Received: 14 May 2024 | Revised: 19 November 2024 | Accepted: 8 December 2024

DOI: 10.1111/psj.12589

PSJ POLICY STUDIES JOURNAL

RESEARCH NOTE

Distracted partners: Why police traffic enforcement is inefficient

Alexander Love[1] | **Michael Greenberger**[2] | **Ye Wang**[1] | **Frank R. Baumgartner**[1]

[1]Department of Political Science, UNC Chapel Hill, Chapel Hill, North Carolina, USA

[2]Department of Political Science, University of Denver, Ashbury Ave Denver, Colorado, USA

Correspondence
Alexander Love, Department of Political Science, UNC Chapel Hill, MS 3265, Chapel Hill, NC 27599-3265, USA.
Email: ajlove@unc.edu

Abstract

As communities throughout the country adopt policies designed to reduce traffic fatalities to their lowest possible numbers, they rely heavily on police for traffic enforcement. Within policing communities, however, traffic stops are seen not only as a means to encourage better driving, but also as an important tool for drug interdiction and crime control. This renders the police "distracted partners" in the fight against dangerous driving. We analyze 246,003 stops conducted by the San Diego Police Department using geolocated traffic-stop data. We compare a model of traffic stops driven by injury-causing collisions to models where the stops are associated with crime and minority population. We find that the police are attentive to collisions but driven more by crime and minority population levels. We conclude that traffic safety efforts could more effectively be enhanced by a non-police agency devoted solely to reducing serious collisions, fatalities, and the public health threats from cars, with the police focused on crime control. The combined mission for the police of doing traffic safety and crime control results in suboptimal outcomes with regard to crash and injury prevention.

KEYWORDS

criminal justice, policing, race and politics, traffic safety, traffic stops

INTRODUCTION

The National Highway Traffic Safety Administration (NHTSA), a federal agency within the US Department of Transportation, distributes over $600 million each year to state highway safety offices in all US states and territories (see U.S. Department of Transportation (US DOT) National Highway Traffic Safety Administration, 2022, p. 4, pp. 53–55).[1] These agencies in turn provide funds for programs designed to enhance safety on the roadways. The vast bulk of these funds are allocated to police agencies to implement enhanced highway safety programs such as impaired driving campaigns, speeding patrols, or targeted efforts to promote the use of seat belts.[2] Emphasis on traffic safety may only increase as communities commit

themselves to "Vision Zero," an effort to eliminate traffic deaths and serious injuries. Typically, these efforts rely on the police for many of their most important and most expensive traffic safety initiatives.

At the same time as the federal government continues its long-standing practice of moving hundreds of millions of dollars to local police departments throughout the country, activists and scholars are increasingly questioning the police's role in traffic stops. Jordan Woods (2021a, 2021b) has been the most influential legal scholar to promote the idea that an alternative traffic-focused agency might be a better way to promote safety on the roads and highways. The question for Woods is whether we would be safer with an agency tasked with enforcing the traffic code but with no further police powers. The police, Woods notes, often use the traffic code for something else, the opportunity to have conversations and informally investigate people for other reasons, particularly the suspicion of being involved in drugs or other crimes.

In this paper, we assess whether the police are reliable partners in the effort to promote traffic safety. Analyzing 246,003 geo-located traffic stops, injury-related collisions, and 911 calls for police service from San Diego CA, we find that police are attentive to collisions in the morning, but that in the afternoon and evening, the association between collisions and moving violations weakens. Instead, police focus their activity in the afternoon in evening much more on non-moving stops, and on traffic stops in areas with higher numbers of 911 calls and larger minority populations. Importantly, even as police move their attention toward crime control later in the day, the number of collisions remain high, only beginning to taper off in the evening. That is, we find support for Woods' implicit assessment that the police are "distracted partners" in the war on bad driving, largely because of their over-arching concern with the war on drugs and crime.

We have no doubt that the police are sincere partners in the goal of reducing traffic collisions and fatalities. But police agencies clearly have other priorities as well that may cause them to be "distracted partners" in the implementation of "Vision Zero" goals. Our analysis suggests that the police focus on crime makes them distracted partners in the effort to improve traffic safety.

Police and traffic stops

Sarah Seo (2019) explains how police agencies across the country were transformed by the rise of the automobile. The car and the police grew in a symbiotic relationship, with the police expanding nationwide by orders of magnitude as they responded to a new and expensive challenge: monitoring the roads. As cars expanded dramatically during the time of Prohibition, the issue of transporting contraband was always connected to the police vision of the automobile. As Seo describes, the courts would later have to decide what level of privacy a person may expect in a car: is it similar to one's home (with a high expectation of privacy), or a public sidewalk (with a lower expectation). Eventually, the answer came in a series of court decisions: your car is a crime scene. Because every driver is violating some aspect of the traffic or vehicle code, the police may intervene in virtually every situation. The "pretextual" traffic stop was born. Further, the traffic stop is seen as inherently dangerous for the police (not the driver), and the police therefore approach traffic stops with a more aggressive attitude than their objective level of danger might justify. Jordan Woods explains:

> On highways, traffic stops became, and still serve as, tools for drugs and weapons interdiction. In neighborhoods, traffic stops offered and still provide easy justification for police to stop and search "suspicious" persons for non-traffic crime. Under the guise of public order and public safety, these practices give effect to racialized and class-based officer assumptions about the social positions and assumed criminality of stopped drivers and passengers.
>
> (Woods, 2021a, p. 657)

In addition to describing police as defenders of traffic safety, courts also characterize police as potential victims of violence in the traffic space. For instance, the U.S. Supreme

> Court has accepted and perpetuated officer-danger narratives involving routine traffic stops, emphasizing on several occasions that traffic stops are "especially fraught with danger to police officers." Over the past few decades, courts have upheld the authority of police officers under the Fourth Amendment to question stopped drivers and passengers, order them out of cars, and conduct various searches and seizures during traffic stops. Deference to law enforcement based on officer safety concerns has played a key role in these decisions.
>
> (Woods, 2021a, p. 660)

Michael Sierra-Arévalo (2024) reinforces Woods' points in a book-length exploration of what he calls "the danger imperative": Police training, culture, and information networks emphasize the constant danger that officers are seen to face, and justify an "us v. them" mentality with regard to interactions with the public (see also Balko, 2014; Vitale, 2018). These studies suggest that police culture may not be conducive to purely preventive traffic control designed to reduce collisions and the injuries that stem from them. Rather, the police may be attuned to crime, danger, and threats to their own personal safety. Many recent studies have documented the different experiences of black and white drivers. These include journalistic exposés about the "driving while black" phenomenon dating back to the 1990s (see for example Webb, 2007/1999); legislative mandates to investigate the question (see Baumgartner et al., 2018, chapter 1); law enforcement training programs designed to use "proactive policing" to monitor entire communities, with traffic stops as a major element in this toolkit (see for example Vitale, 2018); and Drug Enforcement Agency profiles of "couriers" focused on young men of color driving certain types of cars (see Banks, 2003; Epp et al., 2014; Sorin, 2020). The most recent literature, including Epp et al.'s (2014) study based on a survey of motorists as well as others based on millions of data points from public records of actual police stops (e.g., Baumgartner et al., 2018; Knox et al., 2020; Pierson et al., 2020) confirms ideas of over-policing minority drivers and neighborhoods and the use of the traffic code for needle-in-the-haystack searches. These collective findings have led to a number of reforms, particularly those directed toward the ideas of reducing the use of pretextual traffic stops and removing the police from some traffic stop functions so that the agency that conducts traffic stops would be solely concerned with traffic safety, with the police focused on crime. Mashhadi et al. (2017) provide evidence that targeted enforcement, such as speeding enforcement, effectively reduces traffic crashes, aligning with the goals of traffic safety. However, we question whether similar outcomes can be achieved through the enforcement of equipment violations, which are less directly related to crash prevention. Our analysis suggests that equipment enforcement may be more susceptible to being used for broader policing objectives, such as crime control, rather than purely for traffic safety.

Jordan Woods (2021a) describes calls for such reforms in New York City following the 2019 death of Allan Feliz, a driver pulled over for failure to wear a seat belt, and in Brooklyn Center, Minnesota where Daunte Wright was killed in 2021 following a similar traffic stop. Berkeley, California voted for a comprehensive reform of the police including removing them from routine traffic enforcement in July 2020 (Woods, 2021a, pp. 647–648). The New York Attorney General's Office has called for the removal of New York City police from routine traffic enforcement in response to the killing of Allan Feliz, described above (see New York State Office of the Attorney General (NYSOAG), 2020a, as well as in its investigation of the City's response to the George Floyd protests, New York State Office of the Attorney General (NYSOAG), 2020b). Both reports reached the same conclusion, that traffic stops are a source of racial friction and the police should be removed from these activities: "Armed police officers are not needed for traffic enforcement, particularly when the underlying conduct in question is not criminal, such as a broken tail light, speeding, or not wearing a seatbelt" (New York State Office of the Attorney General (NYSOAG), 2020b, p. 39).

Few examples exist of non-police agencies conducting traffic stops, and the limited reforms that have occurred in the US have not yet been evaluated (or implemented in many cases). Wilson and Chappell (1971) describe an alternative model of policing in New Zealand from 1936 to 1992, whereby the police were essentially replaced by local authorities for the enforcement of routine traffic patrols in

towns and by a national agency housed in the Department of Transportation for inter-city roadways. While there may be some examples internationally of traffic-control agencies housed outside of the auspices of the police, such arrangements seem to be rare, and have never been widely used in the United States.

Jordan Woods has explored alternatives to the current model of policing in a series of articles published in various prominent law review articles. In a 2019 article, Jordan Woods reviews millions of traffic stops to assess the "danger narrative" so common in policing: that every traffic stop has the potential to end in the death of the officer. His analysis suggests that these narratives are vastly overstated in police training and judicial assessments of the police function (see Woods, 2019, p. 640). Woods also notes that the Court has validated traffic stops as long as the officer has probable cause to believe that a traffic violation has occurred, even if the traffic violation is merely the pretext for the stop (see *Whren v. United States*, 517 U.S. 806 (1996), Woods, 2019). Such pretextual stops are seen in police trainings and culture as more valuable than the numbers suggest in terms of their crime-fighting benefits (Woods, 2019).

All this motivates our question: Does the police concern with the war on crime detract from its ability to use the traffic code effectively to reduce injurious collisions? To understand this question, we exploit temporal and geographic variation in police stopping behavior. Traffic collisions and traffic stops both vary over time and space and studying the relationship between the two reveals a dynamic wherein police officers are responsive to traffic safety but sacrifice some degree of responsiveness in order to patrol areas where they suspect drivers may be violating criminal law. Our analysis is designed to assess the degree to which the (reasonable) police concern with crime detracts from its efficiency in traffic enforcement.

TRAFFIC STOPS, TRAFFIC SAFETY, AND CRIMINAL PROFILING IN SAN DIEGO

Data

This analysis relies primarily on three administrative datasets maintained by the city of San Diego. First, we utilize traffic stop reports that detail each stop conducted by San Diego Police Department and record the date, time, location, reason for the stop, if the driver was searched, if contraband was found, and the race of the driver. We analyzed 246,003 stops between January 2017 and June 2023. We also utilize 911 call data which include the date, time, location, and urgency of each call. Finally, we also analyze collision data which record each reported traffic crash on San Diego roads including the date, time, location, and number of people injured and killed. These data allow us to analyze the shifting priorities of the San Diego Police Department and to assess whether traffic stops appear to be more closely connected to collisions or to crime-related 911 calls. We use the following language conventions: Traffic stops can be broken down by their stop purpose and we distinguish here only among "moving violations" and all others, which we term "non-moving" stops. Non-moving stops emerged as a crime control strategy during the War on Drugs era of the 1980s–90s, legitimized by Supreme Court decisions like Terry v. Ohio (1968) and Whren v. United States (1996). Baumgartner et al. (2018) find that these discretionary stops, while ostensibly about traffic safety, actually represent a deliberate policy choice to use traffic enforcement as a pretext for conducting investigative searches that disproportionately impact minority communities. Because of their largely discretionary nature and primary use as a means of crime control, we use non-moving stops as an indicator that police are engaged in crime control rather than traffic safety. Collisions refer to crashes or accidents in which an injury was recorded. 911 calls refer to urgent calls for service, excluding other types of calls.

Our analyses assess police activity geographically and temporally by assessing how police respond to the demands of crime control and traffic safety in different police beats throughout the day. Police do not have unlimited resources—wherever and whenever officers are concentrated in one place or time, they are necessarily diminished in another. Table 1 shows the distribution of

TABLE 1 Share of police activity by time of day.

Category	Morning	Afternoon	Night	Total
Total traffic stops	97,495 (39.6%)	80,726 (32.8%)	67,782 (27.6%)	246,003 (100.0%)
Moving violations	73,707 (46.2%)	50,688 (31.8%)	35,139 (22.0%)	159,534 (100.0%)
Non-moving stops	23,788 (27.5%)	30,038 (34.7%)	32,643 (37.8%)	86,469 (100.0%)
Searches	6063 (21.3%)	9942 (34.9%)	12,454 (43.8%)	28,459 (100.0%)
Collisions	7583 (25.7%)	15,198 (51.5%)	6737 (22.8%)	29,518 (100.0%)
911 calls	760,057 (29.7%)	1,003,529 (39.3%)	791,905 (31.0%)	2,555,491 (100.0%)

various police activities across three time periods of the day. For each activity category, the percentages represent how that specific activity is distributed across morning, afternoon, and night, summing to 100% for each activity.

Breaking down the data by stop type and outcome, as well as by time of day, reveals important trends in the policing environment. Traffic stops overall are highest in the morning (5 a.m.–12 p.m.), decrease in the afternoon (12 p.m.–8 p.m.), and decrease even more at night (8 p.m.–5 a.m.).[3] This trend is true for moving violations as well, but not for non-moving violations, which increase in frequency over the course of the day. Descriptively, we see that despite increased demand for traffic safety in the afternoon (over half of the collisions occur during the afternoon), police assess fewer moving violations. Instead, police engage in more searches and non-moving stops.

In the next section, we present a temporal analysis that parses police behavior by hour of day and day of week. This analysis reveals significant incongruence between the demands of traffic safety and police behavior over time. The following section presents a geographic analysis, in which we model police behavior by period of day (morning, afternoon, and night), and location. There, we find that as police become less geographically responsive to the demands of traffic safety over the course of the day, they focus their time into crime prevention.

Temporal analyses

Previous studies on traffic enforcement have predominantly focused on aggregate traffic stop data, often treating temporal variables in broad strokes or including time components as uninterpreted "control" variables. Here, we look at traffic stops, collisions, 911 calls, the racial mix of drivers stopped, and moving versus non-moving violations by the hour of the day and the day of the week. This granular approach uncovers the daily dynamics of law enforcement activities, highlighting a transition from traffic safety enforcement in the early hours to a pronounced emphasis on crime prevention later in the day. We illustrate these trends by displaying a series of weekday-hour graphs where the *x*-axis represents the time of day, and the text at the top of each cell shows the day of the week. The *y*-axis represents the relative frequency of the measure of interest in standard deviations from the mean value.

Figure 1 shows the relative frequency of collisions and traffic stops. The *y*-axis represents the standardized frequency of each event type, calculated as the number of standard deviations from the mean frequency. This standardization allows for a direct comparison between collisions and traffic stops, despite their different absolute frequencies. The pattern for collisions is relatively consistent across days of the week but shows strong temporal trends across the hours of the day: Collisions are most common in the afternoon and evening. In contrast, traffic stops show strong trends both across the hour of the day and the day of the week.

Figure 1 illustrates an incongruity between stops and collisions; traffic stops are most common on Tuesday, Wednesday, and Thursday mornings while collisions are most common in the afternoon of

any day of the week. The period between 8 a.m. and 11 a.m. on Tuesdays, Wednesdays, and Thursdays accounts for 14.1% of all traffic stops but only 5.6% of all collisions.

When we examine the frequencies of moving and non-moving violations in Figure 2, we see that moving violations are more frequent on weekday mornings before police shift into conducting more non-moving enforcement in the evenings and on weekends. Because the same cars remain in the community throughout the week, it seems unlikely that the rate of offense for non-moving violations varies so significantly during the day. Instead, this pattern suggests that police use non-moving violations like faulty equipment or registration violations as a means of investigating drivers for criminal offenses like carrying drugs or weapons, as previous studies have suggested (e.g., Baumgartner et al., 2018; Epp et al., 2014).

Around the time the clock strikes 3 p.m., there is a notable shift in police enforcement from moving to non-moving violations. Despite collisions reaching their peak on Friday afternoons, law enforcement activities pivot away from moving violations, suggesting a transition to alternative policing tasks during this period. However, this reallocation of enforcement efforts does not seem to align with crime patterns. As illustrated in Figure 3, 911 call volumes remain relatively constant throughout the day, suggesting that the rate of serious incidents requiring immediate police attention does not fluctuate significantly. This constancy occurs even as the police enforcement strategy shifts dramatically from active traffic patrol to targeting non-moving violations, which are often used as tools to fight crime.

The patterns of law enforcement activity suggest a strategic focus that varies by time and demographic factors. Analysis reveals a concentrated effort on issuing routine citations for moving violations

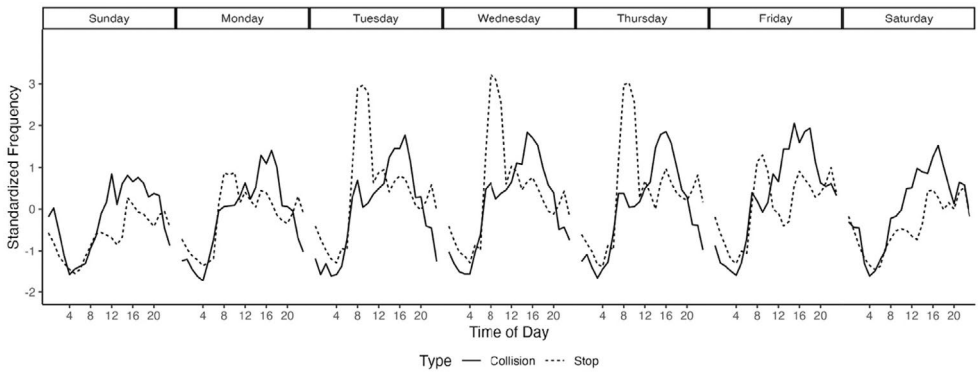


FIGURE 1 Timing of collisions and traffic stops, San Diego, 2017–2023.

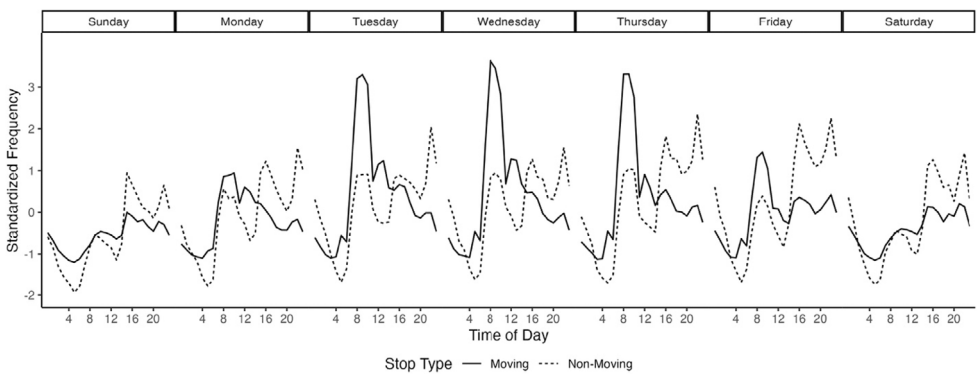


FIGURE 2 Relative frequency of moving and non-moving violations.

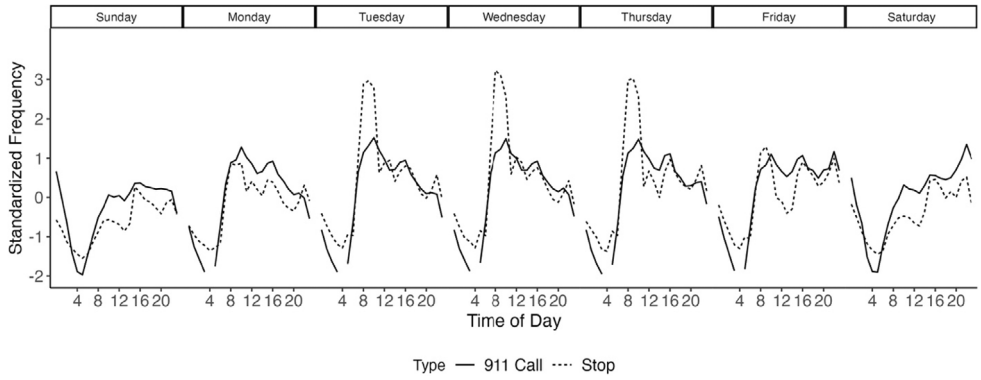


FIGURE 3 Relative frequency of 911 calls and traffic stops.

on Tuesday, Wednesday, and Thursday mornings. In contrast, collisions predominantly occur in the late afternoon and early evening hours, indicating a temporal mismatch between peak times for traffic enforcement and peak times for traffic incidents.

Spatial analysis

We build on the temporal incongruity demonstrated in the previous section by assessing the degree of spatial and temporal congruity between collisions and moving violations during the morning, afternoon, and night. For stakeholders in VisionZero Campaigns and other traffic safety advocates, it is important to know whether police are making traffic stops in areas and at the times where traffic is most dangerous. In particular, the utility of police as efficient partners for VisionZero campaigns depends on their ability to deploy resources effectively. That is, do police engage in more traffic safety as a response to increased demand for traffic enforcement, or do traffic stops respond more closely to calls for police service based on something else? We measure traffic safety and police responses at the beat level—the administrative unit where police are likely making decisions about resource allocation (e.g., how many patrol officers will be engaging in traffic safety operations at any given time). In order to estimate how responsive police activity is to collisions and 911 calls from 1 week to the next, we rely on the following regression model:

$$Y_{it} = \mu + \beta Y_{i,t-1} + \alpha_1 D_{it} + \alpha_2 D_{i,t-1} + \alpha_1 D_{it} \times \text{Crime}_i + \alpha_2 D_{i,t-1} \times \text{Crime}_i + \gamma X_i + \eta_t + \varepsilon_{it},$$

where Y_{it}, D_{it}, and X_{it} represent the outcome, the key predictors, and the covariates for beat i in period t, respectively. We focus on three outcome variables: the standardized number of moving violations, the ratio between the number of non-moving violations and the number of moving violations, and the proportion of stops in which a search occurred (search rate), in different periods of a day: the morning, the afternoon, and the night. Our key predictors are the same variables used above: the number of collisions and the number of 911 calls in the corresponding time of a day. Further, we interact these values with a beat's level of crime, measured using the indexed crimes reported yearly as part of the FBI's Uniform Crime Reporting (UCR) program. Our covariates include population size, the percentage of minority residents, and the median income level of each beat. We control for the 1-week lag of Y and D to reduce the influence of confounders. We assume that $E\left[\varepsilon_{it} | D_i^{(t-1):t}, Y_{i,t-1}, X_i, \eta_t\right] = 0$. In the literature, this is known as the autoregressive distributed lag (ADL) model (Beck & Katz, 2011; Blackwell & Glynn, 2018).[4]

We present the results of the ADL model in Figure 4. From left to right, the outcome variables are the standardized number of moving violations, the ratio between non-moving and moving violations, and search rate, respectively. In each panel, we report the estimated effects of collisions, 911 calls, and

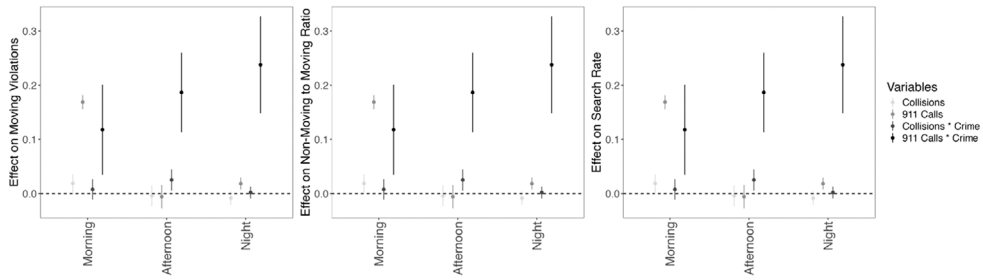


FIGURE 4 Collisions, crime, 911 calls, and police responses by time of day.

their interactions with the crime rate for three different periods of the day: morning, afternoon, and night. In the panel on the left, we see that police assess more moving violations in the morning in beats with more collisions in the morning in the same week. This effect is substantively small (about 0.01 of a standard deviation) and becomes statistically insignificant in the afternoon and evening. 911 calls have a substantively larger effect on stops related to moving violations in the morning (about a 0.18 standard deviation increase), but this effect also attenuates in the evening. 911 calls but not collisions have a meaningful impact on the search rate and the non-moving-to-moving violation ratio. The estimates of the interaction effects show that the police are more responsive to collisions and 911 calls from beats with a higher-than-average crime index when we predict the number of stops for moving violations and the non-moving to moving violation ratio. These results highlight that to the extent that police respond to demands for service in the form of moving violations from week to week, they respond much more directly to non-traffic-related matters like 911 calls and crime; this affects both in the time of day and places in which they engage in traffic enforcement.

Once concern with the ADL model, the results of which are presented in Figure 4, is that police respond to broader trends detected within beats, like perceived levels of crime or need for traffic enforcement, rather than responding to a particular beat that had a particularly high number of collisions in a given week. To address these concerns, we regress our outcomes of interest (moving violations, non-moving violations, and search rates) on collisions, 911 calls, crime rates, and the covariates included in the lagged models. In this further regression analysis, these variables are aggregated such that we have one observation per beat. We find that in the aggregate, police conduct more moving violation stops in beats with more collisions in the morning, but that this effect is substantively small and attenuates over the course of the day. We find no association between 911 calls and non-moving stops or vehicle searches at the beat level. One possible reason for this discrepancy between this finding and the estimates from the ADL model is that the police respond to fluctuations in 911 calls with more policing, but that these effects are time-limited, and do not show up in the aggregate when looking across a broader time-span. Only higher percentages of non-white populations in beats are consistently associated with more non-moving stops and searches at the beat level. These results are presented in the Appendix in Tables A1–A3 and Figures A1 and A2.

Implications for racial equity

The patterns just described have important implications with regard to the racial composition of the drivers pulled over. Previous research has found that enforcement that prioritizing crime control is associated with increased racial disparities in policing (Baumgartner et al., 2018, 2021). Figure 5 shows that in the mornings, the relative frequency of stops for black and white drivers track closely, but in the afternoon and evening, stops of white drivers decrease in frequency while stops of black drivers remain high.[5]

Figure 6 further explores the allocation of police resources throughout the day, plotting the percentage of stops that take place in beats that are in the 75th percentile for percentage minority residents.

Figure 6 demonstrates that police focus more on stops in neighborhoods with the greatest percentage of minority residents in the afternoon and at night, further suggesting that stopping behavior is driven by concerns other than traffic safety or responding to demands for crime prevention (beat crime rates and percent minority correlate at -0.13, $p > 0.1$). This pattern is most pronounced when comparing morning and night stops, where the difference in proportions is statistically significant ($p < 0.001$), highlighting a stark contrast in police behavior between these time periods.

Additionally, beat demographics are consistently linked to crime control and prevention strategies. Across mornings, afternoons, and nights, a greater concentration of minority residents in a beat is associated with relatively more non-moving stops and higher search rates. Looking at the models using data gathered from the afternoon activity (when police begin focusing much more on non-moving stops and searches), a one standard deviation increase in the minority share of a beat is associated with a 0.31 standard deviation increase

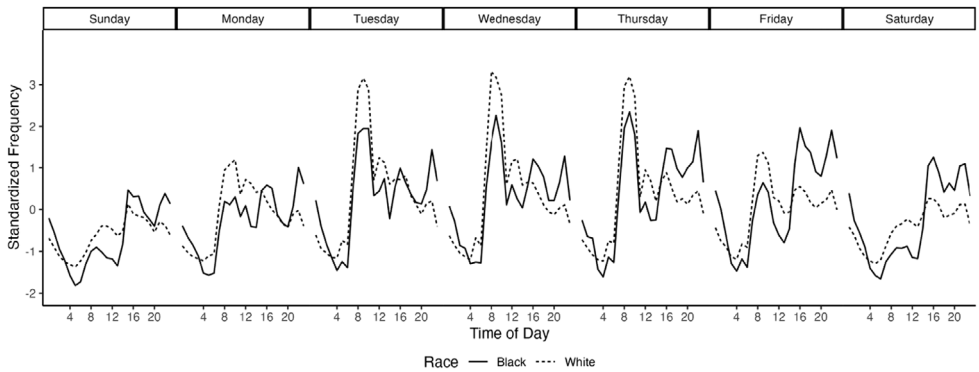


FIGURE 5 Relative frequency of White and Black driver stops by weekday-hour.

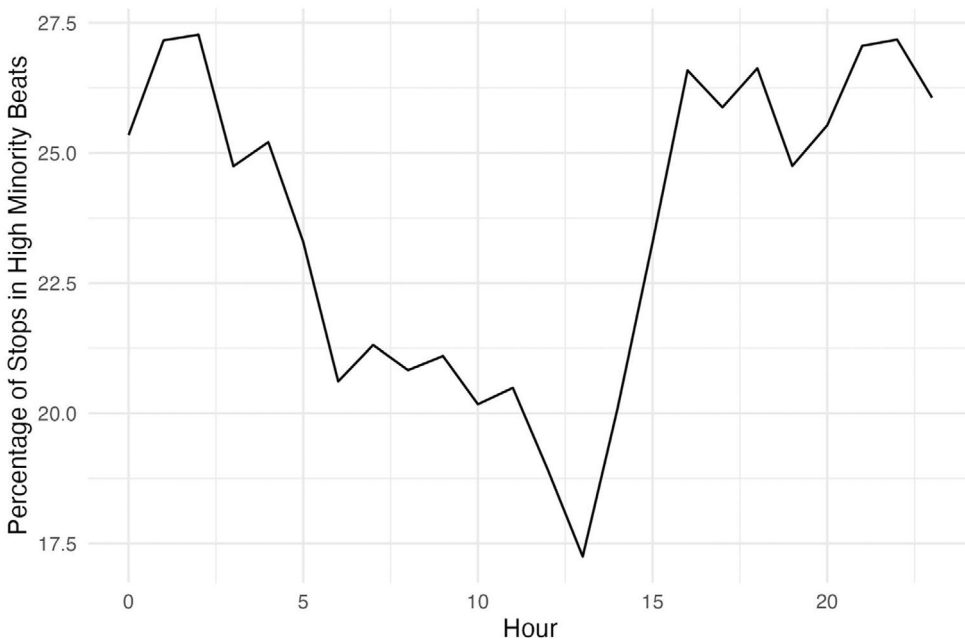


FIGURE 6 Proportion of stops in 75th percentile minority percentage beats.

in the non-moving to moving violation ratio. Search rates are similar: a one standard deviation increase in the minority share of a beat corresponds to a search rate increase of 0.47 standard deviations.

The statistical strength and substantive magnitude of the relationship between collisions and moving violations weakens over the course of the day. On the other hand, the relationships between traffic stops and beat demographics are stable over the course of the day (the effect estimates are larger as the day progresses, but not statistically distinguishably so). Taken together, the spatial and temporal results pertaining to police behaviors relating to crime prevention suggest that spatial bias affects how police employ traffic-based tactics related to crime control. And, as police use relatively more of these tactics over the course of the day, these biases grow more acute.

Intuitively, if traffic-based crime prevention activities are more intense in geographic areas with greater shares of minorities, then racial disparities will be magnified. These disparities may have little crime-fighting value, as the bottom left pane of Figure A2 illustrates. This figure looks at contraband hit rates, which are often used as a measure of assessing efficiency because a low contraband hit rate indicates that police are using an inaccurate threshold of implied suspicion with drivers of different demographic characteristics (see Glaser, 2006, 2015; Pierson et al., 2020). The figure shows that these hit rates are negatively associated with larger shares of minority populations (the estimate becomes more precise and is significant at the 95% confidence interval only in the afternoon and night). The effect estimate is substantial: a standard deviation increase in minority population in a beat corresponds to a roughly 5% decrease in the contraband hit rate, a decrease of a third of a standard deviation. This suggests a final paradox in our analysis: Not only do the police engage in crime control rather than traffic safety activities when they conduct traffic stops, but as they move through the day and focus more on crime rather than on traffic safety, even their crime-control activities become less efficient.

CONCLUSION

In this paper, we have demonstrated that policing practices vary over time and space in patterns consistent with a distracted partnership. With diverse responsibilities, police face a trade-off between enforcing traffic laws for the sake of preventing collisions and pursuing broader crime-fighting goals. We illustrate how this tension manifests in one large police department. We find that police do indeed conduct traffic safety enforcement; on weekday mornings, police often stop drivers for moving violations in areas with many collisions. However, at other times, policing looks quite different. On weekends and in the afternoons and evenings, the correlation between areas with collisions and areas with stops weakens. Officers move into areas with higher minority populations and begin to conduct more searches, more non-moving violations, and more stops of black rather than white drivers. This shift is particularly remarkable given the increase in collisions during the evening rush hour. Further, our analysis shows that the focus on minority neighborhoods is associated with a drop in the rate of finding contraband from searches there. So, we can conclude on a troubling note. The police attention to crime makes it a distracted partner in the fight against collisions, but its use of the traffic code to fight the war on drugs is also quite inefficient.

ORCID

Alexander Love https://orcid.org/0000-0003-0650-4675
Frank R. Baumgartner https://orcid.org/0000-0003-4193-4152

ENDNOTES

[1] Highway traffic safety grants are the largest of three major programs administered by NHTSA, with an annual budget of approximately $600 million; the others are vehicle safety programs ($245 million) and highway safety research and development ($155 million).

[2] For one of many examples of such efforts, see the North Carolina Governor's Highway Safety Program https://www.ncdot.gov/initiatives-policies/safety/ghsp/Pages/default.aspx; for the full list of agencies, see https://www.ghsa.org/about/shsos.

[3] These time period categorizations aim to reflect time of day, and are not equal (e.g., the afternoon category includes 8 h and the

morning category includes 7 h), but because we are comparing rates of collisions and stops, or the percent of total daily stops and collisions taking place in each time period, this does not bias any of our results.

[4] As none of the covariates are time-varying, our estimates will not be affected by the treatment-confounder feedback mentioned in Blackwell and Glynn (2018).

[5] A Kolmogorov–Smirnov test (Massey Jr, 1951) comparing traffic stops between noon and midnight reveals a statistically significant difference in the distributions of stops between Black and White drivers.

REFERENCES

Balko, Radley. 2014. *Rise of the Warrior Cop: The Militarization of America's Police Forces*. New York: Public Affairs.

Banks, R. Richard. 2003. "Beyond Profiling: Race, Policing, and the Drug War." *Stanford Law Review* 56: 571–603.

Baumgartner, Frank R., Kate Bell, Luke Beyer, Tara Boldrin, Libby Doyle, Lindsey Govan, Jack Halpert, et al. 2021. "Intersectional Encounters, Representative Bureaucracy, and the Routine Traffic Stop." *Policy Studies Journal* 49(3): 860–86. https://doi.org/10.1111/psj.12382.

Baumgartner, Frank R., Derek A. Epp, and Kelsey Shoub. 2018. *Suspect Citizens: What 20 Million Traffic Stops Tell us about Policing and Race*. New York: Cambridge University Press.

Beck, Nathaniel, and Jonathan N. Katz. 2011. "Modeling Dynamics in Time-Series–Cross-Section Political Economy Data." *Annual Review of Political Science* 14: 331–52.

Blackwell, Matthew, and Adam N. Glynn. 2018. "How to Make Causal Inferences with Time-Series Cross-Sectional Data under Selection on Observables." *American Political Science Review* 112(4): 1067–82.

Epp, Charles R., Steven Maynard-Moody, and Donald P. Haider-Markel. 2014. *Pulled over: How Police Stops Define Race and Citizenship*. Chicago: University of Chicago Press.

Glaser, Jack. 2006. "The Efficacy and Effect of Racial Profiling: A Mathematical Simulation Approach." *Journal of Policy Analysis and Management* 25(2): 395–416.

Glaser, Jack. 2015. *Suspect Race: Causes and Consequences of Racial Profiling*. New York: Oxford University Press.

Knox, Dean, Will Lowe, and Jonathan Mummolo. 2020. "Administrative Records Mask Racially Biased Policing." *American Political Science Review* 114(3): 619–37.

Mashhadi, Mohammad Mahdi, Promothes Saha, and Khaled Ksaibati. 2017. "Impact of Traffic Enforcement on Traffic Safety." *International Journal of Police Science and Management* 19(4): 238–46. https://doi.org/10.1177/1461355717730836.

Massey, F. J., Jr. 1951. "The Kolmogorov-Smirnov Test for Goodness of Fit." *Journal of the American Statistical Association* 46(253): 68–78.

New York State Office of the Attorney General (NYSOAG). 2020a. *Report on the Investigation into the Death of Allan Feliz*. Albany, NY: Office of the Attorney General. https://ag.ny.gov/sites/default/files/sipu_allan_feliz_report_final.links_.pdf.

New York State Office of the Attorney General (NYSOAG). 2020b. *Preliminary Report on the new York City Police Department's Response to Demonstrations Following the Death of George Floyd*. Albany, NY: Office of the Attorney General. https://ag.ny.gov/sites/default/files/2020-nypd-report.pdf.

Pierson, Emma, Camelia Simoiu, Jan Overgoor, Sam Corbett-Davies, Daniel Jenson, Amy Shoemaker, Vignesh Ramachandran, et al. 2020. "A Large-Scale Analysis of Racial Disparities in Police Stops across the United States." *Nature Human Behaviour* 4: 736–45. https://doi.org/10.1038/s41562-020-0858-1.

Seo, Sarah A. 2019. *Policing the Open Road: How Cars Transformed American Freedom*. Cambridge: Harvard University Press.

Sierra-Arévalo, Michael. 2024. *The Danger Imperative: Violence, Death, and the Soul of Policing*. New York: Columbia University Press.

Sorin, Gretchen. 2020. *Driving while Black: African American Travel and the Road to Civil Rights*. New York: W.W. Norton.

U.S. Department of Transportation (US DOT) National Highway Traffic Safety Administration. 2022. *Budget Estimates, Fiscal Year 2022*. Washington, DC: US DOT.

Vitale, Alex S. 2018. *The End of Policing*. London: Verso.

Webb, Gary. 2007. "Driving while Black: Tracking Unspoken Law-Enforcement Racism." *Esquire* 131: 118–27.www.esquire.com/news-politics/a1223/driving-while-black-0499.

Wilson, P. R., and D. Chappell. 1971. "The Effects of Police Withdrawal from Traffic Control: A Comparative Study." *Journal of Criminal Law, Criminology, and Police Science* 61(4): 567–72.

Woods, Jordan Blair. 2019. "Policing, Danger Narratives, and Routine Traffic Stops." *Michigan Law Review* 117(4): 635–712.

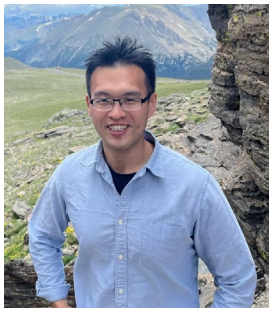
Woods, Jordan Blair. 2021a. "Metanarratives of Traffic Policing." *Connecticut Law Review* 53: 645–65.

Woods, Jordan Blair. 2021b. "Traffic without the Police." *Stanford Law Review* 73(6): 1471–1549.

AUTHOR BIOGRAPHIES

Alexander Love is a Ph.D. Candidate at the University of North Carolina at Chapel Hill where he studies American poltical institutions, policy-making, criminal justice policy, and bureaucratic politics.

Michael Greenberger is an Assistant Professor of Political Science at the University of Denver who researches American Politics with a focus on elections, American political development, political geography, and race and ethnic politics.



Ye Wang is a Assistant Professor in the Department of Political Science at the University of North Carolina at Chapel Hill. His research focuses on political methodology, particularly the development and application of causal inference methods in social science. He is interested in exploring the spillover effects generated by policies or events across time, space, and networks, as well as panel data analysis and statistical inference.

Frank R. Baumgartner holds the Richard J. Richardson Distinguished professorship in political science at UNC-Chapel Hill. The author of numerous books relevant to public policy, including Agendas and Instability in American Politics, his work on traffic stops includes Suspect Citizens: What 20 Million Traffic Stops Tell Us about Policing and Race (Cambridge, 2018) and a number of articles published in recent years.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Love, Alexander, Michael Greenberger, Ye Wang and Frank R. Baumgartner 2025. "Distracted Partners: Why Police Traffic Enforcement is Inefficient." *Policy Studies Journal* 00(0): 1–13. https://doi.org/10.1111/psj.12589.