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MEASURING WHAT MATTERS:
Data Analysis and the Future of Police Reform

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About the Author

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Abstract

A fundamental principle of organizational management is that you measure the things that matter. In the field of law enforcement, the most routinely and intensely tracked metrics often relate to reported crime rates. Data-driven management systems like CompStat have a huge influence over law enforcement decisions about resource deployment, patrol assignments, performance evaluations, and promotions. Potential harms of racially disparate or unnecessarily burdensome policing, on the other hand, are rarely analyzed as routinely or intensely. As a result, evaluation of law enforcement policies and practices can often become a benefit-only cost-benefit analysis: Decisions about police intervention are made based on anticipated benefits of preventing crimes and catching offenders with little regard for the direct and indirect costs of police intervention to individuals and communities.

While protecting the public from crime is certainly a central goal of law enforcement, crime reduction alone is not a sufficient measure of successful public safety policy. A law enforcement agency that considers only the short-term crime control benefits of police intervention without adequate consideration of intangible costs to communities that experience the most policing risks exacerbating racial disparities in police outcomes and ultimately making communities less safe. If promoting equity and minimizing unnecessary harm matter to public safety officials—as they should—officials need to measure, analyze and follow up on these outcomes just as they would measure, analyze and follow up on crime data.

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Introduction

A fundamental principle of organizational management is that you measure the things that matter. If an organization wants to improve an outcome, it should: 1) measure and monitor that outcome; 2) set specific, measurable benchmarks for improvement; and 3) hold itself accountable to those benchmarks. A development team may set specific benchmarks for how much money it intends to raise over a given period of time. A sales team may set goals to hit certain revenue targets each quarter. A human resources department may set goals to increase hiring, decrease employee turnover, or reduce rates of on the job injury. Regardless of the goal being pursued, a successful organization will continuously monitor relevant metrics and hold itself accountable to improving them. You can often tell a lot about what an institution values from the metrics that drive its work.

In the field of law enforcement, the most routinely and intensely tracked metrics often relate to reported crime rates. Data-driven management systems like CompStat have a huge influence over law enforcement decisions about resource deployment, patrol assignments, performance evaluations, and promotions. Law enforcement agencies dedicate significant time and financial resources to analyzing and strategizing responses to reported crime because they know crime reduction is a central aspect of their mission and a key metric by which municipal leaders and the general public will evaluate their performance. William Bratton, one of the creators of CompStat, described his approach in this way: "We began to run the NYPD as a private profit-oriented business. What was the profit I

wanted? Crime reduction . . . I wanted to serve my customers, the public, better; and the profit I wanted to deliver to them was reduced crime."[1]

While protecting the public from crime is certainly a central goal of law enforcement, crime reduction alone is not a sufficient measure of successful public safety policy. The public expects more from their law enforcement officers than simply reducing crime at any cost. We expect police to obey laws and internal department policies. We expect police to do their jobs fairly, impartially, and with integrity. We expect police to value and respect human life, dignity, and privacy. We expect police to avoid imposing burdens on the community that are not justified by important public safety goals. A police department's success cannot, therefore, be viewed as solely a function of falling crime rates. When we think about the goals of public safety, we should consider not only whether people are safe from reported crime, but also whether people are safe from burden and harm associated with inequitable or unnecessary police contact.[2]

While law enforcement agencies typically collect and analyze extensive data on when and where crimes are reported,[3] data on police behavior is rarely examined with the same rigor.[4] We lack good national data regarding police stops, searches, use of force, and other interactions with the public.[5] Factors that predict aggressive and biased policing are among the least studied issues in the field of policing.[6] Legal scholars have observed that most analyses of police policies focus almost exclusively on the benefits of crime deterrence and incapacitation of offenders

1. James J. Willis, Stephen D. Mastrofski & David Weisburd, *Making Sense of COMPSTAT: A Theory-Based Analysis of Organizational Change in Three Police Departments William Bratton of the New York City Police Department*, 41 Law & Soc'y Rev. 147, 150 (2007).
2. *See* Barry Friedman & Maria Ponomarenko, *Democratic Policing*, 90 N.Y.U. L. Rev. 1827, 1832 (2015); Rachel A. Harmon, *The Problem of Policing*, 110 Mich. L. Rev. 761, 792–94 (2012); Maria Ponomarenko & Barry Friedman, *Benefit-Cost Analysis of Public Safety: Facing the Methodological Challenges*, 8 J. Benefit-Cost Analysis 305 (2017).
3. Oliver Roeder et al., What Caused the Crime Decline? 65–70 (2015), https://www.brennancenter.org/publication/what-caused-crime-decline [https://perma.cc/NQJ7-6ZQG]; David Weisburd et al., The Growth of Compstat in American Policing 6 (2004), https://www.policefoundation.org/publication/the-growth-of-compstat-in-american-policing [https://perma.cc/9PPN-7Y7B]; Inimai M. Chettiar, *More Police, Managed More Effectively, Really Can Reduce Crime*, The Atlantic (Feb. 11, 2015), https://www.theatlantic.com/national/archive/2015/02/more-police-managed-more-effectively-really-can-reduce-crime/385390 [https://perma.cc/KDM7-MEM4].
4. *See, e.g.*, Lawrence W. Sherman, *The Rise of Evidenced-Based Policing: Targeting, Testing and Tracking*, 42 Crim. & Just. 377, 414 (2013) (noting that CompStat meetings rarely track data regarding "where . . . police [are] doing what, and for how much of their time on duty[.]").
5. Rachel Harmon, *Why Do We (Still) Lack Data on Policing?*, 96 Marq. L. Rev. 1119, 1139 (2013).
6. Nat'l Acad. of Scis., Eng'g, and Med., Proactive Policing: Effects on Crime and Communities 101–103, 298–301 (2018).

with little or no consideration of the social costs borne by heavily policed communities.[7]

In order to increase equity and reduce avoidable harm in police-citizen interactions, law enforcement agencies need to start measuring those outcomes like they matter. When organizations in the private sector prioritize equity, they keep and analyze data to identify disparities and potential solutions. Large companies like Starbucks, Apple, Salesforce, Intel, and Adobe systematically track and analyze employee salaries, raises, and bonuses so that they can identify and address racial and gender disparities in pay.[8] Many hospitals routinely produce equity reports analyzing racial, ethnic, and socioeconomic disparities in patient outcomes so that systemic fixes can be implemented.[9] Law enforcement agencies need to do the same.

I. Data Analysis in Law Enforcement

A. *Analyses of Data on Reported Crime*

In most law enforcement agencies, analyses of crime data drive agency strategy and resource deployment. Most of the largest police departments in the United States use some version of the CompStat program developed by then New York Police Department (NYPD) Commissioner William Bratton and his colleague Jack Maple in the 1990s.[10] CompStat is based on four primary components: maintaining timely and accurate information on crime in the city, developing innovative strategies to address specific problems, rapidly deploying law enforcement resources in response to specific crime problems, and following up to monitor efficacy of any interventions.[11] In New York, the NYPD CompStat Unit generated weekly statistical reports that provided a snapshot of complaint and arrest activity in New York City at the precinct, patrol

7. Ryan Fackler et al., *Closing the Gap: The Need for Inclusive Benefit-cost Analysis in Policing*, 8 J. Benefit-Cost Analysis 330, 332 (2017).
8. Jennifer Calfas, *How These Major Companies Are Getting Equal Pay Right*, Fortune, (Apr. 9, 2018), http://fortune.com/2018/04/09/equal-pay-companies-starbucks-apple [https://perma.cc/L4E7-JQDG].
9. *E.g.*, Health Research and Educ. Tr., Improving Health Equity Through Data Collection AND Use: A Guide for Hospital Leaders (2011), http://www.hpoe.org/Reports-HPOE/improvinghealthequity3.2011.pdf [https://perma.cc/S93Z-PLHS]; Robin M Weinick et al., Creating Equity Reports: A Guide for Hospitals (2008), https://www.rwjf.org/content/dam/web-assets/2008/01/creating-equity-reports [https://perma.cc/G86V-BJ7M].
10. Roeder et al., *supra* note 3, at 65–70; David Weisburd et al., The Growth of Compstat in American Policing 6 (2004), https://www.policefoundation.org/publication/the-growth-of-compstat-in-american-policing [https://perma.cc/9P-PN-7Y7B]; Inimai M. Chettiar, *More Police, Managed More Effectively, Really Can Reduce Crime*, The Atlantic (Feb. 11, 2015), https://www.theatlantic.com/national/archive/2015/02/more-police-managed-more-effectively-really-can-reduce-crime/385390 [https://perma.cc/KDM7-MEM4].
11. Andrew Guthrie Ferguson, *Crime Mapping and the Fourth Amendment: Redrawing "High-Crime Areas"*, 63 Hastings L.J. 101, 115 (2011).

borough, and city levels. Electronic maps were also generated to identify "hot spots" where crimes clustered geographically. Precinct commanders met with top department executives twice a week to discuss crime problems in their precincts and what the commanders were doing to address them.[12] Performance evaluations and promotion decisions placed significant weight on crime trends within each commander's precinct.[13]

Despite numerous changes in department leadership, NYPD has continued and expanded the CompStat program for over 25 years.[14] Proponents of the program credit CompStat with dramatic reductions in crime rates in New York City and other jurisdictions that have adopted the program.[15] The CompStat program spread rapidly, and most law enforcement agencies now use some form of the program.[16] Today, many larger police departments also use predictive policing software programs like PredPol and HunchLab which model the likelihood of particular crimes happening in a given area over a given period of time.[17] Hundreds of law enforcement agencies share geo-mapped data on reported crime with the general public through websites like crimemapping.com[18] or through special interactive online portals like the NYPD's CompStat 2.0.[19] In short, analysis of reported crime data plays a central and continually expanding role in police decisionmaking.

B. *Analyses of Data on Law Enforcement Behavior*

While law enforcement agencies typically collect and analyze extensive data on when and where crimes are reported, data on police behavior is rarely examined with the same rigor.[20] The federal government and most states do not require police departments to collect data on stops, use of force, or other interactions with the public, and even departments

12. Weisburd et al., *supra* note 10, at 2.
13. *Id.* at 15; Nathaniel Bronstein, *Police Management and Quotas : Governance in the CompStat Era*, 48 Colum. J.L. & Soc. Probs. 543, 547 (2014).
14. Andrew Guthrie Ferguson, *supra* note 11, at 150; Stephanie Pagones, *NYPD announces new plan to combat rise in rapes*, N.Y. Post, (Feb. 5, 2019), https://nypost.com/2019/02/05/nypd-announces-new-plan-to-combat-rise-in-rapes [https://perma.cc/5LXH-VS7B].
15. Roeder et al., *supra* note 3; Weisburd et al., *supra* note 10.
16. Roeder et al., *supra* note 3; Weisburd et al., *supra* note 10; Chettiar, *supra* note 11.
17. Lindsey Barrett, *Reasonably Suspicious Algorithms: Predictive Policing at the United States Border*, 41 N.Y.U. Rev. L. & Soc. Change 327, 335 (2017); *see also* David Robinson & Logan Koepke, Stuck in a Pattern: Early Evidence on "Predictive Policing" and Civil Rights 3–4 (2016), https://www.upturn.org/static/reports/2016/stuck-in-a-pattern/files/Upturn_-_Stuck_In_a_Pattern_v.1.01.pdf; *see also* Andrew G. Ferguson, *Policing Predictive Policing*, 94 Wash. U. L. Rev. 1109, 1131–37 (2017).
18. *See Frequently Asked Questions*, CrimeMapping.com, https://www.crimemapping.com/FAQ# (last visited Apr. 1, 2019).
19. *CompStat 2.0*, NYC.gov, https://www1.nyc.gov/site/nypd/stats/crime-statistics/compstat.page (last visited Apr. 1, 2019).
20. Sherman, *supra* note 4.

that collect these data do not necessarily analyze them to identify patterns of disparate and burdensome policing.[21] Law enforcement agencies rarely collect or analyze information about lawsuits brought against their officers. Factors that predict aggressive and biased policing are among the least studied issues in the field of policing.[22]

1. Early Intervention Systems

Law enforcement analyses of officer behavior often focus on identifying patterns of problematic behavior by individual officers rather than systemic problems within a department. For example, an increasing number of law enforcement agencies are adopting early intervention systems that analyze data on police behavior to identify officers with problematic patterns of law enforcement behavior who may benefit from counseling or retraining.[23] While the efficacy of early intervention systems depends on a number of factors, including the nature of the algorithms used, the accuracy of the underlying data, the adequacy of available technological infrastructure, and the quality of the interventions provided by frontline supervisors, there is evidence that well-run early intervention systems can help to reduce the frequency of citizen complaints and officer misconduct.[24]

Although early intervention systems are a promising tool for managing unusually complaint-prone officers, they are not typically designed to identify or address systemic problems that involve large groups of officers.[25] While some early intervention systems include provisions for analyzing patterns of problematic behavior within specific units or among officers who report to the same supervisor,[26] these tools are primarily designed to address individual rather than organizational or situational patterns of behavior. Different statistical tools are needed to uncover patterns of disparate policing arise from official policies or widespread practices within a law enforcement agency.

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21. Joanna C. Schwartz, *Systems Failures in Policing*, 51 Suffolk U. L. Rev. 535, 558–559 (2018).
22. Nat'l Acads. of Scis. Eng'g & Med., *supra* note 6, at 101–103, 298–301.
23. *See* Samuel Walker, Geoffrey P. Alpert & Dennis J. Kenney, *Early Warning Systems for Police: Concept, History, and Issues*, 3 Police Q. 132, 146–48 (2000).
24. Samuel Walker, et al., *supra* note 23, at 149; *see also* Stuart Macintyre, Tim Prenzler & Jackie Chapman, *Early Intervention to Reduce Complaints: An Australian Victoria Police Initiative.*, 10 Int'l J. Police Sci. & Mgmt. 238, 241 (2008); *see also* Schwartz, *supra* note 21, at 1029.
25. *See* Samuel Walker, *Searching for the Denominator: Problems With Police Traffic Stop Data and an Early Warning System Solution*, 3 Just. Res. & Pol'y 63, 87 (2001).
26. Consent Decree at 17, *U.S. v. City of Los Angeles*, No. CV 00-11769-GAF-RC (C.D. Cal Jun. 15, 2001), ECF No. 123, *available at* https://www.justice.gov/crt/file/826956/download.

2. Analyses of Law Enforcement Behavior and the U.S. DOJ's Pattern and Practice Reform Work

Data analyses have played an important role in the police reform work of the Civil Rights Division of the United States Department of Justice. Section 14141 of the 1994 Violent Crime Control Act gives the United States Department of Justice the authority to investigate and, if necessary, take legal action against law enforcement agencies suspected of engaging in a pattern and practice of violating civilians' rights under the Constitution. Despite limited resources to conduct investigations, the Civil Rights Division has found patterns and practices of unconstitutional policing in more than forty police departments since 1994.[27] The Civil Rights Division has frequently used statistical analyses in its investigations to identify patterns of racially disparate policing.[28] For example, the Civil Rights Division often examines search yield rates, the rate at which searches reveal contraband, when investigating allegation of racial discrimination in law enforcement agency search practices. If members of a particular racial group are, on average, less likely to be found with contraband but more likely to be searched, this could suggest that racial bias has influenced law enforcement decisions about whom to search. The Civil Rights Division also frequently uses = regression analyses to control for factors that might provide alternative explanations for racial disparities in stops, searches, and use of force.[29]

In its reform agreements with law enforcement agencies, the Civil Rights Division has often required changes in procedures for collection and analysis of data on police stops, searches, use of force, and civilian complaints.[30] In some cases, the Civil Rights Division has specifically required departments to engage in annual data-based assessments of police programs to determine whether they impose a disparate impact on the basis of protected characteristics, including regression analyses to control for potential explanatory factors other than protected characteristics.[31]

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27. Civil Rights Division, U.S. Dep't of Just., The Civil Rights Division's Pattern and Practice Police Reform Work: 1994–Present 3–5 (2017), https://www.justice.gov/crt/file/922421/download [https://perma.cc/M3G7-VNX6].
28. *Id.* at 11.
29. *Id.*
30. *Id.* at 30–32; *see also* Consent Decree at 45–49, *U.S. v. City of Los Angeles*, No. CV 00-11769-GAF-RC (C.D. Cal Jun. 15, 2001), ECF No. 123, *available at* https://www.justice.gov/crt/file/826956/download; *see also* Consent Decree at 47–51, *U.S. v. City Of New Orleans*, No. CV 12-01924-SM-JCW (E.D. La Jul. 24, 2012), ECF No. 2–1, *available at* https://www.justice.gov/sites/default/files/crt/legacy/2012/11/07/nopd_consentdecree_7-24-12.pdf; *see also* Consent Decree at 20–30, *U.S. v. City of Ferguson*, No. CV 16-00180-CDP (E.D. Mo. Mar. 17, 2016), ECF No. 12–2, *available at* https://www.justice.gov/crt/file/833701/download; *see also* Settlement Agreement at 42–43, *U.S. v. City of Seattle*, No. CV 12-01282 JLR (W.D. Wash. Jul. 27, 2012), ECF No. 3–1, *available at* https://www.justice.gov/sites/default/files/crt/legacy/2012/07/31/spd_consentdecree_7-27-12.pdf.
31. *See, e.g.,* Consent Decree, U.S. v. City of Ferguson, No. 4:16-cv-00180-CDP (E.D. Mo. Mar. 17, 2016), *available at* https://www.justice.gov/crt/file/833701/download [https://perma.cc/G35K-U2PW].

While the Civil Rights Division has done important work with respect to improving analysis and collection of data on police behavior in some of the nation's largest police departments, it has intervened in only a few dozen police departments out of more than 15,000 police and sheriff's departments in the United States.[32] Moreover, some departments have implemented new procedures and reforms pursuant to consent decrees with the Department of Justice only to abandon those procedures after the consent decrees were lifted.[33] The Los Angeles Police Department (LAPD), for example, was required under the terms of a 2000 consent decree to collect detailed information about vehicle and pedestrian stops conducted by its officers and to publish semiannual reports containing statistics on stops, arrests, and use of force broken down by race.[34] After the consent decree was lifted, the LAPD stopped documenting what happened to individuals after they were stopped until California law changed to require collection of this information. While the LAPD continued to document the race of each individual stopped, it stopped producing reports on the racial breakdown of stops.[35]

II. The Underexamined Costs of Disparate and Burdensome Policing

As previously discussed, law enforcement agencies frequently devote significant time and resources to procuring frequent, timely, and detailed analyses of reported crime rates in their precincts, divisions, and cities. Analyses of reported crime rates can have significant influence over an agency's enforcement priorities, resource allocation, officer deployment, and employee evaluations. Potential harms of racially disparate or unnecessarily aggressive or intrusive policing, on the other hand, are rarely analyzed as intensely. Evaluation of law enforcement policies and practices frequently amounts to a benefit-only cost-benefit

32. *See* Geoffrey P. Alpert, Kyle McLean & Scott Wolfe, *Consent Decrees: An Approach to Police Accountability and Reform*, 20 Police Q. 239–249 (2017); Joshua M. Chanin, *Examining the Sustainability of Pattern or Practice Police Misconduct Reform*, 18 Police Q. 163–192 (2015).

33. Consent Decree, U.S. v. City of Los Angeles, No. 2:00-cv-11769-GAF-RC (C.D. Cal. Jun. 15, 2001); *See also* Cindy Chang & Ben Poston, *"Stop-and-Frisk in a Car:" Elite LAPD Unit Disproportionately Stopped Black Drivers, Data Show*, L.A. Times (Jan. 24, 2019, 11:05 AM), https://www.latimes.com/local/lanow/la-me-lapd-traffic-stops-20190124-story.html [https://perma.cc/LL8J-3Z66]; *see also* Geoffrey P. Alpert, Kyle McLean & Scott Wolfe, *Consent Decrees: An Approach to Police Accountability and Reform*, 20 Police Q. 239–249 (2017); Joshua M. Chanin, *Examining the Sustainability of Pattern or Practice Police Misconduct Reform*, 18 Police Q. 163–192 (2015).

34. Consent Decree, U.S. v. City of Los Angeles, No. 2:00-cv-11769-GAF-RC (C.D. Cal. Jun. 15, 2001); *See also* Cindy Chang & Ben Poston, *"Stop-and-Frisk in a Car:" Elite LAPD Unit Disproportionately Stopped Black Drivers, Data Show*, L.A. Times (Jan. 24, 2019, 11:05 AM), https://www.latimes.com/local/lanow/la-me-lapd-traffic-stops-20190124-story.html [https://perma.cc/LL8J-3Z66].

35. *Id.*

analysis: decisions about police intervention are made based on anticipated benefits of preventing crimes and catching offenders with little regard for the direct and indirect costs of police intervention to individuals and communities.[36]

Making decisions about police intervention based on analysis of reported crime data without analysis of potential harms is a recipe for bad policy and bad policing. While crime prevention is an important and central duty of law enforcement agencies, it is neither their only responsibility nor a sufficient measure of good policing. Policing should be equitable and fair. Policing should respect human life, autonomy, dignity, and privacy. Policing should impose costs and harms on individuals and communities only when they are justified by important public interests.[37]

The costs of inequitable and unnecessarily aggressive or intrusive police contact can be significant. Over the past five years alone, numerous police shootings of unarmed civilians have prompted outrage and protests in communities across the United States.[38] Even an investigatory stop and frisk, which is routine for many police officers, can represent a serious infringement on time and personal privacy from the perspective of the civilian involved.[39] When members of non-White communities are disproportionately targeted, the dignitary and psychological harms can be even greater. "Pervasive, ongoing suspicious inquiry sends the unmistakable message that the targets of this inquiry look like criminals: they are second class citizens."[40] On a community level, chronic police contact can have a corrosive effect on police legitimacy and community trust in law enforcement. Communities that do not trust their law enforcement agencies may be less willing to report crimes and cooperate with law

36. Fackler et al., *supra* note 7.

37. *See* Friedman and Ponomarenko, *supra* note 3, at 1832; Harmon, *supra* note 2; Rachel A. Harmon, *Federal Programs and the Real Costs of Policing*, 90 New York Univ. Law Rev. 870, 873–40 (2015); Seth W. Stoughton, *Principled Policing: Warrior Cops and Guardian Officers*, 51 Wake Forest Law Rev. 611, 667–9 (2016).

38. *See, e.g.*, Larry Buchanan et al., *What Happened in Ferguson?*, N.Y. Times, https://www.nytimes.com/interactive/2014/08/13/us/ferguson-missouri-town-under-siege-after-police-shooting.html [https://perma.cc/MEQ4-7E38] (last updated Aug. 10, 2015); Mark Guarino, *Protests in Chicago Continue After Officials Release Video of Police Shooting*, Wash. Post (July 16, 2018), https://www.washingtonpost.com/national/hundreds-protest-in-chicago-over-police-shooting/2018/07/16/08276a88-8960-11e8-85ae-511bc1146b0b_story.html?utm_term=.d456299a98a6 [https://perma.cc/XS84-Z2XH]; Christina Tkacik, *Remembering the Baltimore Riots After Freddie Gray's Death, 3 Years Later*, Baltimore Sun (Apr. 27, 2018, 6:15 AM), https://www.baltimoresun.com/news/maryland/baltimore-city/bs-md-ci-riots-three-years-later-20180426-story.html [https://perma.cc/4BYV-VALP].

39. Seth W. Stoughton, *Terry v . Ohio and the (Un)Forgettable Frisk*, 15 Ohio State J. Crim. L. 19–33 (2017).

40. Charles R. Epp, Steven Maynard-Moody & Donald P. Haider-Markel, Pulled Over: How Police Stops Define Race and Citizenship 5 (2014).

enforcement investigations when they are victimized.[41] Unsurprisingly, heavily policed communities face increased risk of adverse physical and mental health outcomes.[42]

Biased, unjust, and unnecessary police interventions can also impede legitimate police efforts to control crime. When police legitimacy is weak, community members may be less likely to report crimes, cooperate with police investigations, and follow community rules and laws.[43] Police contact with young people may, ironically, increase the likelihood that young people will go on to violate the law in the future.[44] Moreover, every enforcement action motivated by bias, aggression, or even an unsupported hunch has an opportunity cost: law enforcement officers could have been spending that same time pursuing a lead supported by evidence and important public safety concerns.

Law enforcement agencies that allocate resources and set enforcement strategies based solely on analyses of reported crime data without considering potential consequences and harms of intervention may unintentionally perpetuate patterns of racially disparate policing, damage public safety, and undermine their own efforts at crime control. If we want to create a public safety system that is more equitable and less burdensome for traditionally marginalized communities, we need to adopt a more balanced perspective, paying closer attention to the social costs of new and existing police policies. If law enforcement agencies routinely analyzed trends and disparities in stops, searches, and use of force, law enforcement and the communities that they serve could more readily identify crime interventions that cause unintended harms. This information could facilitate informed cost-benefit analyses and make it easier for law enforcement and community stakeholders to identify potential solutions.

III. Data Analysis and Police Reform

A. *How Data Analyses Can Improve Police Policy*

In order to promote more equitable and less burdensome policing, we need to start collecting and analyzing data that will shed light on the scope and causes of current problems so that we can hold law enforcement accountable to continual improvement.

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41. Tom R. Tyler & Jeffrey Fagan, *Legitimacy and Cooperation: Why Do People Help the Police Fight Crime in Their Communities?*, 6 Ohio State J. Crim. Law 231–275 (2008).
42. Susan A. Bandes et al., *The Mismeasure of Terry Stops: Assessing the Psychological and Emotional Harms of Stop and Frisk to Individuals and Communities*, Behav. Sci. Law (forthcoming).
43. Tyler & Fagan, *supra* note 41.
44. Juan Del Toro et al., When policing causes crime: The criminogenic effects of police stops on adolescent Black and Latino boys Legal Socialization (Tom R Tyler ed., 2018).

Data analyses can help law enforcement leaders and the public to understand whether burdens on individual time, privacy, liberty, and bodily integrity imposed by law enforcement practices are proportional to and justified by benefits to legitimate public safety interests. Data analyses can, for example, shed light on how many innocent people are stopped and searched for every stop or search that leads to an arrest or seizure of contraband.

Data analyses can also shed light on the extent to which racial and other disparities in law enforcement outcomes are likely attributable to police policies and behavior. Heavily policed communities in which police bias is an urgent concern are often also burdened with systemic inequities in education, health care, housing, employment, and other aspects of community life. As a result, when analysis reveals that, for example, Black residents of a particular city are disproportionately likely to be stopped by police relative to their share of the population, it may not be immediately obvious what portion of that disparity is attributable directly to law enforcement policy and behavior and what portion of that disparity is attributable to underlying disparities in crime rates, poverty, health care access, and other factors outside of police control. This ambiguity can lead to situations in which community members attribute disparities to police bias, police attribute disparities to differences in crime rates, and no one can agree about what problem they are trying to solve, much less what should be done about it. This type of impasse can be broken or avoided altogether by using regression analysis or another statistical approach to control for potentially confounding factors such as local crime rates, poverty levels, and neighborhood demographics. Data analyses that control for race-neutral factors that may contribute to observed racial disparities in policing outcomes can give law enforcement and communities a much better idea of the portion of observed disparities that law enforcement has the power to change.

Regular analysis of burden and disparities in law enforcement could benefit police policymaking in multiple ways. First, insights into burdens and disparities in policing outcomes could help law enforcement agencies and community stakeholders make more informed decisions about whether the crime reduction benefits of particular enforcement strategies justify the social costs those strategies impose.

Police policymakers could also use these types of analyses to identify and regulate situations that chronically give rise to patterns of biased policing. There is evidence that implementing targeted, restrictive policies can reduce harmful police behavior.[45] The NYPD, for example,

45. *See, e.g.*, Samuel Sinyangwe, Examining the Role of Use of Force Policies in Ending Police Violence (2016); Samuel E Walker & Carol A Archbold, The New World of Police Accountability (2nd ed. 2014) at 89; Samuel Walker & Charles M. Katz, The Police In America: An Introduction (6th ed. 2008); James J. Fyfe, *Administrative Interventions on Police Shooting Discretion: An Empirical Examination*, 7 J. Crim. Justice 309–323 (1979).

achieved a notable reduction in police shootings in the early 1970s after adopting new administrative shooting guidelines that included multiple specific restrictions on officer discretion with respect to use of deadly force. Among other restrictions, the regulations specifically prohibited officers from shooting at moving vehicles except when the occupants of the vehicle were using deadly force against the officer by means other than the vehicle itself.[46] In the early 2000s, the U.S. Customs Service (now U.S. Customs and Border Protection), adopted more restrictive guidelines governing searches, setting specific criteria for when searches could be conducted and requiring prior supervisor approval for certain types of searches. The number of individuals searched declined by 47 percent while the hit rate rose by 65 percent. Racial disparities in search rates also declined.[47] In 2013, a federal district court ruled in *Floyd v. City of New York*, 959 F. Supp. 2d 540 (S.D.N.Y. 2013), that the NYPD's use of stop and frisk was unconstitutional as practiced, requiring the NYPD to implement changes to its policies, training, auditing, performance evaluation procedures, and handling of civilian complaints. Beginning in the latter states of the litigation and continuing through at least 2015, the number of stops and frisks by NYPD officers decreased dramatically.[48] Racial disparities in stop and frisk outcomes for Black and Latino individuals diminished over the same time period.[49] These examples are consistent with a significant body of social psychology laboratory research indicating that people are far more likely to engage in discriminatory or aggressive behavior in situations that lack clear rules or norms mandating appropriate behavior.[50] Reducing officer discretion in situations that chronically give rise to bad policing outcomes may therefore be a promising strategy for improving those outcomes.[51]

Perhaps most importantly, law enforcement agencies and the communities that they serve can use trends in analyses of inequity and harm to determine whether interventions designed to improve those outcomes

46. Fyfe, *supra* note 45, at 311; Police Executive Research Forum, Guiding Principles on Use of Force 15 (2016).
47. Walker and Katz, *supra* note 45.
48. John MacDonald et al., *Did Post–Floyd et al. Reforms Reduce Racial Disparities in NYPD Stop, Question, and Frisk Practices? An Exploratory Analysis Using External and Internal Benchmarks*, 8825 Justice Q. 1, 24 (2018).
49. *Id.*
50. John F. Dovidio, *On the Nature of Contemporary pPrejudice: The third Wave*, 57 J. Soc. Issues 829, 831 (2001); John F. Dovidio et al., *On the Nature of Contemporary Prejudice: From Subtle Bias to Severe Consequences*, *in* Explaining the Breakdown of Ethnic Relations: Why Neighbors Kill 41, 44 (Victoria M Esses & Richard A Vernon eds., 2008); John B. Pryor et al., *A Social Psychological Model for Predicting Sexual Harassment*, 51 J. Soc. Issues 69 (1995).
51. Phillip Atiba Goff et al., *Predicting Bad Policing: Theorizing Burdensome and Racially Disparate Policing Through the Lenses of Social Psychology and Routine Activities*, Annals Am. Acad. Pol. & Soc. Sci. (forthcoming); Jillian K. Swencioniset al., *The Psychological Science of Racial Bias and Policing*, 23 Psychol. Pub. Pol'y L. 398, 400–02 (2017).

have had their intended effects. Just as follow up and ongoing evaluation are crucial elements of CompStat and early intervention systems, a commitment to continuous monitoring and improvement is likely to be a key component to successful, sustainable public safety reform.

B. *Addressing Challenges*

Routine analysis of racial disparities and burdens in policing outcomes may represent a significant shift for many departments. While the benefits of such a shift are likely to be significant, at least two significant challenges may arise for many departments. First, some police departments may not currently collect the data necessary to perform useful analyses. As a result, departments may need to invest in improved data collection practices before they can benefit from new data analysis plans. Second, police departments may face challenges with analyzing data at a fast enough cadence to affect police policy and management decisions in real time.

1. Improving Data Collection

The first challenge for many departments will be improving the quality of their data collection. Data analysis is only as powerful as the quality of the underlying data one has to work with, and law enforcement data is too often messy and incomplete. Law enforcement agencies need to adopt data collection policies to ensure that they have the types of data needed to perform relevant analyses and quality assurance polices to identify and address odd or erratic patterns of data collection.

Ideally, law enforcement agencies should collect data on all stops, searches (including consent searches), and uses of force against civilians, including:

- The time, date, and precise location of each encounter.
- The general reason or justification for each stop, search, or use of force.
- Whether the encounter was officer-initiated or in response to a call for service.
- The outcome of each stop or search, including whether a citation or arrest occurred and whether any contraband was located.
- Personal and demographic information about the civilian involved, including race, gender and age.
- Personal and demographic information about the officer involved, including race, gender, age, years of service, and team or precinct.

Combined with data on neighborhood demographics and crime rates, the information listed above may help police departments to begin to identify disparities in law enforcement outcomes and assess the extent to which those disparities can be attributed to law enforcement policies and behavior. Of course, the more detailed a department's records pertaining to police-civilian contact, the more potentially useful information

can be obtained when analyzing the data. It can be helpful, for example, to collect additional demographic information about civilians involved in police encounters in order to better understand whether groups such as people with disabilities, LGBTQ people, English language learners, and homeless people are at increased risk of police contact.

While norms in police data collection remain understudied, it is highly likely that many police departments do not currently collect all of the data described in the previous paragraph. Most states do not require police departments to collect data on stops, use of force, or other interactions with the public.[52] The fact that the Civil Rights Division of the U.S. Department of Justice has so frequently required improved data collection in its reform agreements with police departments suggests that the data routinely collected by police departments may often be lacking.[53] Some departments do not routinely record data on vehicle and pedestrian stops and searches unless they lead to an arrest or citation. Departments that fail to collect such data have no way to determine whether disparities exist in these outcomes; they also lack any way to know how many innocent people are stopped for every person who is cited or arrested.[54]

Ensuring that law enforcement agencies have sufficient data to analyze questions of equity and harm may require changes in industry norms or modifications to state, federal, and local laws. In 2015, California passed two bills imposing new data collection requirements on law enforcement, AB 953 and AB 71. AB 71 requires law enforcement agencies to collect and report to the California Department of Justice detailed information about each incident in which a civilian is killed or subjected to serious bodily injury by a police officer, as well as information about each incident in which a police officer is killed or subjected to serious bodily injury by a civilian.[55] When fully implemented, AB 953, the Racial and Identity Profiling Act, will require law enforcement agencies to collect and report to the state Attorney General detailed information about all vehicle and pedestrian stops, including information about the time, date and location of the stop; the reason for the stop; the result of the stop; and actions taken by the officer during the stop.[56] The Racial

52. Joanna C Schwartz, *Systems Failures in Policing*, 51 Suffolk U.L. Rev. 535, 558–559 (2018).

53. Consent Decree at 42–45, *U.S. v. Cty. of Los Angeles*, No. CV 00-11769-GAF-RC (C.D. Cal. Jun. 15, 2001), https://www.justice.gov/crt/file/826956/download; Consent Decree at 42–25, *U.S. v. Cty. Of New Orleans*, No. CV 12-01924-SM-JCW (E.D. La. Jul. 24, 2012) at 42–45, https://www.justice.gov/sites/default/files/crt/legacy/2012/11/07/nopd_consentdecree_7-24-12.pdf; Consent Decree at 18, *U.S. v. Cty. of Ferguson*, No. CV 16-00180-CDP (E.D. Mo. Mar. 17, 2016), https://www.justice.gov/crt/file/833701/download; Settlement Agreement, *U.S. v. Cty. of Seattle*, No. CV 12-01282 JLR (W.D. Wash. Jul. 27, 2012), https://www.justice.gov/iso/opa/resources/407201283174056123976.pdf.

54. *See e.g., id.*

55. Cal. Gov't Code § 12525.2 (West 2017).

56. Cal. Gov't Code § 12525.5 (West 2018); Cal. Code Regs. tit. 11, § 999.226 (2017).

and Identity Profiling Act required the first round of reporting from law enforcement agencies that employ 1,000 or more peace officers on April 1, 2019. All agencies will be subject to the law's reporting requirements by April 1, 2023.[57] Other states and municipalities may be able to learn practical lessons from the rollout of these new laws in California and gain insight into the best ways to require improved data collection and transparency in their own jurisdictions.

2. Challenges with Data Analysis

Even with good data collection practices, law enforcement agencies may also face challenges with analyzing certain data quickly and frequently enough to affect police policy and management in real time. While some law enforcement agencies incorporate analysis of civilian complaints and officer involved shootings into regular CompStat-like meetings,[58] the numbers of such incidents are often small enough that they can be assessed without the need for extensive statistical analysis. This approach may be more challenging when assessing outcomes like stops and low-level uses of force that occur far more frequently than civilian complaints or critical incidents. To illustrate, the NYPD Force Investigation Division investigated 33 civilian complaints of excessive force and 17 police shootings in 2018.[59] The NYPD reported over 11,000 street stops over the same time period.[60] Given that police data are often messy and incomplete, analyzing data on routine police-civilian encounters at a regular cadence is likely to require a greater investment of time and resources from law enforcement agencies.

Some law enforcement agencies already have analytical units able to perform necessary analyses. In some municipalities, local civilian oversight entities tasked with monitoring the law enforcement agency may be able to take on the task. Partnerships with academic researchers and think tanks may provide a solution for agencies that lack internal resources necessary to produce timely analyses of disparities and harm in their policing outcomes. For example, the Center for Policing Equity at John Jay College of Justice and University of California–Los Angeles is developing a program it refers to as "CompStat for Justice," which will use statistical analysis to examine the causes of racial disparities in police stops, searches, and use of force. The Center for Policing Equity has

57. Cal. Gov't Code § 12525.5, *supra* note 56.
58. Myles Miller, *Inside the NYPD Unit That Studies Use of Police Force*, Spectrum News NY1, (Jan. 30, 2019), https://www.ny1.com/nyc/all-boroughs/news/2019/01/30/inside-the-new-nypd-unit-that-studies-use-of-police-force-[https://perma.cc/3HNC-BTAA]; John Annese, *NYPD Poised to Create Special Unit to Investigate Officer-Involved Shootings, Sources Say*, Staten Island Live, (Mar. 2015), https://www.silive.com/news/2015/03/exclusive_nypd_poised_to_creat.html [https://perma.cc/4GGC-D9TB].
59. Miller, *supra* note 58.
60. N.Y.C. Police Dept., Stop, Question and Frisk Data NYPD, https://www1.nyc.gov/site/nypd/stats/reports-analysis/stopfrisk.page [https://perma.cc/KE7Z-CW-CF] (last visited Apr. 11, 2019).

partnered with engineers from Google to develop tools to automatically clean, audit, and standardize police data for analysis, substantially reducing the time it takes to produce reports for police departments.[61]

It should also be noted that while data on stops and use of force are often voluminous, so too are crime data. Big cities like New York City receive—and statistically analyze—thousands of reports of major crime each year.[62] As a field, law enforcement has committed time and resources to analyzing reported crime because crime reduction is an important part of their mission. While it will also require a public investment of time and money to analyze data on equity and burden in law enforcement-community interaction on a regular basis, it is a worthwhile investment. Equity, justice, and safety are worth investing in.

Conclusion

Law enforcement is and has always been a data-driven profession. It has, however, traditionally focused its analyses on patterns in reported crime. While crime prevention is an important goal of law enforcement, it is not and should not be the only goal of law enforcement. A law enforcement agency that considers only the short-term crime control benefits of police intervention without weighing potential intangible costs to communities that experience the most policing risks exacerbating racial disparities in police outcomes and ultimately making communities less safe. If promoting equity and minimizing unnecessary harm matter to public safety officials—as they should—officials need to measure, analyze and follow up on these outcomes just as they would measure, analyze and follow up on crime data.

61. AtlanticLive, *Google.org and The Center for Policing Equity are Mapping the Path to Justice Through Data*, Youtube (May 7, 2018), https://www.youtube.com/watch?v= J9zMT8vgEkg [perma.cc/82YB-EVWP] (last visited Apr. 11, 2019).

62. *See* N.Y.C. Police Dept., NYPD CompStat 2.0 (2019), https://compstat.nypdonline.org (last visited Apr. 11, 2019).