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Ferguson and Police Use of Deadly Force

Richard Rosenfeld*

I. INTRODUCTION

The killing of Michael Brown, an unarmed black teenager, by Darren Wilson, a white police officer in Ferguson, Missouri, sparked widespread protests in the St. Louis area and across the nation.¹ Protests and civil unrest resumed after a St. Louis County grand jury declined to indict the police officer.² Protesters and commentators raised several issues related to the Ferguson incident and police use of deadly force. This Article addresses four of those issues: (1) Why Ferguson? (2) Did the Ferguson killing and ensuing civil unrest increase crime rates in St. Louis? (3) What is known about police use of deadly force? (4) What additional information is needed to understand and respond effectively to police use of deadly force? These are certainly not the only issues provoked by the Ferguson events, but they have both research and policy significance, and they have also been raised in response to other controversial police use-of-force incidents in Cleveland, New York City, Baltimore, and elsewhere.

The report by the U.S. Department of Justice (“DOJ”) on the Ferguson Police Department (“FPD”) offers several reasons why Ferguson was ripe for protests and civil unrest over police practices in the city’s African-American community, including aggressive enforcement of municipal ordinances to generate revenue, inadequate training and supervision related to police use of force, and a pattern of racial bias in policing that eroded trust in the police by African Americans.³ Yet, such practices are clearly not unique to this small suburban community,⁴ and the DOJ report also notes that many Ferguson

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1. See *Michael Brown’s Shooting and Its Immediate Aftermath in Ferguson*, N.Y. TIMES (Aug. 25, 2014), http://www.nytimes.com/interactive/2014/08/12/us/13police-shooting-of-black-teenager-michael-brown.html?_r=0##time348_10366.

2. *Latest Updates: Protests Nationwide as More Troops Are Called to Ferguson*, N.Y. TIMES (Nov. 25, 2014), <http://news.blogs.nytimes.com/2014/11/25/live-updates-grand-jury-decision-darren-wilson-ferguson/>.

3. CIVIL RIGHTS DIV., U.S. DEP’T OF JUSTICE, INVESTIGATION OF THE FERGUSON POLICE DEPARTMENT 2 (Mar. 4, 2015), http://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/ferguson_police_department_report.pdf.

4. See, e.g., Joel Rose, *Despite Laws and Lawsuits, Quota-Based Policing Lingers*, NPR (Apr. 4, 2015, 4:47 AM), <http://www.npr.org/2015/04/04/395061810/despite-laws-and-lawsuits-quota-based-policing-lingers>; Jaxon Van Derbeken & Vivian Ho, *S.F. Police Chief: 8 Officers Deserve Firing Over Text Messages*, S.F.

residents, both black and white, take pride in their city, particularly its racial diversity: “Pride in this aspect of Ferguson is well founded; Ferguson is more diverse than most of the United States, and than many of its surrounding cities. It is clear that many Ferguson residents of different races genuinely embrace that diversity.”⁵

Shortly after rioting erupted in response to Michael Brown’s killing, a reporter wrote: “It’s still unclear why . . . tensions boiled over. But to many people, it had little to do with this town.”⁶ This Article documents similarities and differences between Ferguson and its surrounding communities, including the City of St. Louis, that may help to explain why a controversial police killing took place there.

The second issue addressed here concerns the putative connection drawn by police and public officials between the police killing in Ferguson and increasing crime rates in St. Louis. Drawing on the experience of Cincinnati, Ohio, where crime rates rose after rioting broke out in response to a fatal police shooting in 2001, police and other public officials attributed the crime increase in St. Louis to a “Ferguson effect” that emboldened criminals while diverting police from normal patrols to address civil unrest in the city.⁷ This Article analyzes month-by-month changes in crime between 2013 and 2014 to determine whether the Ferguson events may have spurred crime increases in St. Louis.

The third issue this Article considers is the state of empirical research on police use of deadly force. The research literature focuses on the social conditions in states and, to a lesser degree, cities that are associated with police killings of citizens.⁸ This Article maintains that neighborhoods constitute a better unit of analysis in such research and reports the results of a recent neighborhood-level study of police use of deadly force in St. Louis.⁹ The

CHRON. (Apr. 3, 2015), <http://www.sfgate.com/bayarea/article/S-F-chief-moves-to-fire-7-more-officers-over-6177739.php>.

5. CIVIL RIGHTS DIV., *supra* note 3, at 76.

6. Todd C. Frankel, *Why the Police-Shooting Riots in Ferguson, Mo., Had Little to do with Ferguson*, WASH. POST (Aug. 12, 2014), <http://www.washingtonpost.com/news/storyline/wp/2014/08/12/why-the-police-shooting-riots-in-ferguson-mo-had-little-to-do-with-ferguson/>.

7. Joel Currier & Christine Byers, *St. Louis Homicides up More than 30 Percent in 2014 to Highest Total Since 2008*, ST. LOUIS POST-DISPATCH (Dec. 31, 2014 9:45 AM), http://www.stltoday.com/news/local/crime-and-courts/st-louis-homicides-up-more-than-percent-in-to-highest/article_1fedee5e-71df-5b12-8f1b-69ab62aab352.html; Amy L. Stutzenberger, *Street Crime in Cities: Cincinnati, Ohio*, in *ENCYCLOPEDIA OF STREET CRIME IN AMERICA* 74, 74–76 (J.I. Ross ed., 2013).

8. As used in this Article, the term “citizen” refers to persons against whom the police use force and is not meant to describe the legal or citizenship status of such persons. On occasion, the term “suspect” is used interchangeably with “citizen.”

9. See David Klinger, Richard Rosenfeld, Daniel Isom & Michael Deckard, *Race, Crime, and the Micro-Ecology of Deadly Force*, 15 *CRIMINOLOGY & PUB. POL’Y* (forthcoming Feb. 2016).

study recommends major improvements in the information systems used to monitor and explain police use of force in the United States.

That is the fourth issue taken up in this Article: the woefully inadequate state of the evidence on police use of force in the United States. Public and scholarly debate regarding the use of force by the police is not limited to the recent incident in Ferguson. It has emerged periodically over the past several decades, typically after highly publicized incidents in which the police injure or kill an unarmed suspect. The debates surrounding these incidents have produced calls to reform police practices. But both the debates and recommendations lack a strong research foundation. From a scientific standpoint, it is not an overstatement to concede that very little is known about the conditions under which the police decide to use force and the consequences of these decisions for specific incidents and for the communities in which police use of force occurs with some frequency.¹⁰ This Article concludes with several recommendations for improving the evidence base regarding the police use of force in ways that can enhance scientific inquiry, inform public debate, and promote more effective policy responses.

II. WHY FERGUSON?

Ferguson, Missouri, is a St. Louis suburb with a current population of just over 21,000 residents.¹¹ It is located in the northern part of St. Louis County, a few miles from the St. Louis City border, as shown in Figure 1.¹² Like most other American cities, St. Louis has a long history of residential racial segregation that has persisted to the present.¹³ Figure 1 shades census tracts in the city and county by racial composition: the darker the shading, the higher the proportion of African Americans in the census tract. The figure reveals that African-American residents are concentrated in the northern sections of the city and county. The southern areas are largely white. Ferguson is something of an outlier in this respect, with census tracts that are largely white, largely black, and mixed-race. Michael Brown lived and was killed in a predominantly black neighborhood in the southeast section of Ferguson.¹⁴

10. See David Klinger, *Police Violence Against Youth in Community Context* 20–21 (Apr. 9, 2015) (presentation at 14th Annual Youth Violence Prevention Conference), <http://www.umsl.edu/ccj/Youth%20Violence%20Prevention/2015/2015Klinger.pdf>.

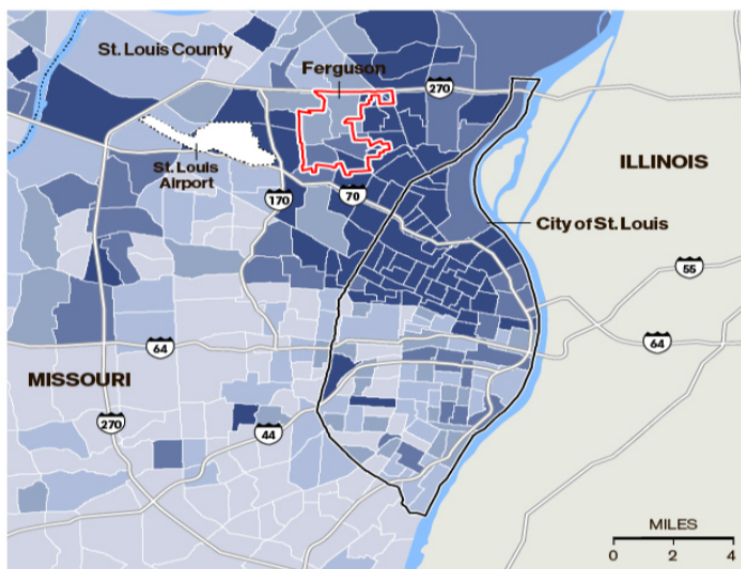
11. *Ferguson* (city), Missouri, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/29/2923986.html> (last visited Oct. 1, 2015).

12. See *infra* Figure 1.

13. COLIN E. GORDON, *MAPPING DECLINE: ST. LOUIS AND THE FATE OF THE AMERICAN CITY* 299 (Glenda Gilmore, Michael Kazin & Thomas J. Sugrue eds., 2008).

14. Narry Enten, *Michael Brown's Neighborhood In Ferguson Still Lags In Voter Turnout*, FIVETHIRTYEIGHT (Apr. 8, 2015, 4:57 PM), <http://fivethirtyeight.com/datalab/michael-browns-neighborhood-in-ferguson-still-lags-in-voter-turnout/>.

FIGURE 1:
St. Louis City and County Census Tracts Shaded by Percentage of Black Residents¹⁵



The racial composition of Ferguson has undergone a reversal in just the past two decades. In 1990, the city's population was 74% white and 25% black; by 2010, the black population had risen to 67% and the white population had fallen to 29%.¹⁶ The growth of the black population has been accompanied by rising rates of poverty and unemployment. Table 1 compares Ferguson's current poverty rate and unemployment rate with those of St. Louis County and St. Louis City.¹⁷ On both indicators, Ferguson is more similar to the city than the county, with high rates of poverty and unemployment that far exceed those in St. Louis County as a whole.

15. Peter Coy, *The County Map that Explains Ferguson's Tragic Discord*, BLOOMBERG (Aug. 15, 2014), <http://www.bloomberg.com/bw/articles/2014-08-15/how-st-dot-louis-countys-map-explains-fergusons-racial-discord>.

16. Niall McCarthy, *Chart Inside Ferguson's Changing Demographics*, FORBES (Aug. 19, 2014, 8:59 AM), <http://www.forbes.com/sites/niallmccarthy/2014/08/19/chart-ferguson-white-flight>.

17. See *infra* Table 1.

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TABLE 1:
Racial Composition, Unemployment Rate, Poverty Rate, and Crime Rates in
Ferguson, St. Louis County, and St. Louis City¹⁸

	Ferguson	St. Louis Co.	St. Louis City
Population	21,203	998,954	319,356
% Black	67.4	23.7	49.2
% Unemployed	12.2	8.6	14.3
% Poor	24.9	10.9	27.4
Homicide Rate ^a	.094	.037	.376
Violent Crime Rate ^a	4.76	2.82	15.9
Property Crime Rate ^a	53.1	24.8	66.8

^a Per 1000 population in 2013.

High levels of economic disadvantage are generally accompanied by correspondingly high rates of crime.¹⁹ That is not the case in Ferguson, at least with respect to violent crimes. As shown in Table 1, homicide and total violent crime²⁰ rates in Ferguson in 2013, the year before Michael Brown was killed, were much closer to those in the remainder of St. Louis County than to those in St. Louis City. Ferguson's property crime²¹ rates were somewhat closer to those in the city. To be clear, Ferguson is hardly free of criminal violence; its homicide rate in 2013 was just over twice the national rate of 4.5 per 100,000 inhabitants.²² But Ferguson residents are 75% less likely to become the victim of a homicide than their St. Louis counterparts with whom

18. *Ferguson (city), Missouri, supra* note 11; *Uniform Crime Reporting (UCR) Statistical Query*, MO. ST. HIGHWAY PATROL STAT. CTR. ANALYSIS, http://www.mshp.dps.missouri.gov/MSHPWeb/SAC/data_and_statistics_ucr_query_backup.html (last visited Jan. 1, 2016) [hereinafter *Uniform Crime Reports*].

19. Ruth D. Peterson & Lauren J. Krivo, *Divergent Social Worlds*, in *AMERICAN SOCIOLOGICAL ASSOCIATION'S ROSE SERIES IN SOCIOLOGY* 33 (Diane Barthel-Bouchier et al. eds., 2012); ROBERT J. SAMPSON, *GREAT AMERICAN CITY: CHICAGO AND THE ENDURING NEIGHBORHOOD EFFECT* 34 (2012).

20. Violent crimes include homicide, rape, robbery, and aggravated assault. *Violent Crime*, FBI, https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/violent-crime/violent-crime-topic-page/violentcrimemain_final (last visited Jan. 1, 2016).

21. Property crimes include burglary, larceny, and motor vehicle theft. *Property Crime*, FBI, https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/property-crime/property-crime-topic-page/propertycrimemain_final (last visited Jan. 1, 2016).

22. See *Crime Rate in Ferguson, Missouri (MO)*, CITY-DATA, <http://www.city-data.com/crime/crime-Ferguson-Missouri.html> (last visited Oct. 15, 2015).

they share demographic risk factors.²³ That is one reason why people, including those of modest means, left the city for the safer confines of suburban communities like Ferguson.²⁴

Ferguson's violent crime rate is not only well below that in St. Louis, it is also lower than those of several of its suburban neighbors. For example, the City of Jennings (population 14,752), located to the southeast of Ferguson, had a violent crime rate of 10.8 per 1000 residents in 2013, over twice the Ferguson rate of 4.8 per 1000 residents.²⁵ The City of Berkeley (population 9099), to the west, had a violent crime rate of 6.4 per 1000.²⁶ The rate in Dellwood (population 5004), to the east, was 6.8 per 1000, and the rate in Normandy (population 4987), to the south, was equal to Ferguson's at 4.8 per 1000.²⁷ Among Ferguson's nearest neighbors, only Florissant (population 52,363), to the north, had a lower violent crime rate than Ferguson's in 2013.²⁸ At 1.6 violent crimes per 1000 residents, Florissant's rate was also lower than that of St. Louis County as a whole.²⁹

What light might these comparisons shed on why Ferguson experienced a controversial police shooting? Of course, explaining a single occurrence of a rare event is inherently difficult. Other things equal, however, we might have expected that such an incident would have been more likely to occur in one of Ferguson's neighbors with a higher rate of violent crime. Yet, as explained below, some evidence suggests that police shootings may be less frequent in the most violent communities than in those with mid-levels of violent crime – places like Ferguson. Before reviewing research on police shootings, the claim that the events in Ferguson spurred a crime rise in St. Louis is evaluated.

23. See *Uniform Crime Reports*, *supra* note 18.

24. See GORDON, *supra* note 13, at 25.

25. See *Jennings (city), Missouri*, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/29/2937178.html> (last visited Jan. 1, 2016); *Uniform Crime Reports*, *supra* note 18.

26. See *Berkeley (city), Missouri*, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/29/2904906.html> (last visited Jan. 1, 2016); *Uniform Crime Reports*, *supra* note 18.

27. See *Dellwood (city), Missouri*, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/29/2919018.html> (last visited Jan. 1, 2016); *Uniform Crime Reports*, *supra* note 18.

28. See *Florissant (city), Missouri*, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/29/2924778.html> (last visited Jan. 1, 2016); *Uniform Crime Reports*, *supra* note 18.

29. *Uniform Crime Reports*, *supra* note 18; see *supra* Table 1.

III. WAS THERE A “FERGUSON EFFECT” ON CRIME IN ST. LOUIS?

Does widespread and heavily publicized protest activity directed at alleged police misconduct result in higher crime rates? At first glance, that appeared to be true in St. Louis after Michael Brown was killed. After declining or holding steady for several years, the number of violent crimes in St. Louis rose by 5.3% in 2014 over the previous year.³⁰ The increase in homicide was especially pronounced. In 2014, the police department recorded 159 homicides, a 32.5% increase over the 2013 total of 120.³¹ As noted above, some public officials have attributed the crime increase in St. Louis to the police shooting in Ferguson that led to protest demonstrations in St. Louis, as well as Ferguson. The protests were also in response to two fatal police shootings that occurred in St. Louis after the Ferguson incident.³²

To determine with certainty whether the Ferguson events caused crime increases in St. Louis, we would have to know the crime rates in St. Louis absent the Ferguson events. Proving the counterfactual – whether *y* would not have occurred had *x* not occurred – is challenging. In this case, however, we can ask whether the *timing* of the “Ferguson effect” hypothesis corresponds with observed crime changes in St. Louis. Obviously, the Ferguson events or subsequent police shootings could not have produced crime increases in St. Louis if those increases took place *before* Michael Brown was killed. If the increases occurred afterward, that would not prove they were caused by the controversial police shootings, but it is a necessary condition for drawing causal inferences.

Figure 2 displays month-by-month homicide frequencies in St. Louis in 2013 and 2014.³³ The homicide count was higher in 2014 than in 2013 throughout most the year, but it is not readily apparent from the figure whether the gap grew after Michael Brown was killed in early August of 2014.³⁴ To establish whether the police shooting in Ferguson and resulting protests may have triggered an increase in homicide, the month-by-month ratio of homicides in 2014 to homicides in 2013 is shown in Figure 3.³⁵ Here we see

30. See ST. LOUIS METROPOLITAN POLICE DEP'T, REPORT: CRM0013-BY, PART 1 CRIME COMPARISON BASED ON UCR REPORTING NEIGHBORHOOD REPORT 91 (Jan. 6, 2105), http://slmpd.org/crimestats/crm0013-by_201412.pdf.

31. See *id.*

32. Fred Barbash & Abby Phillip, *Fatal Shooting of 18-Year-Old by Off-Duty Police Officer Ignites Protests in St. Louis*, WASH. POST (Oct. 9, 2014), <http://www.washingtonpost.com/news/morning-mix/wp/2014/10/09/crowds-in-streets-of-st-louis-after-fatal-shooting-by-off-duty-police-officer/>; Joe Holleman & Lisa Brown, *St. Louis Police Fatally Shoot Man Who Brandished Knife*, ST. LOUIS POST-DISPATCH (Aug. 20, 2014, 12:15 AM), http://www.stltoday.com/news/local/crime-and-courts/st-louis-police-fatally-shoot-man-who-brandished-knife/article_85d27316-a17a-5e0a-b1d6-8a6753e2fcb2.html.

33. See *infra* Figure 2.

34. See *infra* Figure 2.

35. See *infra* Figure 3.

that homicides were far more frequent in the early months of 2014 compared with the same period in 2013. The ratio then decreased but began to rise again in June, two months before Michael Brown was killed, and at no time in the following months did it exceed the levels reached earlier in the year. These results do not support the belief that the St. Louis homicide increase in 2014 was attributable to the Ferguson events.

FIGURE 2:
St. Louis Homicides by Month, 2013-2014

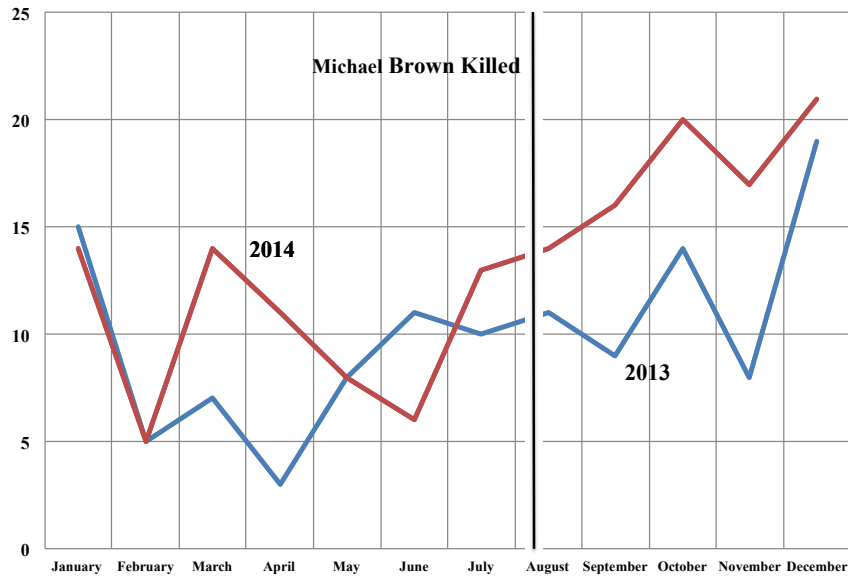
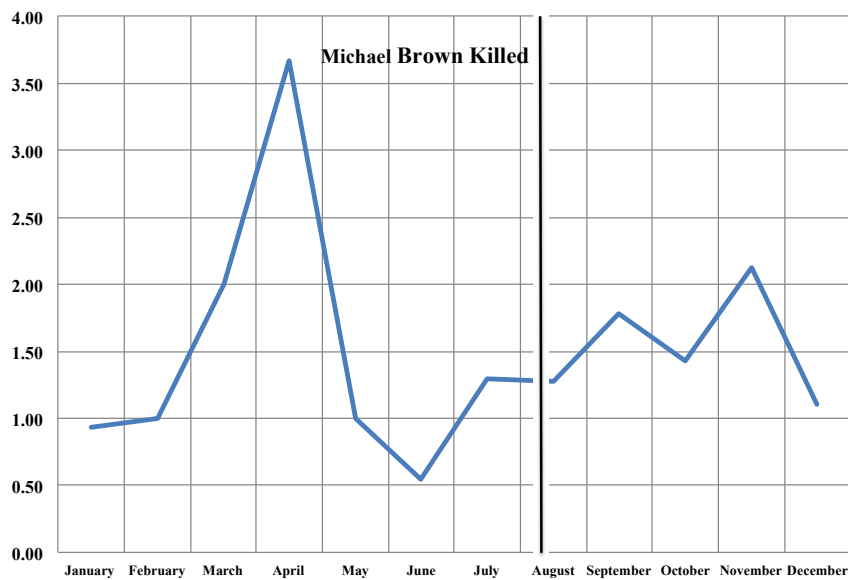


FIGURE 3:
Ratio of St. Louis Homicides by Month, 2013-2014



The picture differs somewhat for other violent crimes. Figure 4 displays the monthly ratio of violent crimes in 2014 to violent crimes in 2013.³⁶ We see that the ratio grew early in the year, decreased for a month or two, and then increased again through the end of the year. But that increase began in May, well before the police shooting in Ferguson. The rate of increase in the violent crime ratio, however, does appear to have accelerated beginning in September. The timing of these changes offers mixed support, at best, for the “Ferguson effect” hypothesis.

FIGURE 4:
Ratio of St. Louis Violent Crimes by Month, 2013-2014

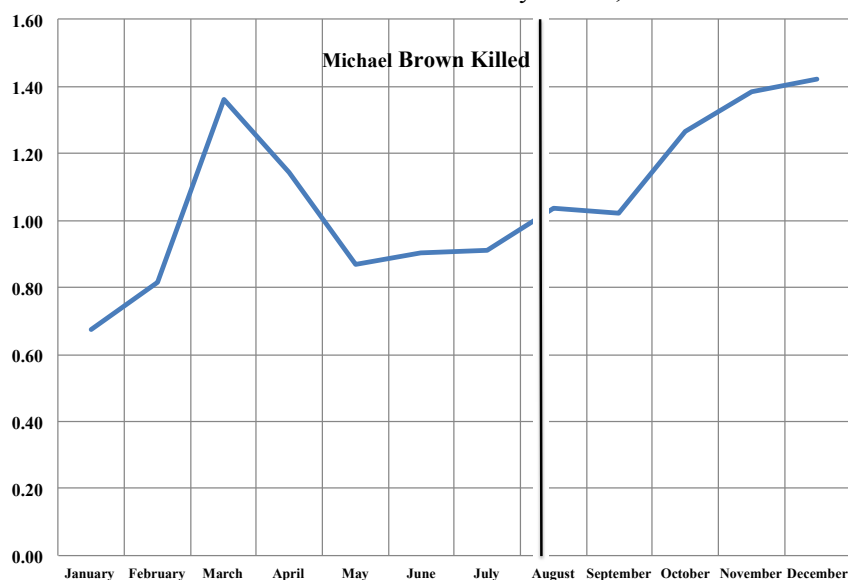
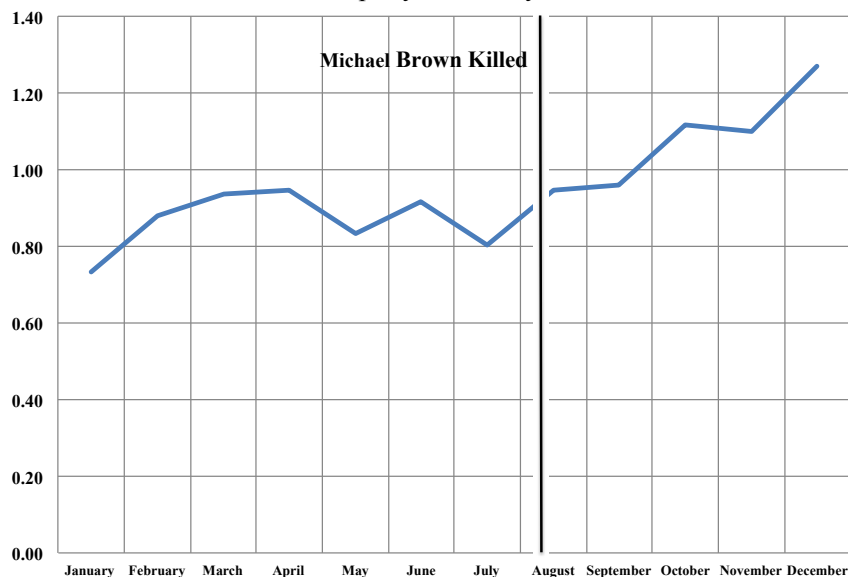


Figure 5 displays the ratio of property crimes in 2014 over 2013.³⁷ The monthly change in the property crime ratio offers the strongest evidence in support of the hypothesis that the Ferguson events led to crime increases in St. Louis, at least with respect to timing. The property crime ratio was fairly flat until August, when it began to increase steadily through the remainder of the year. Before August, St. Louis averaged about 15% fewer property crimes in 2014 than in 2013. From August through the end of 2014, the city averaged 8% more property crimes than during the same period the year before. By December, the number of property crimes in 2014 exceeded the number in 2013 by 27%. If there was a “Ferguson effect” on crime in St. Louis, it was most pronounced in the growth of property crimes.

36. See *infra* Figure 4.

37. See *infra* Figure 5.

FIGURE 5:
Ratio of St. Louis Property Crimes by Month, 2013-2014



Taken together, the timing of these monthly crime changes provides only partial support for the contention that the police shooting in Ferguson and ensuing protest activity spurred crime increases in St. Louis. The increase in homicide in 2014 predated Michael Brown's killing on August 9.³⁸ Violent crimes exhibit much the same pattern, although the rate of increase in violent crimes over 2013 accelerated after August.³⁹ Only the timing of the change in property crimes is fully consistent with a "Ferguson effect." But temporal consistency is not a sufficient condition to establish substantive proof. Many factors may have contributed to a rise in property crimes, and perhaps also violent crimes, in St. Louis after August of 2014, and we cannot conduct an experiment to discover whether crime would have increased had Michael Brown not been killed in a controversial police shooting. But we can conclude with reasonable certainty that the events in Ferguson were not responsible for the steep rise in homicide in St. Louis.

38. See *supra* Figure 5.

39. See *supra* Figure 5.

IV. WHAT IS KNOWN ABOUT POLICE USE OF DEADLY FORCE?⁴⁰

A sizable research literature exists on the social conditions that are related to police killings of citizens. The results of that research are decidedly mixed. Most studies find higher rates of killings by police in places with high rates of violent crime.⁴¹ Some studies find that police killings are associated with the size of the minority population, while others find that police killings are more frequent in places with extensive poverty and unemployment.⁴² It is difficult to know what to make of these results, not simply because the results vary, but because the research literature is subject to several significant limitations that preclude strong conclusions, regardless of the results.

One limitation involves the unit of analysis used to study police killings and its covariates. With a single exception, prior research on the social determinants of police killings has been based on data for states and cities. Such large and heterogeneous spatial units can mask as much as they reveal about the conditions associated with police use of deadly force. The exception is criminologist James Fyfe's investigation of the link between crime levels and officer-involved shootings across twenty patrol zones of the New York City Police Department for the years 1971-1975.⁴³ Fyfe found a positive relationship between crime levels and police shootings, but he looked only at the relationship between crime and shootings, ignoring the role that race and economic (or any other) factors may play in exerting direct effects on shootings or as possible confounds of the observed crime-shooting relationship.⁴⁴ In addition, with an average population of about 400,000 residents, the within-city spatial aggregates Fyfe used are still quite large and heterogeneous; they hardly qualify as "neighborhoods," even in New York City.⁴⁵

Research has clearly established that urban neighborhoods exhibit substantial variation in crime, demographic composition, and socioeconomic status.⁴⁶ Moreover, some research suggests that police behavior may vary systematically with race and class across neighborhoods,⁴⁷ and that the nature of police-citizen interactions in heavily minority communities may be mark-

40. See Klinger, Rosenfeld, Isom & Deckard, *supra* note 9.

41. See, e.g., *id.*

42. See generally *id.*

43. See generally James J. Fyfe, *Geographic Correlates of Police Shootings*, 17 J. RES. CRIME & DELINQ. 101 (1980).

44. See *id.*

45. See *id.*

46. See Peterson & Krivo, *supra* note 19, at 71; Sampson, *supra* note 19, at 6.

47. See generally Sandra Bass, *Policing Space, Policing Race: Social Control Imperatives and Police Discretionary Decisions*, 28 SOC. JUST. 156 (2001); Douglas A. Smith, *The Neighborhood Context of Police Behavior*, 8 CRIME & JUST. 313 (1986).

edly different than in other neighborhoods.⁴⁸ The neighborhood is arguably a more appropriate unit of analysis than states or cities for studying police behavior, including use of force against citizens.

A second drawback of prior research is the questionable reliability of the data used to measure police killings. Most studies are based on data drawn from the FBI's Supplementary Homicide Reports, which FBI Director James Comey has characterized as "incomplete and therefore, in the aggregate, unreliable."⁴⁹ But even if the data were complete and accurate, the research would still undercount police use of deadly force. That is because the existing data sources are limited to fatalities.⁵⁰ Death at the hands of the police is not a sound operationalization of police use of deadly force. Police are trained to fire at "center mass," which means that all police shootings are potentially deadly.⁵¹ Yet, no one is killed in most of the incidents in which police officers discharge their firearms.⁵² Bullets fired by the police miss their mark in many shooting incidents, and the majority of people who are struck by police gunfire survive their wounds.⁵³ Measures that count only dead bodies, therefore, understate by a large margin the extent of deadly force by the police because they omit non-fatal shootings.

Criminologist David Klinger and colleagues sought to overcome these limitations of prior research on police use of deadly force in a study of police shootings in St. Louis between 2003 and 2012.⁵⁴ The study is based on 230 incidents in which sworn officers intentionally discharged their firearms at

48. See, e.g., Rod K. Brunson, *Police Don't Like Black People: African-American Young Men's Accumulated Police Experiences*, 6 CRIMINOLOGY & PUB. POL'Y 71 (2007); Rod K. Brunson & Jody Miller, *Young Black Men and Urban Policing in the United States*, 46 BRIT. J. CRIMINOLOGY 613 (2006).

49. James B. Comey, Dir., FBI, Remarks at Georgetown University: *Hard Truths: Law Enforcement and Race* (Feb. 12, 2015), <http://www.fbi.gov/news/speeches/hard-truths-law-enforcement-and-race>. The Supplementary Homicide Reports are part of the FBI's Uniform Crime Reporting program. See also DUREN BANKS ET AL., ARREST-RELATED DEATHS PROGRAM ASSESSMENT: TECHNICAL REPORT (Mar. 2015), <http://www.bjs.gov/content/pub/pdf/ardpatr.pdf>; David Klinger, *On the Problems and Promise of Research on Lethal Police Violence*, 16 HOMICIDE STUD. 78, 78-96 (2012); Loftin, et al., *Underreporting of Justifiable Homicides committed by Police Officers in the United States, 1976-1998*, 93 AM. J. PUB. HEALTH 1117 (2003); Michael S. Schmidt, *Scant Data Frustrates Efforts to Assess Number of Shootings by Police*, N.Y. TIMES (Apr. 8, 2015), http://www.nytimes.com/2015/04/09/us/us-has-limited-data-on-shootings-involving-police.html?_r=0.

50. See generally Klinger, *supra* note 49.

51. See Ryllie Danylko, *Shooting to Kill: Why Police Are Trained to Fire Fatal Shots*, CLEVELAND (Dec. 10, 2014), http://www.cleveland.com/metro/index.ssf/2014/12/shooting_to_kill_why_police_ar.html.

52. See Klinger, *supra* note 49, at 85.

53. See *id.*; WILLIAM GELLER & MICHAEL J. SCOTT, DEADLY FORCE: WHAT WE KNOW 97 (1992).

54. See Klinger, Rosenfeld, Isom & Deckard, *supra* note 9.

citizens during the ten-year period between 2003-2012.⁵⁵ Each incident was allocated to the census block group in which it occurred.⁵⁶ Block groups consist of clusters of contiguous census blocks and house between 600 and 3000 residents.⁵⁷ The average population of the 355 St. Louis block groups used in the study is 1000 inhabitants.⁵⁸ Block groups are not perfect measures of “neighborhoods,” but their large number, relatively small size, and internal homogeneity – compared with states, cities, or police districts – make them a suitable unit of analysis for examining the social conditions associated with police shootings.

Most of the shootings involved white male officers and young black male suspects armed with a gun and were precipitated by perceived criminal activity or “suspicious” behavior by suspects.⁵⁹ About half of the shootings resulted in injury to suspects, but only about one in six involved fatal wounds.⁶⁰ The shootings tended to occur in socioeconomically disadvantaged neighborhoods with relatively large black populations and elevated levels of firearm violence – but only to a point.⁶¹ Police shootings rarely occurred in the neighborhoods with the lowest levels of firearm violence, but they were also less frequent in the most violent neighborhoods.⁶² The shootings were most likely to occur in St. Louis neighborhoods with mid-levels of firearm violence.⁶³

Why are police shootings somewhat less likely to occur in neighborhoods with the highest levels of criminal violence? And why do some neighborhoods with moderate levels of violence experience multiple police shootings? One possibility, of course, is that the curvilinear pattern in the relationship between police shootings and firearm violence derives from local circumstances. St. Louis may differ from other large cities with respect to the relationship between police shootings and neighborhood characteristics, or in other ways not captured in the data used in this study. For that reason, the authors call for comparable neighborhood-level research on police shootings in other cities.

If their results are replicated in future research, the researchers speculate that fewer police shootings may occur in the most violent neighborhoods because the police or citizens, or both, take special care to avoid confrontations that could result in the use of deadly force.⁶⁴ Drawing on extensive research in organizational studies and public health, and interviews with police officers, they suggest that “mindful” police officers become more cau-

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.*

tious in areas with extremely high levels of violence and thus avoid shootings that would have occurred had they been less attentive to proper tactical procedure.⁶⁵ The authors recommend that academy and in-service training programs should include thorough tactical instruction and emphasize that officers always exhibit sound tactical practices when in the field.⁶⁶ Some of these practices are rather straightforward: clearly communicating with suspects, managing the physical space between themselves and armed citizens (and citizens who are believed to be armed), and making and following plans.⁶⁷ Other practices are more involved; for example, determining the circumstances that warrant “tactical retreat” by officers.⁶⁸ All, however, present officers in the field with opportunities to stay out of the “tunnel of violence”⁶⁹ which, once entered, can easily lead to otherwise avoidable police gunfire. Training officers in, and emphasizing the importance of, mindful tactical principles and procedures assumes special urgency, the authors conclude, given recent community unrest in St. Louis and elsewhere across the nation in response to the use of deadly force by the police.⁷⁰

V. IMPLICATIONS FOR FERGUSON

What implications might the results from the study of police shootings in St. Louis have for the incident in Ferguson? To repeat, there are obvious hazards in attempting to explain a single event. Nonetheless, it is worth recalling that the level of violent crime in Ferguson, although not trivial, is far lower than in St. Louis. We might expect, then, that Ferguson police officers are less mindful of the circumstances that can result in potentially violent encounters with citizens, and less vigilant in applying departmental policies and procedures for de-escalating the use of force, compared with their counterparts in the most violent St. Louis neighborhoods. There is evidence to support this expectation. According to the DOJ investigation of the FPD, de-escalation policies were in place at the FPD at the time Michael Brown was killed.⁷¹ Even so, “Many officers are quick to escalate encounters with subjects they perceive to be disobeying their orders or resisting arrest.”⁷² The DOJ investigation found that Ferguson officers did not receive adequate

65. *Id.*

66. *Id.*

67. *Id.*

68. David J. Spotts, *Reviewing Police Use-of-Force Practices*, 79 POLICE CHIEF 12, 12–13 (Aug. 2012), http://www.policemagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=2723&issue_id=82012.

69. RANDALL COLLINS, *VIOLENCE: A MICRO-SOCIOLOGICAL THEORY* 360–69 (2008).

70. See Klinger, Rosenfeld, Isom & Deckard, *supra* note 9.

71. CIVIL RIGHTS DIV., *supra* note 3, at 31. “The department prohibits the use of force unless reasonable alternatives have been exhausted or would clearly be ineffective.” *Id.*

72. *Id.* at 28.

training in use of force procedures and that supervisors routinely failed to enforce departmental de-escalation policies or adequately review use of force incidents.⁷³ As a result, the FPD “does not give its officers the supervision they need to do their jobs safely, effectively, and constitutionally.”⁷⁴

Did FPD officer Darren Wilson act within the law and follow departmental policies when he shot and killed Michael Brown? In a separate investigation, the DOJ concluded that Officer Wilson’s actions were not “objectively unreasonable” under applicable federal law permitting the use of deadly force by a police officer when the officer reasonably believes a suspect’s actions “place him, or others in the immediate vicinity, in imminent danger of death or serious bodily injury.”⁷⁵ Even if Officer Wilson failed to comply with FPD policies prohibiting the use of force against a suspect unless alternatives have been exhausted or are clearly ineffective,⁷⁶ that would not necessarily result in a constitutional violation. According to the DOJ report, the Constitution and applicable federal statutes require only that police use of deadly force is objectively reasonable under the circumstances and does not constitute willful violation of the law.⁷⁷ The courts have granted police officers wide discretion when deciding to use force against an individual, and officers are under no legal obligation to exhaust meaningful alternatives to the use of force or take, what others may judge by “20/20 hindsight vision,” a more prudent course of action.⁷⁸

There is no immediate indication that the courts or policymakers are going to substantially revise the legal standards applied to the use of deadly force by the police. There is a broad public interest, however, in reducing the number of persons who are killed by the police. Public pressures on police departments can prompt reviews of and changes in departmental policies and use of force training protocols, as they have in Ferguson and St. Louis.⁷⁹

A particularly salient, if controversial, method to emphasize in police training on avoiding the use of deadly force in encounters with citizens is “tactical retreat” (sometimes termed “tactical withdrawal” or “tactical re-

73. *See id.* at 38–41.

74. *Id.* at 41.

75. U.S. DEP’T OF JUSTICE, REPORT REGARDING THE CRIMINAL INVESTIGATION INTO THE SHOOTING OF MICHAEL BROWN BY FERGUSON, MISSOURI POLICE OFFICER DARREN WILSON 10 (Mar. 4, 2015) [hereinafter DEP’T OF JUSTICE REPORT], http://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/doj_report_on_shooting_of_michael_brown_1.pdf.

76. CIVIL RIGHTS DIV., *supra* note 3, at 31.

77. DEP’T OF JUSTICE REPORT, *supra* note 75, at 79.

78. *Id.* at 85.

79. Christine Byers, *After Ferguson, Police Consider ‘Tactical Retreat’ Instead of Force in Certain Cases*, ST. LOUIS POST-DISPATCH (Jan. 24, 2015), http://www.stltoday.com/news/local/crime-and-courts/after-ferguson-police-consider-tactical-retreat-instead-of-force-in/article_7fa34fed-9770-5860-ad10-4358b4523b76.html.

straint”).⁸⁰ The tactic calls for police officers to remove themselves from potentially violent encounters and call for back up under certain circumstances, such as when a suspect is unarmed.⁸¹ Some police officers have condemned the approach as “cowardice retreat,” but others contend that it is yet another device in the modern toolkit of smart policing.⁸² It is arguable that Officer Wilson could have used the tactic in his confrontation with Michael Brown. As Michael Brown leaned into the patrol car during their struggle, instead of shooting him, Officer Wilson might have put his foot on the gas and driven ten yards ahead, thereby expanding the perimeter of the encounter, and radioed for backup.⁸³ Michael Brown may have ended up with cuts and bruises from falling to the pavement, but he probably would not have died from his encounter with the police.

VI. WHAT DO WE NEED TO KNOW ABOUT POLICE USE OF DEADLY FORCE?

One reason the courts, legislative bodies, and many police departments may be slow in revising policies governing the use of deadly force is that so little is known about how often and under what circumstances the police use force against citizens. As noted above, the national data systems on police shootings are inaccurate, incomplete, and lack sufficient detail to fashion effective, evidence-based policy responses. If we are to devise more effective policies and tactics regarding police use of deadly force, the following information, at a minimum, is needed: (1) the number of incidents that occur, based on a uniform definition of use of force; (2) the demographic characteristics of the police and citizens involved in each incident; (3) the location of each incident; (4) the weapons, if any, used by police and citizens; (5) whether the incident resulted in death or injury to police or citizens; and (6) additional information, as discussed below, needed to describe the situational dynamics of the incident. Most, but not all, large police departments compile this information for purposes of internal review.⁸⁴ All departments should be required to collect it and report it to appropriate state and federal agencies, which, in turn, should be required to disseminate the data on an annual basis.

80. *Id.*

81. *Id.*

82. *Id.*

83. Wilson did call for backup after he had shot Michael Brown. See DEP'T OF JUSTICE REPORT, *supra* note 75, at 22.

84. See *Use of Force*, BUREAU JUST. STAT., http://www.bjs.gov/index.cfm?ty=tp&tid=703#data_collections (last visited Oct. 17, 2015).

A. *Counting the Incidents*

Seemingly, the most straightforward of these recommendations is to produce an accurate count of use of force incidents that occur across the nation. But to count the incidents, a uniform, operational definition of police use of force is needed. Initially, policymakers may wish to limit the definition to instances of deadly force, such as those in which a police officer fires his gun at a citizen or uses other weapons or physical force that produce or could produce death or serious injury. Eventually, however, all instances in which a police officer uses physical force against a citizen should be counted. Unfortunately, a universal definition of police use of force does not exist, and police departments vary widely in how they categorize specific actions, such as use of less-lethal methods, on the “use of force continuum.”⁸⁵ The DOJ should consult with police leaders and researchers to establish a uniform definition of police use of force to be included in a national statistical system.

B. *Describing the Participants*

Initially, a national data system on police use of force should record the sex, age, race, and ethnicity (Hispanic, Non-Hispanic) of all officers and citizens involved in each incident. These descriptors, especially race and ethnicity, are needed to document group disparities in police use of force. Eventually, however, additional information on the participants in use of force incidents should be compiled, including the rank and years in service of officers, prior use of force incidents in which the officers were involved, and the criminal records of the citizens. This background information is needed to determine whether some officers use physical force against citizens at disproportionate rates and the extent to which force is used against citizens who do not have extensive or serious criminal histories.

C. *Location of the Incident*

The state, county, and municipality in which each incident took place, and the name and Originating Agency Identifier (“ORI”) number⁸⁶ of the responding law enforcement agency, should be recorded in a national data system on police use of force. In addition, the street address or census code for the street block where the incident occurred should be noted. The latter information, which can be aggregated to census block groups, census tracts, or other spatial coverings, is essential for conducting the kind of research on

85. *Police Use of Force*, NAT’L INST. JUST., <http://www.nij.gov/topics/law-enforcement/officer-safety/use-of-force/pages/welcome.aspx> (last updated Apr. 13, 2015).

86. ORI numbers are assigned to law enforcement agencies by the FBI. See *Ordering Fingerprint Cards & Training Aids*, FBI, http://www.fbi.gov/about-us/cjis/fingerprints_biometrics/ordering-fingerprint-cards (last visited Oct. 5, 2015).

the social context of police use of force reported in *Race, Crime, and the Micro-Ecology of Deadly Force*.⁸⁷

D. Weapons

A national data system should compile detailed information on any and all weapons used or possessed by police officers and citizens involved in use of force incidents. Weapons may include blunt objects (such as a club or baton), cutting instruments (such as a knife), firearms, explosives, or any other device that can cause injury or death to a human being. It is particularly important to record the use of so-called less-lethal weapons by the police, including chemical agents (e.g., Mace), conducted electrical weapons (e.g., Tasers), and projectile weapons that fire bean bags, rubber bullets, or pepper.⁸⁸ Such weapons have been known to cause injury or death and, as noted above, policies governing the circumstances in which they should be used differ across police departments. Detailed information on weaponry in use of force incidents can assist policymakers and police departments in developing evidence-based policies and training programs to minimize the use of force necessary to achieve legitimate law enforcement objectives.

E. Outcomes

A national data system on police use of force should record the outcome of each incident, including whether suspects were restrained, subdued, or escaped police custody, and all resulting injuries or fatalities. Injuries should be coded as minor, requiring little or no medical attention, and serious, requiring hospitalization or comparable medical treatment. The source of non-fatal or fatal injuries, by weapon type, should also be noted. Finally, all weapon use or other physical force that did not result in injury or death should be recorded, so that injury and fatality rates can be computed.

F. Additional Information

The recommendations discussed above should be regarded as minimum requirements for a national data system on police use of force. Some, such as an accurate enumeration of deadly force incidents, the demographic characteristics of participants, incident location, and whether the incident resulted in injury or death to police officers or citizens, should be implemented immediately. Others, such as the number of incidents in which the police use even minor physical force against citizens and more extensive background information on the participants, should be added when feasible, perhaps a year or

87. See Klinger, Rosenfeld, Isom & Deckard, *supra* note 9.

88. See generally Amaury Murgado, *Less-Lethal Weapon Options*, POLICE MAG. (Mar. 06, 2013), <http://www.policemag.com/channel/weapons/articles/2013/03/less-lethal-weapon-options.aspx> (discussing alternatives to deadly force).

two after the system is established. This information will greatly expand our current knowledge of how often, against whom, where, and with what consequences the police use force against citizens. But it is not sufficient to gain the kind of understanding we need to fully inform use of force policy and training. That will require additional information on the situational dynamics of police use of force.

Use of force incidents are dynamic events, even if they unfold over a brief span of time. Participants assemble, move toward or retreat from one another, display or use weapons, and exchange verbal commands, threats, or warnings – all of which may or may not culminate in injury or death to citizens, the police, or both. Detailed information on these moving parts of use of force incidents is necessary to reduce the number of incidents that end in avoidable injuries or fatalities and increase the number that end peacefully. Some of that information is currently compiled by most police departments and can be transferred as discrete data elements to a national data system with little difficulty.⁸⁹ Ultimately, however, the situational dynamics of each incident should be documented in their entirety in a comprehensive data repository, in the form of detailed narrative descriptions and video and audio recordings.

The discrete data elements that can be added to a national data system on police use of force without much difficulty include, but are not limited to: the number of police officers and citizens involved in the incident; whether or when the first officers on the scene called for backup; officers who discharged their firearm or less-lethal weapon; officers who used other physical force to subdue or restrain a citizen; citizens who used a weapon (by type) or other physical force against officers; officers and citizens struck by bullets, less-lethal projectiles or substances, or subject to physical force in other ways; and officers and citizens injured or killed. Another important piece of information, especially for training purposes, is the positioning of officers in relation to the citizen(s) and how the positions of the participants may have changed throughout the course of the incident. That information is best conveyed by a map showing the distance separating all participants and relevant features of the physical terrain, such as motor vehicles, buildings, roadways, alleyways – any attribute of the immediate environment that may have afforded protection, entry to and exit from the scene, or may have affected sightlines. Because some use of force incidents take place over multiple terrains (e.g., when officers chase a fleeing suspect), several maps may be necessary to provide a complete picture of the incident as it developed over time and space.

Discrete data elements and maps, however, can convey only so much information about the dynamics of use of force incidents, and they may be subject to conflicting interpretations. A narrative account of what transpired in

89. See TOM McEWEN, U.S. DEP'T OF JUSTICE, NATIONAL DATA COLLECTION ON POLICE USE OF FORCE 59 (Apr. 1996), <http://www.bjs.gov/content/pub/pdf/ndcopuof.pdf>.

an incident, ideally written from the perspective of all officers and witnesses on the scene, can help to clarify ambiguous aspects of the situation. But such qualitative renderings also must be interpreted and disparate accounts of what happened must be reconciled.⁹⁰

Current proposals to outfit police officers with body cameras seek to ameliorate this and other problems associated with police use of force. The American Civil Liberties Union has given a qualified endorsement to the use of body cameras by police,⁹¹ and one randomized controlled study found that the use of body cameras significantly reduced the number of use of force incidents and citizen complaints of officer misconduct.⁹² As with all portrayals of use of force incidents, however, audio and video recordings, no matter how unblemished or complete, will remain open to varying interpretations.

There exists no single, unambiguous, objective perspective on the “facts” of a specific instance of police use of force. Subjective judgment will always be required to order and illuminate a given fact pattern. Nonetheless, the availability of manifold data elements, maps, narrative accounts, and recordings can provide valuable guidance to policymakers, the police, researchers, and anyone else who makes a good faith effort to understand the situational dynamics of police use of force. A comprehensive national data system containing all of these components will take years to implement fully and will likely require Congressional action, but much can be accomplished now at both the local and national level.

VII. CONCLUSION

The killing of Michael Brown by a police officer in Ferguson, Missouri, initiated both a local and national conversation about police use of deadly force against citizens. This Article has addressed four questions emerging from that discussion: Why Ferguson? Did the Ferguson events lead to crime increases in St. Louis? What have we learned from research on police use of deadly force? What remains to be learned? These are not the only or even the most urgent issues prompted by the Ferguson incident – the controversial police response to the Ferguson protests warrants a separate assessment – but, together, they reveal important facets of police use of deadly force that can inform public debate and policy responses.

The small St. Louis suburb of Ferguson was not destined to host a contentious police shooting. Many other American communities have experi-

90. See, e.g., DEP’T OF JUSTICE REPORT, *supra* note 75, at 26–77.

91. Jay Stanley, *Police Body-Mounted Cameras: With Right Policies in Place, a Win for All*, ACLU 1 (Oct. 2013), https://www.aclu.org/files/assets/police_body-mounted_cameras.pdf.

92. Tony Farrer & Barak Ariel, *Self-Awareness to Being Watched and Socially-Desirable Behavior: A Field Experiment on the Effect of Body-Worn Cameras on Police Use-of-Force*, POLICE FOUND. 8 (2013), <http://www.policefoundation.org/wp-content/uploads/2015/06/The-Effect-of-Body-Worn-Cameras-on-Police-Use-of-Force.pdf>.

enced rapid racial turnover and are subject to problematic policing. Ferguson's comparatively low violent crime rate and plainly inadequate police training, however, may have ill-prepared its police officers to de-escalate potentially violent encounters with citizens. The FPD is now training its officers in de-escalation procedures, including tactical retreat.⁹³ It is at least arguable that Michael Brown would not have been killed had such training been in place and applied conscientiously before August 9, 2014.

It can never be determined with certainty whether the Ferguson events led to crime increases in St. Louis. It is reasonably clear, however, that the homicide spike was not the product of Ferguson, because homicides had begun to increase well before Michael Brown was killed. Other violent crimes did as well, although the increase in violent crime accelerated after August of 2014. The timing of the increase in property crime is most consistent with a "Ferguson effect," but whether other factors were pushing up property crimes remains unknown and perhaps unknowable.

Research on police use of deadly force has produced mixed and inconclusive results. It is not an exaggeration to contend that we know little more now about the social conditions and immediate circumstances of police use of deadly force than we did nearly fifty years ago when the Kerner Commission issued its report on the urban disorders of the 1960s.⁹⁴ This Article recommends a major upgrading of the national information systems on police use of force. Some progress can be made more or less immediately. There are no technical reasons why, well into the twenty-first century, we cannot mount a data system that accurately records the number of deadly force incidents that occur each year, the geographic location of each incident, the demographic characteristics of the police officers and citizens involved, and the resulting injuries and deaths. Other features of a comprehensive system, such as narrative descriptions and video and audio recordings of incidents, will take more time, effort, and political pressure to implement. But we should begin building the information systems now that can help us to reduce the number of deadly encounters between citizens and the police.

93. See Byers, *supra* note 79.

94. See NAT'L ADVISORY COMM'N ON CIVIL DISORDERS, REPORT OF THE NATIONAL ADVISORY COMMISSION ON CIVIL DISORDERS 25 (1968), <http://www.eisenhowerfoundation.org/docs/kerner.pdf>.

