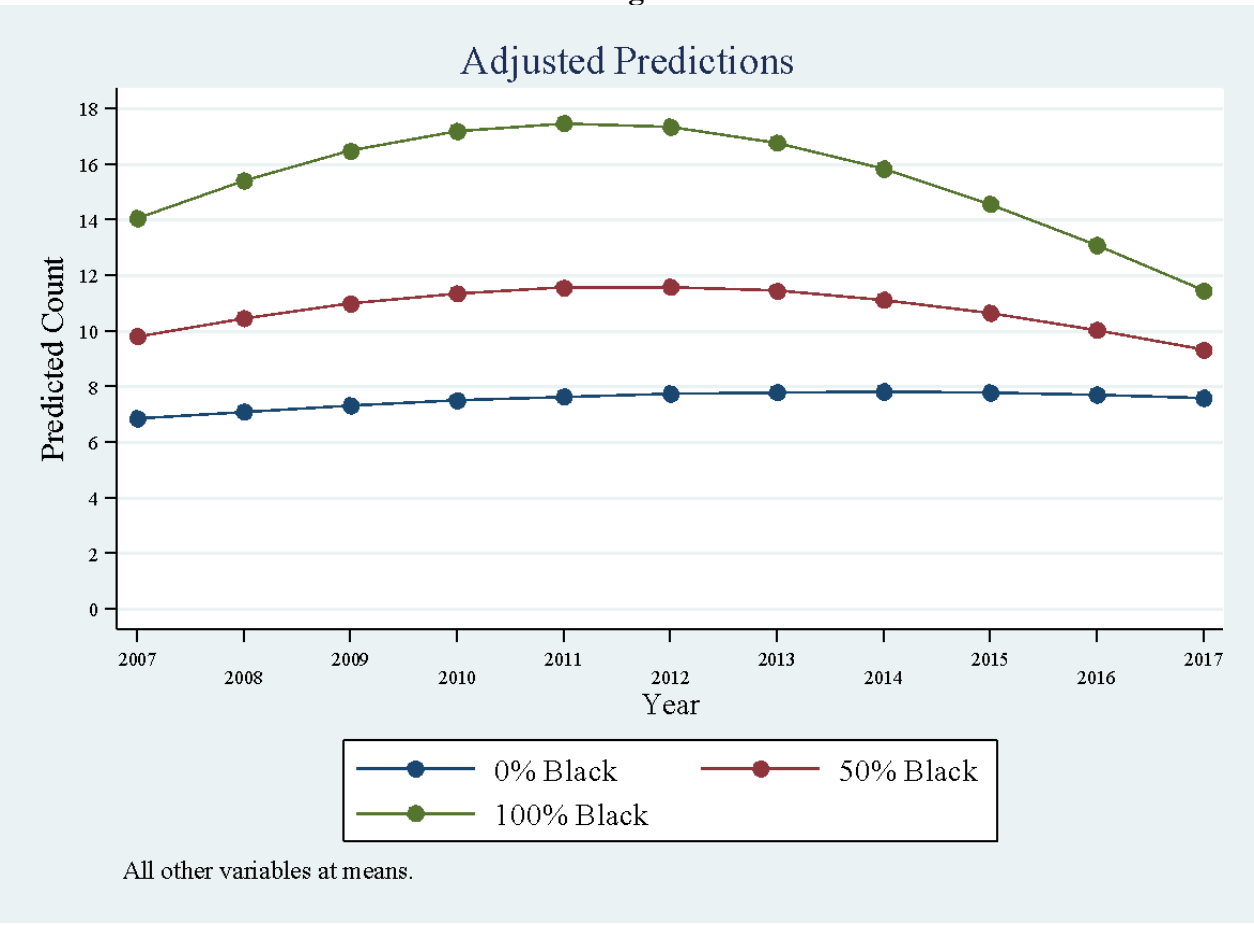


Figure 8. Felony Arrest Trends from 2007 – 2017 for St. Louis Neighborhoods with Different Percentages of Black Residents



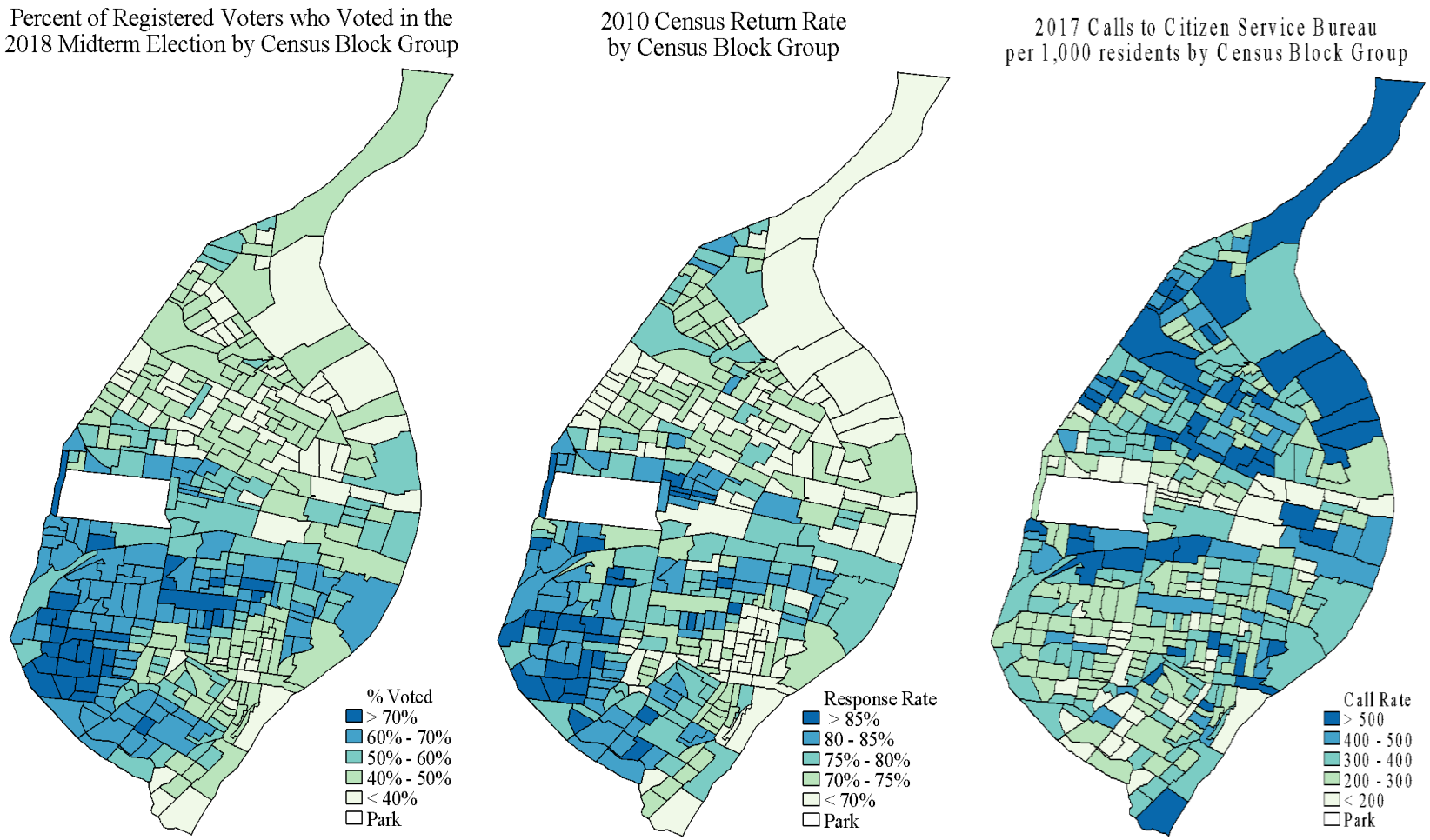
Consequences of Concentrated Enforcement for Civic Engagement

Voter turnout, participation in the US Census, and rates of reports to the city's CSB varied significantly across the city, as displayed in Figure 9. When we examined the relationship between these forms of government engagement and the number of felony and non-felony arrests, we found the following.

Voter turnout. Results indicated that although neighborhoods with more non-felony and felony arrests had lower rates of voter participation in the 2018 election, this relationship was accounted for by community differences in serious crime. In other words, for neighborhoods with similar levels of crime, there were no differences in voter turnout at varying levels of arrests; instead, neighborhoods with more crime tended to have lower voting rates.

Participation in 2010 Census. In neighborhoods with more arrests for felony and non-felony arrests, fewer households participated in the 2010 U.S. Census, even after accounting for community characteristics and crime. For every 10 non-felony arrests in a neighborhood, participation in the U.S. Census decreased by 1.9 percentage points, and for every 10 felony arrests, participation dropped by 6.3 percentage points.

Figure 9. Spatial Patterning of Government Engagement by Census Block Group



Calls to the Citizen Service Bureau. After differences in neighborhood crime were taken into account, we found no evidence that the number of arrests in a neighborhood was related to the rate at which residents called the CSB to report neighborhood problems.

IMPLICATIONS AND CONCLUSIONS

Arrests have declined over time in the City of St. Louis, particularly for low-level offenses. While enforcement of misdemeanor and municipal violations was dropping before the killing of Michael Brown and the ensuing protests, there was a precipitous decline in bench warrant arrests following these events. Between 2002 and 2017, reductions in misdemeanor and bench warrant arrests were greater in communities with a higher percentage of Black residents, eliminating the race gap in enforcement levels for these offenses in neighborhoods with similar characteristics. Municipal arrests, however, remained more prevalent in neighborhoods with a higher percentage of White residents, after controlling for calls to the police. This finding is consistent with work that finds officers are more likely to downgrade the seriousness of crime and disorder in predominantly Black areas, leading to less vigorous enforcement of minor offenses (Lum, 2011). In comparison, felony arrests remained higher in predominantly Black neighborhoods, suggesting a continued emphasis on enforcement of more serious crimes in minority communities. Greater declines in arrests for low-level offenses and bench warrants in neighborhoods with more minority residents could be viewed as positive news for communities that historically have been subject to disproportionately high levels of enforcement (Fagan et al., 2010). In addition, reductions in discretionary arrests combined with a sustained focus on more serious felony offenses may help reduce crime if residents begin to exhibit greater trust in law enforcement and become more willing to report crime and cooperate with the police (Rengifo et al., 2019). Enforcement of all types was higher in more socioeconomically disadvantaged neighborhoods. Given the role of the criminal justice system in generating inequality and the financial costs associated with being arrested, going to court, and paying fines and fees, these findings suggest a need for policies or strategies to mitigate these differences in enforcement and/or reduce the costs and consequences for people as they navigate the justice system.

The findings also contribute to work that documents the consequences of high levels of enforcement on community life. Although enforcement was unrelated to community rates of voter participation or calls to the CSB, neighborhoods with more arrests tended to have lower response rates for the 2010 Census, particularly for felony offenses. While our analyses cannot address the mechanisms driving this association, it is possible that high levels of enforcement generate distrust in the government or reduce residents' willingness to engage with agencies that have the potential to track them, particularly if they have existing warrants. We also cannot determine if arrests have a causal effect on census participation or whether this relationship is correlational. Regardless, census non-response has serious consequences. Missouri forfeits $1,272 in federal funds for each person who is missed in the count (Reamer, 2018). Census data also guide local decisions and facilitate resource allotment. As a result, communities with more arrests may be left with fewer resources to address the underlying issues driving crime and physical disorder. Therefore, in heavily policed, high-arrest communities it is critical that resources are devoted to removing barriers to participation in the 2010 Census and to educating residents about its importance.

We also generated neighborhood-specific trends in arrests and crimes. It is our hope that these will spur conversations between the community and law enforcement about existing gaps between current enforcement activity in the neighborhood and how residents would like policing to look. These discussions are particularly important for minority communities, as they can simultaneously feel both

over-policed and underserved by law enforcement (Leovy, 2015). Our findings can also provide police with an opportunity to share the factors that influence enforcement levels with community members, such as crime and calls for service. Furthermore, if generated on a regular basis, neighborhood enforcement reports can be used to promote police accountability, and, when law enforcement has been responsive to community concerns, they can be used to document these positive changes. In this way, data sharing has the potential to help improve strained relationships by fostering communication and understanding between the police and communities.

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