REVIEW

"Don't Shoot!": Racialized Policing, Gunshots, and The Fourth Amendment

UNREASONABLE: BLACK LIVES, POLICE POWER, AND THE FOURTH AMENDMENT. By Devon W. Carbado. New York: The New Press. 2022 Pp.228 $27.99.

VIRTUAL SEARCHES: REGULATING THE COVERT WORLD OF TECHNOLOGICAL POLICING. By Christopher Slobogin. New York: New York University Press. 2022 Pp.261. $27.49.

REVIEWED BY HARVEY GEE*

ABSTRACT

Police consistently adopt techniques and practices that infringe on the rights of Black people, and rapidly-developing policing technology has only increased this risk. This review builds on the cutting-edge scholarship offered in Devon Carbado's book Unreasonable: Black Lives, Police Power, and the Fourth Amendment *(*Unreasonable*)*[1] *and Christopher Slobogin's book* Virtual Searches: Regulating the Covert World of Technological Policing (Virtual Searches).[2] *This review brings together the central claims of* Unreasonable *and* Virtual Searches *and broadens the conversation about the discretion Fourth Amendment law currently gives to police officers to target and engage Black people without any evidence of wrongdoing. Controversial policing technologies such as ShotSpotter, a rapid identification and response system designed to detect gunshots and dispatch police, and HunchLab, among the newest iterations of predictive policing technology, give police even more ability to surveil communities. Read together, these books make a powerful case for why Fourth Amendment jurisprudence must shift to meaningfully protect the rights of Black people. Until that shift occurs, however, this review argues that state and local governments should invest in community violence reduction and shift away from costly and ineffective police surveillance.*

---

* Author is an attorney in San Francisco. He previously served as an attorney with the San Jose City Attorney's Office, Office of the Federal Public Defender in Las Vegas and Pittsburgh, and the Federal Defenders of the Middle District of Georgia. B.A., Sonoma State University; J.D., St. Mary's University School of Law; LL.M., The George Washington University Law School. The views expressed are solely those of the author, and do not reflect the opinions of past or present employers.

1. DEVON CARBADO, UNREASONABLE: BLACK LIVES, POLICE POWER, AND THE FOURTH AMENDMENT (2022). Carbado is the Honorable Harry Pregerson and Distinguished Professor of Law at UCLA School of Law.

2. CHRISTOPHER SLOBOGIN, VIRTUAL SEARCHES: REGULATING THE COVERT WORLD OF TECHNOLOGICAL POLICING (2022). Slobogin is the Milton Underwood Chair and Professor of Law at Vanderbilt University.

TABLE OF CONTENTS

INTRODUCTION

> "Fourth Amendment law has effectively turned Black people into a criminalized corporal complex over which police officers can exercise enormous power."[3]

As seen with the killings of Michael Brown, George Floyd, Tyre Nichols, and too many others, racism and brutal police violence against Black people is unrelenting.[4]

---

3. CARBADO, *supra* note 1, at 31, 32.

4. *See* Rick Rojas, *Tyre Nichols Cried in Anguish. Memphis Officers Kept Hitting*, NY TIMES (Jan. 27, 2023), https://www.nytimes.com/2023/01/27/us/tyre-nichols-video-memphis.html; *see also* Joan E, Greve, *What is the George Floyd Justice in Policing Act and Is It Likely to Pass?,* THE GUARDIAN (Feb. 6, 2023), https://www.theguardian.com/us-news/2023/feb/06/george-floyd-justice-in-policing-act-explainer-tyre-nichols.

What is the root cause? In *Unreasonable*, Professor Devon Carbado argues that it is the Fourth Amendment that allows the police to target Black youth via frequent contacts on the streets, explaining:

> The truth is that many forms of policing that people find troubling are perfectly legal under a particular body of constitutional Fourth Amendment doctrine. Over the past five decades, the Supreme Court has interpreted the Fourth Amendment to allocate enormous power to police: to surveil, to racially profile, to stop-and-frisk, and to kill.[5]

Police are authorized to have frequent contact with Black people.[6] Because of the Supreme Court's colorblind approach in applying constitutional law, Professor Carbado continues, "Black people are vulnerable to police contact and surveillance through a variety of converging factors, including racial stereotyping, de facto racial segregation, and Fourth Amendment law. . . ."[7] Thus, Professor Carbado argues that these abuses are not simply caused by "bad cops," but rather the result of Fourth Amendment jurisprudence.

Professor Christopher Slobogin's *Virtual Searches* responds to emerging surveillance technologies and illustrates the need for Fourth Amendment jurisprudence to evolve so that the interests of law enforcement can be balanced with the need to protect our civil liberties. Surveillance tools like ShotSpotter and HunchLab, though designed to prevent crime, ultimately allow law enforcement to chip away at the right to privacy. *Virtual Searches* tracks the drastic reduction in our reasonable expectation of privacy under the Fourth Amendment due to surveillance technology and engages the ways in which that same technology enables racism.

Unreasonable focuses on analyzing how the Fourth Amendment allows the police to target Black people, without any mention of surveillance technology. *Virtual Searches* is focused on how Fourth Amendment jurisprudence needs to evolve to accommodate new police surveillance tactics, and the issue of how racial bias in the criminal justice system is relatively downplayed. These books shine a broader spotlight on the Court's need to provide clearer guidance in its Fourth Amendment jurisprudence and the corresponding need for new local, state, and federal legislation governing surveillance technology. Reading these two books together reveals how the Fourth Amendment's language has granted law enforcement the broad ability to develop such invasive surveillance technology that the rights of Black people can be more easily infringed upon. Current Fourth Amendment jurisprudence fails to meaningfully protect Black people, and the advent of new policing technology exacerbates these deficiencies. To address this issue, there must be a change on the legislative level, a process that should involve public discourse and the voice of community stakeholders who are ultimately the ones affected by these policing techniques.

5. CARBADO, *supra* note 1, at 1.
6. *Id.* at 16.
7. *Id.* at 15.

Drawing on the themes presented in *Unreasonable*, Part I evaluates how the Supreme Court's colorblind approach to Fourth Amendment jurisprudence fails to address the reality that policing facilitates the constant surveillance and interrogation of Black people. Part II argues that ShotSpotter, one of many powerful surveillance tools used by local police departments to purportedly help fight crime, actually infringes upon privacy rights and civil liberties upon application. This analysis adds to the emerging scholarship about ShotSpotter and adjacent Fourth Amendment issues emanating from its use in so-called "high crime areas," where law enforcement increasingly relies on ShotSpotter to create reasonable suspicion where it does not exist.[8]

Too often, the use of ShotSpotter increases the frequency of police interactions which in turn increases the risk of Black and Latino people becoming victims of police brutality or harassment in stop and frisks. Such racialized policing facilitates the status quo of violence and bias against communities of color. Part II also evaluates HunchLab, another predictive policing technology owned by ShotSpotter that was designed to purportedly make policing more efficient but also disproportionately harms communities of color. Part II further includes an analysis of federal and state cases addressing the issue of whether the sound of gunshots detected by ShotSpotter technology can serve as reasonable suspicion for officers to stop and subsequently search individuals.

Part III evaluates Slobogin's typology for policing techniques and focuses on his "proportional principle" as an alternative to the traditional probable cause requirement for warrantless searches. Under Slobogin's "proportionality principle," an investigative technique should be permitted under the Constitution only if the strength of the government's justification for the technique is roughly proportionate to the level of intrusion it causes. Part III then evaluates Slobogin's idea of replacing the probable cause requirement with proportional analysis and his adjoining call for a new Fourth Amendment that respects democratic policymaking and holds police accountable.

Part IV argues that spending more money on ineffective ShotSpotters placed in "high crime" neighborhoods across America is not the answer to reducing gun violence. To the contrary, ShotSpotters are part of the problem. Police misuse and overuse of surveillance technologies are factors that certainly weigh against trusting law enforcement with using ShotSpotter with little to no oversight or restriction. Yet there are innovative ways to simultaneously build trust in communities and curb gun violence.

Properly designed group violence reduction strategies foster and maintain dignity for participants in a program tailored to save lives and promote community healing. Part IV further argues against the use of costly surveillance technologies and explores important alternatives to reduce harm for both victims and perpetrators. Much has

8. *See e.g.,* Elizabeth E. Joh*, The Unexpected Consequences of Automation in Policing*, 75 SMU L. REV. 507, 528 (2022); Maneka Sinha, *The Dangers of Automated Gun Shot Detection*, 5 J.L. & INNOVATION 63, 73 (2023); Gage Righter, *Ears in the Sky: How the Technology of ShotSpotter is Eroding Fourth Amendment Protections*, 50 CAP. U. L. REV. 321, 322 (2022); Benjamin Goodman, *ShotSpotter—The New Tool to Degrade What is Left of the Fourth Amendment,* 54 UIC L. REV. 797, 817 (2021).

been written about the general gun control debate, mass shootings, and gun violence in high crime neighborhoods, but less attention has been paid to efforts to prevent shootings before they happen. Part IV suggests that preventative efforts such as group violence reduction strategies and gun violence restraining orders are more effective than police surveillance, and that these strategies can be structured to better protect civil liberties.

I. SUPREME COURT'S COLORBLIND INTERPRETATION OF THE FOURTH AMENDMENT JURISPRUDENCE

Carbado translates complex American legal jurisprudence into accessible policing scenarios readers can relate to.[9] He accomplishes this by effective use of illustrations, case analysis, statistics, and personal narratives to explain legal principles and describe the steps officers' cycle through in deciding who to follow and approach; whether to question a person; and when to stop, search, and interview a person. The book also accurately identifies the major role law has had in shaping the racial and social hierarchy of our society. A particular strength is the book's challenging of the Supreme Court's colorblind approach to the Fourth Amendment.

Supreme Court precedent effectively allows police officers to target Black people without any justification. A series of bedrock Supreme Court Fourth Amendment cases laid the foundations for the over-policing of Black neighborhoods, and Carbado argues the Court has further diluted the Fourth Amendment by giving law enforcement extraordinary powers to stop, frisk, and intrusively search young Black people.[10] The police were thereafter empowered to conduct things like pedestrian checks and traffic stops, which disproportionately harm Black people.[11] Carbado argues that this "colorblind" approach to existing jurisprudence on police power ignores the real-life relationship between Black communities and law enforcement.[12] Professor Carbado then explores how police officers can focus their attention on Black people in traffic stops when they are pulled over, questioned, exiting the car, and arrested.[13]

A. How Did We Get to This Point?

The modern police practice of targeting Black people can be traced to *Terry v. Ohio*, where the Court ruled that searches undertaken by police officers are permitted under the Fourth Amendment, so long as the officer "reasonably" believes that the

9. CARBADO, *supra* note 1, at 15.

10. *Id.* at 29-30.

11. This risk is real, as Carbado notes: "Black people's constant exposure to police contact means that they are constantly exposed to the possibility of their own death. . . For Black people, ordinary police interactions often *do* result in a range of violence. In that sense, simply limiting the frequency with which police interact with Black people could save Black lives, if the police have fewer opportunities to stop and question Black people, they have fewer opportunities to kill us." CARBADO, *supra* note 1, at 13. Professor Paul Butler likewise contends: "For African American men, stop and frisk is a form of government. It is the most visceral manifestation of the state in their lives. Most black men have never been convicted of a crime. About half of [B]lack men get arrested at some point during their lives. But virtually every African American man gets stopped and frisked." PAUL BUTLER, CHOKEHOLD: POLICING BLACK MEN 83 (2017).

12. CARBADO, *supra* note 1, at 15-16.

13. *See generally id.* at 77-99.

suspect has a weapon which poses a threat to the officer's safety while investigating suspicious behavior.[14] Under *Terry*, officers must point to some objective facts or observations that are sufficient to show reasonable suspicion under the circumstances, and courts must assess the reasonableness of searches and seizures from an objective point of view.[15] Officers have complete, unfettered discretion to conduct searches and seizures because the requirement to demonstrate reasonable suspicion of criminal wrongdoing has been significantly diluted since *Terry*.[16] The police can justify their decision to stop and frisk, regardless of true motivation, and courts tend to give police the benefit of the doubt when reviewing their conduct.[17]

Even though the *Terry* opinion did not explicitly mention race, the racial implications were present when it was decided and continue to this day. On this point, Carbado bluntly argues:

> [T]he *Terry* regime makes it virtually impossible for Black people in predominantly Black neighborhoods to avoid contact with the police. The relatively high threshold before Fourth Amendment protections against seizure are triggered. . . combined with the relatively lower threshold of reasonable suspicion needed to justify stop-and-questions. . . makes contact between the police and Black people almost entirely a matter of police discretion. . . because reasonable suspicion allows police officers wide discretion for the stop-and-question and stop-and-frisks they conduct, and courts largely defer to their explanations. It is easy for officers to substitute *racial suspicion* as an investigatory tool without admitting they are doing so. Although officers cannot say that they engaged in either type of stop just because someone is Black, or that they systematically targeted Black people for stops, reasonable suspicion's low hurdle enables them to do both.[18]

The failure to contend with the racial implications of *Terry* continue to this day.

B. Colorblind Jurisprudence Maintains The Status Quo

The main thrust of the book is Professor Carbado's critique of Supreme Court jurisprudence over the past fifty years that has "effectively legalized racially targeted policing by interpreting the Fourth Amendment to protect police officers at the

---

14. Terry v. Ohio, 392 U.S. 1, 27 (1968).

15. *See* STEPHEN A. SALTZBURG & DANIEL J. CAPRA, AMERICAN CRIMINAL PROCEDURE: CASES AND COMMENTARY 201 (9th ed. 2007) (explaining, "the [*Terry*] Court not only permitted stops and frisks on less than probable cause, it also explicitly invoked the reasonableness clause over the warrant clause as the governing standard.").

16. *See* BARRY FRIEDMAN, UNWARRANTED: POLICING WITHOUT PERMISSION 149 (2017) (suggesting "Warren's *Terry* opinion contained the seeds of enormous discretion for law enforcement, which police and prosecutors would capitalize upon —ultimately with the court's gradual blessing—in the years to come.").

17. Consequently, the police do not have to inform people of their right to refuse a search under the law and "consistent with Fourth Amendment law, police officers may approach individuals whom they have no reason to believe engaged in wrongdoing, and ask those individuals for permission to search their persons or effects." CARBADO, *supra* note 1, at 50. This is not considered a seizure. But Carbado states when race is added, the analysis is altered because "If Black Americans believe that police officers are likely to perceive Black people as criminally suspect, they may feel extra pressure to say yes to consent to searches to disconfirm that stereotype. Black Americans might also feel pressured to say yes to consent searches on the view that saying no carries the risk of both prolonging the encounter and escalating the situation." *Id.* at 51.

18. CARBADO, *supra* note 1, at 118.

expense of Black Americans."[19] As a result, police officers can rely on race in their decision-making process without question. He points to *Whren v. United States*,[20] a unanimous opinion allowing police officers who have probable cause to make traffic stops when there is a legitimate basis for the stop, irrespective of the personal or subjective motives of an officer. This enables police officers to conduct traffic stops and racially profile the stopped persons.[21]

Despite police being given the green light to engage in racial profiling, courts have adopted a colorblind approach that fails to provide any meaningful correction. Carbado notes that according to the Court's analysis, the race of a suspect is irrelevant.[22] Thus, under the Court's logic, the Court "proceeds as though race plays no role in shaping a person's sense of agency and freedom during interactions with the police."[23] This, Carbado contends, is a failure of our current jurisprudence.[24]

Unquestionably, the Court's denial of race conflicts with the racial reality of our world. As such, Carbado further criticizes this colorblind approach, asserting that race matters because it "is a profoundly salient dimension of social life."[25] He makes two powerful points here. First, Carbado insists that "Black people, across all sorts of differences, are likely to feel seized earlier in police interactions than whites, likely to feel 'more' seized in any given moment, and less likely to know or feel empowered to exercise their rights."[26] Thus, the failure to bring in this reality to the legal standard means that there will be inherent racial disparities. Second, Carbado argues that the standard fails to address material harms that Black people face, and is thus deficient:

> Nowhere in the Court's entire body of Fourth Amendment law will one find concerns about the sense of exposure, of anxiety, and of vulnerability too often incidental to Black people's encounters with the police. The racial harms police routinely commit—from trampling Black dignity, to sniffing out Black life—are simply not legitimate concerns in Fourth Amendment law.[27]

Carbado is correct with his assessment as colorblindness indeed avoids difficult discussions about discrimination, racial oppression, and past racial injustices.[28] Race

19. *Id.* at 29.
20. 517 U.S. 806 (1996).
21. CARBADO, *supra* note 1, at 83.
22. *Id.* at 193-195.
23. *Id.* at 60.
24. *Id.*
25. *Id.*
26. *Id.* at 62.
27. CARBADO, *supra* note 1, at 63. *Unreasonable* points are echoed in Professor Paul Butler's important volume *Chokehold: Policing Black Men. See generally* PAUL BUTLER, CHOKEHOLD: POLICING BLACK MEN (2017) which was released before George Floyd's murder and the massive Black Lives Matter protests and worldwide outcry which followed, explains the American criminal justice system has effectively transformed black men, as a group and as individuals, into "thugs" deserving of contempt and punishment. Butler presents a raw and unapologetic indictment of the purposefully broken American criminal justice system that targets Black men and pushes them into incarceration through lawful means, revealing that Black men are incarcerated largely because of their race, not because of poverty or poor choices. Instead, the racial disparity in the criminal justice system results from the structural racism that encourages dissimilar treatment of similarly situated people based on race.
28. CARBADO, *supra* note 1, at 60.

certainly plays a role in defining a person's sense of agency in interactions with police.[29] This is evident when police officers negate the role of race in their daily work, even though their thoughts and actions are in fact based on racialized narratives about racial minorities, whether they realize it or not.[30] Likewise, prosecutors regularly take a colorblind approach, describing the criminal justice system as race-neutral and attributing the disproportionate number of Black people who are stopped, searched, arrested, and incarcerated to individual action, all while ignoring how much their own prosecutorial discretion contributes to these results.[31]

Once in the criminal justice system, Black people receive the harshest sentence rates compared to all other racial groups. In a recent report, the Pew Research Center looked at incarceration rates at the state and local levels over the past two decades. Despite changes to sentencing and corrections policies, Black people were still imprisoned at five times the rate for whites in 2020.[32] The report indicated both Black men and women were sent to jail at a higher rate than other groups for both misdemeanors and felonies and spent the most time in jail for felonies in comparison to white people and Latino people.[33] The Judicial Council of California's 2021 annual report summarizes the statewide disposition of criminal cases according to defendants' race and ethnicity.[34] Consistent with previous years, conviction rates were lowest for Asian Americans and highest for Latino people.[35] White people and Asian Americans were sentenced to prison at much lower rates than Black and Latino people.[36] A review of statistics on the application of California's various sentencing enhancements (including the state's Three Strikes law, firearm enhancements, gang enhancements, and the addition of five years for a prior felony offense) shows that Black people are the most likely to receive enhanced sentences, followed by Latino, white, and Asian American people.[37]

Carbado's discussion applies beyond the context of criminal arrests and searches and seizures on the streets. Colorblind judicial approaches do not address racial disparities and may even worsen them by maintaining policies and practices that are facially race-neutral but disproportionately harm people of color. For example, prosecutors and courts do not consider the race of defendants, victims, or witnesses when

29. *Id.*

30. *See* Megan Welsh et al., *Complex Colorblindness in Police Processes and Practices*, 68 SOC. PROB. 1, 1 (2020).

31. Justin Murray, *Reimagining Criminal Prosecution: Toward a Color-Conscious Professional Ethic for Prosecutors,* 49 AM. CRIM. L. REV. 1541, 1541 (2012).

32. *See Racial Disparities Persist in Many U.S. Jails,* PEW RSCH. CTR. 2 (May 2023).

33. *Id.*

34. *See* JUDICIAL COUNCIL OF CALIFORNIA, DISPOSITIONS OF CRIMINAL CASES ACCORDING TO THE RACE AND ETHNICITY OF THE DEFENDANT: 2021 REPORT TO THE LEGISLATURE 9 (Nov. 17, 2021).

35. *Id.* at 9, 12.

36. JUDICIAL COUNCIL OF CALIFORNIA, *supra* note 34, at 9.

37. *See* Mia Bird, et al., *Committee on Revision of the Penal Code, Sentence Enhancements in California*, CAL. POL'Y LAB 3 (Mar. 2023); *see also Racial and Ethnic Disparities in the Justice System*, NATIONAL CONFERENCE OF STATE LEGISLATURES 11 (May 2022) (discussing racial and ethnic disparities seen in the sentencing of individuals post-conviction and disparities in sentencing facilitated by sentencing enhancements and federal drug sentencing).

making case decisions. This can also be seen in instances of racial profiling, stop-and-frisks, drug sentencing, and bail and parole decisions.[38]

Paul Butler argues that existing legal police conduct glosses over how police actually patrol poor, Black neighborhoods with violence in the form of beating, killing, pepper spraying, stopping and frisking, and handcuffing African-American men.[39] On a theoretical level, Professor Neil Gotanda articulates, "[a] color-blind interpretation of the Constitution legitimates, and thereby maintains, the social, economic, and political advantage that whites have over other Americans."[40] Other legal scholars argue that the colorblind principle does not recognize the realities of continued social racism and prejudice,[41] and that the colorblind principle does not consider the great influences that social racism has on a court's understanding and interpretation of legal doctrine.[42]

To generate justice reforms to the these lawful police practices, Carbado wants people to become aware of the overlooked racial dimensions of Fourth Amendment law and to mobilize readers, activists, lawyers, and policy makers to curb the scope of police authority so as to "reimagine the necessity for and/or the role of policing in the United States."[43] Though it was not the author's intent, Carbado's work on race and the Fourth Amendment encourages an examination of the intersection of race and existing and emerging policing technologies which have served to further water down what is left of a continually eroding Fourth Amendment doctrine. The remainder of this review is devoted to that exploration.

II. SHOTSPOTTERS, THE FOURTH AMENDMENT, AND REASONABLE SUSPICION

> "[P]olice officers arrive at the location of ShotSpotter alerts under the belief that a gun related crime likely occurred even if the alert is incorrect. ShotSpotter—not police officers—essentially makes the threshold Fourth Amendment determination required to justify a stop-and-frisk."[44]

In the past few years, as seen in growing media coverage, many young Black men have been arrested or harassed because they had the misfortune of being in an area where gunshots were allegedly heard.[45] As briefly mentioned in this Review's introduction, this injustice can be attributed to ShotSpotter technology, a rapid identification and response

38. See Harvey Gee, *Striving for Equal Justice: Applying the Fair Sentencing Act of 2010 Retroactively*, 49 WAKE FOREST L. REV. 207, 211, 230-32 (2014).

39. *See generally* BUTLER, *supra* note 11, at 82-115, 187.

40. Neil Gotanda, *A Critique of "Our Constitution is Color-Blind,"* 44 STAN. L. REV. 1, 2-3 (1991) (criticizing the Supreme Court's use of traditional equal protection analysis as a standard that hides racism).

41. *See* IAN F. HANEY LOPEZ, WHITE BY LAW: THE LEGAL CONSTRUCTION OF RACE 179 (1996) (interpreting race-blind philosophy as maintaining status quo, and as serving certain racial groups and not others).

42. *See* Kenneth B. Nunn, *Rights Held Hostage: Race, Ideology and the Peremptory Challenge*, 28 HARV. C. R.-C.L. L. REV. 63, 76 (1993) (arguing that "color-blindness masks conscious or unconscious racism"); *see also* John A. Powell, *An Agenda for the Post-Civil Rights Era*, 29 U.S.F. L. REV. 889, 895-96 (1995) (criticizing assumption by proponents of color-blindness that there exists true equality between races).

43. CARBADO, *supra* note 1, at 35.

44. *See* Sinha, *supra* note 8, at 72.

45. *See id.* at 68-69; *Press Release: Class Action Lawsuit Takes Aim at Chicago's Use of ShotSpotter After Unfounded Alerts Lead to Illegal Stops and False Charges*, MACARTHUR JUSTICE CENTER (July 21, 2022), https://www.macarthurjustice.org/class-action-lawsuit-takes-aim-at-chicagos-use-of-shotspotter-after-unfounded-alerts-lead-to-illegal-stops-and-false-charges/; Dell Cameron & Dhruv Mehrotra, *DOJ*

system that is designed to detect gunshots and dispatch police.[46] ShotSpotter is one of many powerful surveillance tools used by local police departments with little oversight; other tools include Stingray cell-site simulators (which track the location of cell phone users in real-time), facial recognition technology, and body cameras.[47] These technologies purportedly help police fight crime, but they often do so at the expense of infringing upon privacy rights.[48]

This Part argues that ShotSpotter technology is responsible for the arrest and harassment of many young Black men who were simply at the wrong place at the wrong time. Law enforcement increasingly relies on ShotSpotter to create reasonable suspicion where it does not exist.[49] Oftentimes ShotSpotter gives courts a reason to defer to police judgment and practices where initial detentions are brief and police officers' hunches prove to be correct.[50]

While there is no evidence that ShotSpotter reduces crime, there is ample evidence that ShotSpotter is an unreliable technology that increases police deployments and the likelihood that people are wrongfully arrested, detained, or worse.

First, this Part will discuss the emergence of ShotSpotter gun detection technology. Next, it will discuss HunchLab, ShotSpotter's companion predictive policing technology, and how HunchLab creates additional issues. Third, it will describe how ShotSpotter is both ineffective and harmful and explore how ShotSpotter technology increases the likelihood of stop-and-frisks in communities of color. Lastly, this Part reviews federal and state appellate court decisions analyzing how much and to what extent ShotSpotter results are relied upon by police and prosecutors.

By adding an analysis of recent cases on this issue, this Part illustrates important findings from *Unreasonable* and *Virtual Searches,* demonstrating how courts' treatment of technology like ShotSpotter fails to meaningfully protect communities of color.

A. ShotSpotter Gunshot Detection Technology

ShotSpotter, Inc. changed its name to SoundThinking, but maintained the ShotSpotter name for its flagship acoustic gunshot detection technology.[51] ShotSpotter "is a system that

Urged to Investigate Use of Gunfire Detectors in Black Neighborhoods, WIRED (Sept. 29, 2023), https://www.wired.com/story/shotspotter-doj-letter-epic/.

46. *See* Faune Evans & Dray Clark, *Gunshot Detection Tech Deployed Across US, But Is It Helping?*, NEWSNATION (Mar 3, 2023), https://www.newsnationnow.com/crime/shotspotter-gunshot-detection-technology/.

47. Lyndsay Winkley, *8 Ways Police Can Spy on Crime, and You*, SAN DIEGO UNION-TRIBUNE (May 21, 2015, 4:14 PM) https://www.sandiegouniontribune.com/sdut-police-technology-devices-surveillance-privacy-2015may21-story.html.

48. Nicol Turner Lee & Caitlin Chin-Rothmann, *Police surveillance and facial recognition: Why data privacy is imperative for communities of color,* BROOKINGS (Apr. 12, 2022), https://www.brookings.edu/articles/police-surveillance-and-facial-recognition-why-data-privacy-is-an-imperative-for-communities-of-color/.

49. Sinha, *supra* note 8, at 70.

50. *See* Rickmon v. U.S., 952 F.3d 876, 883 (majority opinion acknowledging that gun violence is inherently dangerous, and that reports of gunfire, when paired with an anonymous 911 call making an emergency report, may be sufficient to support an officer's reasonable suspicion).

51. *ShotSpotter Changes Corporate Name to Soundthinking and Launches Safetysmart Platform for Safer Neighborhoods,* SOUNDTHINKING: PRESS RELEASES (Apr. 10, 2023), https://www.soundthinking.com/press-releases/

uses audio sensors to determine when and where shootings take place."[52] The system is a cloud-based technological system that covers a geographic area with microphones and software to actively monitor for the sound of gunshots.[53] The system consists of a network of twenty to twenty-five powerful sensors per square mile placed to detect the location of a shooting by triangulation.[54] These white, diamond-like sensors contain "a microphone, GPS for clock data, memory and processing, and cell capability to transmit data" to pinpoint the exact location of a gunshot.[55]

Typically, ShotSpotter sensors are placed on rooftops and traffic light poles "as low as [twenty feet] above the ground" and help alert law enforcement when a gunshot is registered.[56] Based on ShotSpotter's algorithm, the microphones suppress ambient noises and are triggered only by impulsive noises, such as "booms" and "bangs."[57] The system can also pinpoint the precise location of the noise.[58] ShotSpotter begins recording one second before the triggering sound and stops one second afterward.[59] An alert is sent to a twenty-four-hour monitoring center in Newark, California, or the ShotSpotter office in Washington D.C., where acoustic experts determine the origin of the audio and ascertain whether the sound is gunfire.[60] Local police then receive alerts via their smartphones or through the police dispatch service, often within thirty to forty-five seconds.[61]

ShotSpotter is used in ninety cities, including Boston, Miami Gardens, Milwaukee, Minneapolis, Oakland, San Francisco, and Washington, D.C.[62] ShotSpotter charges law enforcement agencies yearly subscription fees ranging from $65,000 to $80,000 per square mile for sensors installed in undisclosed locations.[63] ShotSpotter's biggest contract

shotspotter-changes-corporate-name-to-soundthinking-and-launches-safetysmart-platform-for-safer-neighborhoods/. This Review refers to SoundThinking as ShotSpotter to avoid confusion and maintain consistency.

52. Winkley, *supra* note 47.

53. *See* Jay Stanley, *Gunshot Detectors: the ACLU's View*, ACLU (May 29, 2012, 3:37 PM), https://www.aclu.org/blog/national-security/privacy-and-surveillance/gunshot-detectors-aclus-view; Katherine Kornei, *Physicist Pinpoints Urban Gunfire*, AMERICAN PHYSICAL SOCIETY NEWS (June 2018), https://www.aps.org/publications/apsnews/201806/gunfire.cfm.

54. *See* Jay Stanley, *ShotSpotter CEO Answers Questions on Gunshot Detectors in Cities*, ACLU (May 5, 2015, 9:15 PM), https://www.aclu.org/blog/privacy-technology/surveillance-technologies/shotspotter-ceo-answers-questions-gunshot; Goodman, *supra* note 8, at 800.

55. *Id.*

56. *Id.*

57. *Id.*

58. *Id.*

59. *See* Gabriel Sandoval & Rachel Holiday, *"ShotSpotter" Tested as Shootings and Fireworks Soar, While Civil Rights Questions*, THE CITY (July 5, 2020, 3:53 PM), https://www.thecity.nyc/2020/7/5/21312671/shotspotter-nyc-shootings-fireworks-nypd-civil-rights.

60. Many of these employees are former law enforcement. *See* Michael Quander, *Gunshot Tracking Technology Company Opens Office in DC to Help Police Curb Crime*, WUSA9 (July 14, 2021, 12:19 PM), https://www.wusa9.com/article/news/local/dc/shotspotter-technology-company-expands-offices-to-dc/65-9a1e0121-3728-4cee-a723-78164b682ccb (reporting that ShotSpotter recently opened a new office in Washington, D.C.); Clarence Williams, *How ShotSpotter Locates Gunfire, Helps Police Catch Shooters and Works to "Denormalize" Gun Violence*, WASH. POST (May 10, 2017), https://www.washingtonpost.com/news/true-crime/wp/2017/05/10/how-shotspotter-locates-gunfire-helps-police-catch-shooters-and-denormalize-gun-violence.

61. See Williams, *supra* note 61.

62. *Id.*

63. Alysson Gatens & Jessica Reichert, *Police Technology: Acoustic Gunshot Detection Systems*, ILL. CRIM. JUST. INFO. AUTH. (Dec. 10, 2019), https://icjia.illinois.gov/researchhub/articles/police-technology-acoustic-gunshot-detection-systems.

was with Chicago, which canceled its contract this year because of its hefty cost, claimed ineffectiveness, and contribution to over-policing.[64] New York City takes its place.[65] In 2016, ShotSpotter operated in eight precincts in the Bronx and ten precincts in Brooklyn.[66] Currently, ShotSpotter monitors seventy square miles in New York City under a twenty-eight million dollar, five-year contract.[67] The New York Police Department Police Commissioner stated that ShotSpotter was necessary because around seventy-five percent of shots captured by ShotSpotter technology were not reported to local police through 911 calls.[68]

B. HunchLab Predictive Policing

Virtual Searches strengthens Carbado's thesis by expanding the conversation around race in the context of predictive policing technologies. This is apparent when Slobogin analyzes HunchLab, ShotSpotter's companion technology, and argues that it poses similar threats.[69] HunchLab was developed by Philadelphia-based startup Azavea, which is now owned by ShotSpotter.[70] HunchLab's proactive predictive modeling is a natural extension of the reactive ShotSpotter gun detection technology.[71] HunchLab uses artificial intelligence to analyze crime data and identify patterns.[72] It mimics the thorough process used by analysts to determine "hot spots" for crime during specific times of the day.[73] In determining these "hot spots," HunchLab also considers structures like abandoned properties, schools, bars, sporting events, and transportation centers.[74]

The algorithm also allows communities to assign weights to each crime depending on their severity and to reduce the number of times the police patrol the same area.[75]

---

64. *See* Fran Spielman & Tom Schuba, *What Chicago Mayor's Decision on Ending ShotSpotter Says About His Leadership*, CHICAGO SUN-TIMES (Feb. 15, 2024), https://chicago.suntimes.com/city-hall/2024/02/13/chicago-mayor-brandon-johnson-shotspotter-ends-leadership.

65. *See* Casey J. Bastion, *ShotSpotter Acoustic Detection System Another Example of a Forensic Tool Shrouded in Secrecy and Prone to Questionable Results*, CRIM. LEGAL NEWS (Feb. 2022), https://www.criminallegalnews.org/news/2022/jan/15/shotspotter-acoustic-detection-system-another-example-forensic-tool-shrouded-secrecy-and-prone-questionable-results/.

66. Mia Wassef, *When will 120th Precinct get ShotSpotter, the gunfire-tracking tech?*, STATEN ISLAND LIVE (Oct. 31, 2016), https://www.silive.com/news/2016/10/when_will_the_120th_precinct_g.html.

67. *See* Sandoval & Holiday, *supra* note 59.

68. *See* Tatiana Schlossberg, *New York Police Begin Using ShotSpotter System to Detect Gunshots*, N.Y. TIMES (Mar. 16, 2015), https://www.nytimes.com/2015/03/17/nyregion/shotspotter-detection-system-pinpoints-gunshot-locations-and-sends-data-to-the-police.html.

69. SLOBOGIN, *supra* note 2, at 99.

70. *See* Maurice Chammah, *Policing the Future: In the Aftermath of Ferguson, St. Louis Cops Embrace Crime Predicting Software,* THE VERGE (Feb. 3, 2016), https://www.theverge.com/2016/2/3/10895804/st-louis-police-hunchlab-predictive-policing-marshall-project; Robert Cheetham, *Why We Sold Hunchlab*, AZAVEA (Jan. 23, 2019), https://www.azavea.com/blog/2019/01/23/why-we-sold-hunchlab/.

71. *See* JON FASMAN, WE SEE IT ALL: LIBERTY AND JUSTICE IN AN AGE OF PERPETUAL SURVEILLANCE 55 (2021).

72. *See* AZAVEA, HUNCHLAB: UNDER THE HOOD 10, 10 (2015).

73. *Id.*

74. SLOBOGIN, *supra* note 2, at 99-100.

75. *See* AZAVEA, *supra* note 71, at 20.

The algorithm recommends patrol tactics based on available information about offenders and suspects and monitors the efficacy of those tactics.[76]

The technology costs between $30,000-$200,000 based on the size of the jurisdiction.[77] Police officers monitor the HunchLab website, which displays a map with little bright dots.[78] Officers may zoom in to transform the dots into transparent boxes that encompass geographic areas about the size of a city block and are color coded to indicate the type of crime most likely to occur in that area, such as larceny, gun-related crime, and aggravated assault.[79]

To pacify concerns that HunchLab is too invasive and targets communities of color, the CEO of HunchLab has assured the public that HunchLab aims to "[f]orecast places, not people: We would forecast locations with the highest likelihood of a crime at a given point in time. We do not attempt to make predictions about the actions of people," and that the company also aims to "[l]imit input data to places, not people."[80] Slobogin adds:

> The hot shot algorithm developed by HunchLab relies on population-wide statistics such as area crime reports, weather analysis, or location data that is not person-specific. It then tries to predict where crime might occur, not who might commit it. Little or no intrusion into personal information is involved.[81]

These reassurances carry little weight without research supporting such contentions. The effectiveness of HunchLab has yet to be fully measured, and the potential disproportionate racial impact has not yet been studied. As such, Slobogin cautions that the effectiveness of HunchLab, and other companies that use artificial intelligence to determine which neighborhoods are "hot spots" for crime, remains unclear.[82]

Similar concerns are made by Professor Andrew Ferguson who writes that "[i]f the police have discriminated in the past, predictive technology reinforces and perpetuates the problem, sending more officers after people who we know are already

---

76. *See* Robert Brauneis & Ellen P. Goodman, *Algorithmic Transparency for the Smart City*, 20 YALE J.L. & TECH 103, 150 (2018); AZAVEA, *supra* note 71, at 10 ("[A]nalysts publish spatial notes to the field. Perhaps an offender was recently released from prison or perhaps the analyst has a suspect in mind for a recent burglary series. Spatial notes capture this information and disseminate it to the field when it is most relevant.").

77. Andrew Guthrie Ferguson, THE RISE OF BIG DATA POLICING: SURVEILLANCE, RACE AND THE FUTURE OF LAW ENFORCEMENT 182 (2017).

78. AZAVEA, *supra* note 71, at 10; Chammah, *supra* note 71.

79. *See* Andrew Guthrie Ferguson, THE RISE OF BIG DATA POLICING: SURVEILLANCE, RACE AND THE FUTURE OF LAW ENFORCEMENT 63 (2017); Chammah, *supra* note 71.

80. AZAVEA, *supra* note 71.

81. SLOBOGIN, *supra* note 2, at 103.

82. *Id.* at 120. Predictive policing technologies like HunchLab create new avenues for police to surveil communities of color and engage in privacy violations. Beyond any technological issues, unaddressed racial bias in the criminal justice system "risks being exacerbated if we pretend that technology can magically become race-neutral when the practices and data that feed it never have been." FASMAN, *supra* note 72, at 29. Technology driven predictive policing, just like old fashioned patrol car cruising, can be discriminatory and lead to racial profiling. SLOBOGIN, *supra* note 2, at 116.

targeted and unfairly treated."[83] In short, racialized policing worsens further with the increased use of technology by police.

C. ShotSpotter's Impact

The increased reliance on ShotSpotter has been met with growing criticism about the ineffectiveness of this technology. There are serious concerns that ShotSpotter alerts give police ostensible justification to harass communities of color.[84] As Professor Elizabeth Joh warns, "[a] reference to 'multiple predictive alerts' associated with a place may become part of the justification an officer uses for an investigative detention or frisk of a person encountered there."[85] Thus, "predictive alerts" may provide police with requisite reasonable suspicion even when these alters are inaccurate or based on faulty data.

For example, false-positive gunshots, just like any report of gunfire, can encourage officers to arrive on the scene looking for a shooter with their guns drawn.[86] This could potentially escalate the situation into a violent confrontation. New York Police Department officers responding to ShotSpotter alerts fatally shot a gunman in a Crown Heights housing project, and another ShotSpotter alert sent officers into a violent altercation with a crowd in Harlem.[87] Another incident involved several undercover NYPD officers responding to a ShotSpotter alert in Canarsie and who came across two young men allegedly smoking marijuana.[88] The police officers then swarmed one of the men and repeatedly punched and kicked him for "resisting arrest," while onlookers screamed and took video footage.[89]

In a first-of-its-kind study, Dr. M.L. Doucette and colleagues examined the impact of ShotSpotter technology on firearm homicides, murder arrests, and weapons arrests by analyzing sixty-eight large metropolitan counties in the United States from 1999 to 2016.[90] The study concluded that there is zero evidence that ShotSpotter has had an impact on firearm-related homicides or arrest outcomes.[91] It

83. Andrew Guthrie Ferguson, *The Truth About Predictive Policing and Race*, THE APPEAL (Dec. 7, 2017), https://theappeal.org/the-truth-about-predictive-policing-and-race-b87cf7c070b1/ ("Predictive policing may, in fact, lead to additional police shootings and civilian unrest. In the targeted areas, police may feel additional license to investigate more aggressively. Because the areas have been designated as more dangerous, police may also respond in a more aggressively protective posture."); *see also* ANDREW GUTHRIE FERGUSON, THE RISE OF BIG DATA POLICING: SURVEILLANCE, RACE AND THE FUTURE OF LAW ENFORCEMENT 79 (2017).

84. Multiple courts have found that ShotSpotter activation, by itself, does not establish probable cause or reasonable suspicion, highlighting the importance of this material to the defense. People v. Ravenell, 107 N.Y.S.3d 408 (2nd Dept 2019*);* People v. Yarborough, 116 N.Y.S.3d 866 (N.Y. Sup. Ct. 2019).

85. *See* Joh, *supra* note 8, at 529.

86. *See* Matthew Guariglia, *It's Time for Police to Stop Using ShotSpotter*, ELECTRONIC FRONTIER FOUNDATION (July 29, 2021), https://www.eff.org/deeplinks/2021/07/its-time-police-stop-using-shotspotter.

87. *See* Sandoval & Holiday, *supra* note 60.

88. *Id.*

89. *Id.*

90. Mitchell L. Doucette, et al., *Impact of ShotSpotter Technology on Firearm Homicides and Arrests Among Large Metropolitan Counties: A Longitudinal Analysis*, 98 J. OF URBAN HEALTH 609, 609 (2021).

91. *Id.* at 609.

also suggested that stricter handgun purchaser requirements are a more cost-effective way to reduce firearm violence.[92] Metro Nashville Community Oversight issued an informational report regarding ShotSpotter Technology, raising skepticism about the two-year $800,000 cost for ShotSpotter technology, especially given its "murky efficacy."[93] According to the report, "[r]oughly nine out of ten times an officer responds to a ShotSpotter dispatch, they find no evidence of a gun-related crime."[94] Moreover, the oversight staff acknowledged ShotSpotter technology's negative impact on low-income minority communities.[95]

Communities have been leveraging this data to push back against ShotSpotter. In 2021, Brighton Park's Neighborhood Council, Lucy Parsons Labs, and Organized Communities Against Deportations filed an amicus brief supporting a motion by the Cook County Public Defender, challenging the scientific validity of the ShotSpotter system's gunfire reports.[96] These community activists claimed ShotSpotter is ineffective and has a disproportionate racial impact on Black and Latino communities, leading to over-policing and abuse of these communities.[97]

The suit references a study by the MacArthur Justice Center at Northwestern Pritzker School of Law that found that the Chicago Police Department's (CPD) use of ShotSpotter technology was "inaccurate, expensive, and dangerous."[98] The study was designed to test the veracity of ShotSpotter's claims of accuracy and explore the impact of the ShotSpotter system on Chicago's marginalized communities.[99] According to Jonathan Manes, an attorney with the MacArthur Justice Center, "[s]urveillance technology has a veneer of objectivity, but many of these systems do not work as advertised."[100] The study rebuts ShotSpotter's unsubstantiated claims that its technology is 97% accurate.[101] The MacArthur Justice Center, via the Illinois Freedom of Information Act, secured data on ShotSpotter deployments from July 1,

92. *Id.*

93. METRO NASHVILLE COMMUNITY OVERSIGHT, INFORMATIONAL REPORT REGARDING SHOTSPOTTER TECHNOLOGY 1, 4 (2022).

94. *Id.* at 6. Moreover, there is little evidence that this risk yields results. For instance, a 2013 investigation of ShotSpotter's efficacy in Newark, New Jersey revealed that from 2010 to 2013, seventy-five percent of the 3,632 gunshot alerts issued were false alarms. Prince Shakur, *Gunshot Detection Technology Raises Concerns of Bias and Inaccuracy*, CODA (Mar. 3, 2020), https://www.codastory.com/authoritarian-tech/gun-violence-police-shotspotter. A 2016 report published by the Center for Investigative Reporting, also showed that almost a quarter of the time in the preceding two years, about two-thirds of ShotSpotter alerts did not turn up evidence of gunshots. *See id.*

95. METRO NASHVILLE COMMUNITY OVERSIGHT, INFORMATIONAL REPORT REGARDING SHOTSPOTTER TECHNOLOGY 1, 6 (2022).

96. *See* Brief for Brighton Park Neighborhood Council, et.al. as Amici Curiae in Support of Defendant's Motion for Frye Hearing, State v. Williams, 20 CR 0899601 (Ill. Cir. Ct. 2021).

97. *See Press Release: ShotSpotter Generated Over 40,000 Dead-End Police Deployments in Chicago in 21 Months, According to New Study*, MACARTHUR JUSTICE CENTER (May 3, 2021), https://www.macarthurjustice.org/shotspotter-generated-over-40000-dead-end-police-deployments-in-chicago-in-21-months-according-to-new-study [hereinafter Study Press Release].

98. *Id.*

99. *End Police Surveillance: ShotSpotter Creates Thousands of Dead-End Police Deployments That Find No Evidence of Actual Gunfire*, MACARTHUR JUSTICE CENTER (last visited June 11, 2022), https://endpolicesurveillance.com/.

100. Study Press Release, *supra* note 101.

101. *Id.*

2019, through April 14, 2021.[102] The data showed that "89" [of deployments] turned up no gun-related crime, 86% led to no report of any crime at all," and that more than 40,000 ShotSpotter deployments ran into dead ends.[103]

The City of Chicago's Office of Inspector General (OIG) also released a report on CPD's use of ShotSpotter gunshot detection technology ("Report") that corroborates the findings of the MacArthur Justice Center. The OIG analyzed data from 50,176 ShotSpotter alerts between January 1, 2020, and May 31, 2021.[104] The Report concluded that CPD's responses to ShotSpotter alerts rarely produced evidence of a gun-related crime and rarely rose to investigatory stops, suggesting that the detection system is unreliable.[105] Specifically, the vast majority of ShotSpotter alerts were not connected to any shooting incident, and only nine percent of ShotSpotter alerts indicated evidence of a gun-related criminal offense.[106] Furthermore, only two percent of all ShotSpotter alerts resulted in officer-written investigatory stop reports.[107]

This data has facilitated recent scholarship and requests for investigations about ShotSpotter and the Fourth Amendment. First, Elizabeth Joh refers to the Report and Chicago's experiences with ShotSpotter, and argues that gun detection technologies unexpectedly altered police behavior in the worst sense:

> [T]he ShotSpotter example demonstrates how human discretion can creep into automated decision-making. Inferring that a large number of alerts means a place is dangerous and people found within it could pose dangers to the police is not an intended use of the technology . . . officers in Chicago used what they assumed about ShotSpotter alerts in the aggregate to justify *Terry* stops . . . Many ShotSpotter alerts became shorthand for officers' beliefs that an area was generally dangerous whether or not it actually was dangerous.[108]

Second, Professor Maneka Sinha argues that ShotSpotter evades meaningful analysis under the existing reasonable suspicion framework and erodes search and seizure protections.[109] As such, "[a]lerts thus effectively become a free pass for police to conduct blanket stop-and-frisks of a wide swath of people in the vicinity of an alert."[110] To alleviate these problems, Sinha offers these preliminary solutions: (1) having courts account for a broader context that "Black and Brown people are disproportionately impacted by police that pushes the limits of the Fourth Amendment" and give less weight to facts, which disproportionately impose suspicion on them; and (2)

102. *Id.*
103. *Id.*
104. CITY OF CHI. OFF. OF INSPECTOR GEN., THE CHICAGO POLICE DEPARTMENT'S USE OF SHOTSPOTTER TECHNOLOGY, 2-3, 15 (2021).
105. *See id.* at 2-3, 22.
106. *Id.* at 3.
107. *Id.* at 16.
108. *See* Joh, *supra* note 8, at 528.
109. Sinha, *supra* note 8, at 73.
110. *Id.* at 70.

passing legislation that targets an overreliance on ShotSpotter alerts to justify stop-and-frisks and allow abuses.[111]

Third, the Electronic Privacy Information Center (EPIC), a non-profit organization, recently requested the U.S. Department of Justice (DOJ) to investigate the deployment of ShotSpotter technology in Black neighborhoods.[112] Building on the growing literature about the efficacy of ShotSpotter, the non-profit organization raised concerns about the use of technology to justify the over-policing of Black communities.[113] EPIC argued there is substantial evidence indicating that ShotSpotter is used in a biased and discriminatory manner, possibly violating Title VI which prohibits recipients of federal financial assistance from discriminating based on race, color, and national origin.[114] EPIC further contended that ShotSpotter relies on biased assumptions and historical crime data to determine sensor placement locations.[115] Pointing to thousands of false alerts, it reasoned that the reliance on ShotSpotter has created disparate impacts on majority-minority neighborhoods, increasing police patrolling in these neighborhoods and thereby perpetuating discriminatory patterns of policing practices.[116]

CPD's reliance on ShotSpotter illustrates how the continual use of gun detection technology as a predictive policing tool increases the frequency of police interactions thereby also increasing the risk of Black and Latino people becoming victims of police brutality or harassment in stop-and-frisks. Such racialized policing facilitates the status quo of violence and bias against Black people.

Understandably, pushback against predictive policing is growing. The American Civil Liberties Union (ACLU), Brennan Center for Justice, Electronic Frontier Foundation, and other civil rights organizations have outlined the problems with predictive policing: its narrow focus on the reported crime rate, the overconcentration of enforcement activities in already over-policed communities, the failure to address community needs, and the failure to reduce excessive force or build trust.[117]

111. *Id.* at 109-110.

112. Letter from Electronic Privacy Information Center to U.S. Attorney General Merrick Garland re: ShotSpotter and Title VI Compliance, ELECTRONIC PRIVACY INFORMATION CENTER 1,7 (2023), https://epic.org/wp-content/uploads/2023/09/EPIC-DOJ-23-09-27-Title-VI-Petition-ShotSpotter.pdf [hereinafter Title VI Letter].

113. *Id.* at 1.

114. 42 U.S.C. § 2000(d).

115. *Id.*

116. Title VI Letter, *supra* note 115, at 7-9. These kinds of incidents also spurred concerns for the Center for the Constitutional Rights (CCR). Before ShotSpotter's implementation period, CCR criticized the NYPD ShotSpotter Impact and Use Policy due to concern about the potential of increased surveillance of Black and Latinx communities by placing ShotSpotter sensors in a "high crime area" resulting in discriminatory enforcement against persons of color. Open Letter from Ctr. for Const. Rts., Re: Comments on NYPD ShotSpotter Impact and Use Policy, CENTER FOR CONSTITUTIONAL RIGHTS 1,1 (2021), https://ccrjustice.org/sites/default/files/attach/2021/02/Shot%20Spotter%20Comments%20CCR%20BLH%202-25-21.pdf [https://perma.cc/5ZEL-UVSN].

117. *See* ACLU et al., *Predictive Policing Today: A Shared Statement of Civil Rights Concerns*, CIVIL RIGHTS DOCUMENTS (Aug. 31, 2016), http://civilrightsdocs.info/pdf/FINAL_JointStatementPredictivePolicing.pdf.

These groups contend that "[p]redictive policing must not be allowed to erode rights of due process and equal protection."[118]

Further, Kate Crockford, director of the Technology for Liberty program at the Massachusetts ACLU, warns that predictive policing adds "a veneer of technological authority" to policing practices disproportionately targeting young Black men that existed before the advent of this technology.[119] As the next Part illustrates, a trend is emerging indicating that the increased use of predictive policing technology, like ShotSpotter or HunchLab in communities of color, is resulting in courts having to determine their place in Fourth Amendment analysis.

D. Judicial Review of ShotSpotter and Terry *Stops*

State and federal courts have considered arguments by the police claiming that officers had reasonable suspicion to stop defendants based on the totality of the circumstances in ShotSpotter-involved stops. These courts considered the sound of a gunshot detected by ShotSpotter as one factor to be considered. A legal question has emerged of whether a gunshot sound detected by ShotSpotter alone constitutes an "emergency" or exigent circumstances sufficient for reasonable suspicion. Since 2020, the Seventh Circuit, D.C. Circuit, and Fourth Circuit have created a jurisdictional split on this issue.[120] Under the *United States v. Rickmon* majority's reasoning, police can indiscriminately stop persons standing, walking, sitting, sleeping, or driving within earshot of what they perceive to be gunfire.[121] In contrast, *United States v. Delaney*[122] and *United States v. Curry*[123] stand for the proposition that courts and law enforcement must take seriously the text and history of the Fourth Amendment to curb the exploitation of stop-and-frisks.

Based on the preceding analysis, this Section argues that the Seventh Circuit erred by applying a lax exigent circumstances standard that distorted *Terry*'s requirement of reasonable suspicion by broadly declaring that the sound of gunshots sufficiently translates into an emergency. In contrast, the D.C. and Fourth Circuit's court rulings offer rationales that are more consistent with existing Fourth Amendment jurisprudence. This Section then proceeds to examine recent state court opinions where jurists are mindful that ShotSpotters merely tell officers where to go and do not on their own provide the necessary individualized suspicion required under *Terry*.

1. Federal Appellate Courts

Courts have reached different decisions regarding whether the sound of gunshots raises the requisite individualized suspicion that the individual stopped by the police was engaged in criminal activity. First, in *United States v. Rickmon*, a divided Seventh

118. *Id.*

119. *See* Chammah, *supra* note 71.

120. *See* Petition for a Writ of Certiorari at 4-9, Rickmon v. U.S., 952 F.3d 876 (2020) (No.20-733) cert. denied, 141 S.Ct. 2505 (2021).

121. United States v. Rickmon, 952 F.3d 876 (2020).

122. United States v. Delaney, 955 F.3d 1077 (D.C. Cir. 2020).

123. United States v. Curry, 965 F.3d 313 (4th Cir. 2020).

Circuit ruled that the sound of gunfire created an "emergency" that justified police stopping a vehicle.[124] The court was presented with the question of whether law enforcement may constitutionally stop a vehicle based on a ShotSpotter alert and 911 calls.[125] The Peoria Police Department's ShotSpotter system sent a mobile data terminal alert in the early morning about two gunshots coming from North Ellis Street.[126] Responding officers were notified that three more gunshots had been detected in the area, cars were leaving the area, and a 911 caller reported witnessing a "[B]lack male on foot" running northbound.[127] Officer Ellefritz saw a car coming in the opposite direction and stopped the car.[128] The two occupants inside pointed towards the end of a dead-end street where a crowd was gathered and yelling: "They are down there""[129] Ellefritz detained the occupants at gunpoint until backup arrived.[130] Rickmon, the passenger, explained that he had been shot, and the driver gave consent to search the car, which turned up a handgun under the passenger seat where Rickmon was sitting.[131]

The majority opinion raised, *sua sponte*, the argument that a ShotSpotter alert generates a report of an "emergency," not just a sound.[132] To the court, an alert is the equivalent of an anonymous tip.[133] Therefore, a ShotSpotter report, analyzed within the totality of the circumstances, can support an officer's reasonable suspicion.[134] This cleared the way for the panel majority to affirm the district court's decision. In the eyes of the majority, the totality of the circumstances provided reasonable suspicion for Ellefritz, based on his experience, to initiate the traffic stop.[135] These circumstances included: (1) two ShotSpotter alerts and a caller reporting sounds of gunfire, (2) the car was the only one driving away from a dead end street, and (3) Ellefritz had past experience with shots-fired calls in the same area.[136]

Under the *Rickmon* majority's reasoning, police can indiscriminately stop persons standing, walking, sitting, sleeping, or driving within earshot of what they perceive to be gunfire. Arguably, anything that even remotely sounds like a gunshot is to be treated as an "emergency." Thus, if ShotSpotter hears fireworks, a car backfire, or construction work, such an "emergency" would allow police to mix and match the alert with some other "suspicious circumstance" in a "high crime area" to create a totality of circumstances that warrants unrestrained police discretion. Worse, Maneka Sinha reports, "police also conduct stop-and-frisks based not on any specific

124. Rickmon, 952 F.3d at 879, 884.
125. Delaney, 955 F.3d at 1087 (D.C. Cir. 2020).
126. Rickmon, 952 F.3d at 879.
127. *Id.*
128. *Id.*
129. *Id.*
130. *Id.*
131. *Id.*
132. *Id.* at 883.
133. *Id.* at 882.
134. *Id.* at 881-82.
135. *Id.* at 884.
136. *Id.* at 882-84.

ShotSpotter alert, but on the claim that ShotSpotter alerts are generally frequent in an area."[137]

However, a close reading of *Rickmon* supports an alternative holding: the officer failed to identify specific articulable facts supporting the stop and acted on only a hunch about the car. Under this competing theory, the majority panel erred by applying a lax exigent circumstances standard that distorted *Terry*'s requirement of reasonable suspicion to stop an individual by broadly declaring that the sound of gunshots sufficiently translates into an emergency. Gunshot sounds do not create an emergency because ShotSpotter systems merely report sounds, and gunshot detection technology does not discern what is or is not a real emergency. As such, ShotSpotter does not provide the necessary individualized suspicion as to who in particular may have committed a crime.[138] Chief Judge Dianne Wood made similar points in her dissent, challenging both the majority's assumption that the car must have been connected to the shots because it was the only car found on North Ellis five minutes after the ShotSpotter alert as "'pure speculation'" and the majority's justification for the stop under the less-demanding exigent circumstances standard.[139] Other courts have since relied on *Rickmon*'s reasoning from the majority and dissenting opinions.

Second, in *United States v. Delaney*, the D.C. Circuit held that gunshots are not a license to stop anyone nearby without reasonable articulable suspicion.[140] Two Metro Police Department officers were patrolling a residential area in Washington, D.C. for celebratory gunfire on New Year's Eve 2017 when the officers "heard repeated gunfire in multiple directions" nearby.[141] One minute later, the officers observed Delaney and another person sitting and kissing in a parked Jeep.[142] Officers blocked Delaney's Jeep with their police cruiser.[143] During questioning, a scuffle between the officers and Delaney ensued.[144] A search of the Jeep uncovered a handgun under the passenger seat, along with spent casings in and around the vehicle.[145] The panel applied traditional doctrinal analysis to determine that (1) the officers violated the Fourth Amendment when they seized Delaney because they lacked reasonable suspicion to justify the stop and (2) the government failed to identify specific and articulable facts supporting the officers' reasons for the stop.[146] The panel found no evasive conduct on Delaney's behalf and concluded that the officers pulled into the parking lot and stopped Delaney based on a hunch about the origins of the shots.[147]

---

137. Sinha, *supra* note 8, at 70.

138. Goodman, *supra* note 8, at 825-26 (suggesting that the Seventh Circuit's analysis in *Rickmon* is flawed and arguing that "there are no facts to suggest that Officer Ellefritz had individualized or particularized suspicion that the occupants of Rickmon's vehicle were involved in the shooting, or otherwise armed and dangerous.").

139. Rickmon, 952 F.3d at 886 (Wood, J., dissenting).

140. Delaney, 955 F.3d 1077, 1087 (D.C. Cir. 2020).

141. *Id.* at 1079.

142. *Id.* at 1080.

143. *Id.*

144. *Id.*

145. *Id.*

146. *Id.* at 1087.

147. *Id.* at 1086-87.

The D.C. Circuit reached the correct result because all too often, police officers act based on their own unconscious biases. In such situations, Carbado suggests that Black people are at greater risk when an officer's unconscious biases are combined with weak "reasonable suspicion" to cause them to act on "racial hunches" about Black people being criminally suspect and dangerous.[148] Carbado professes, "These racial hunches can color entire neighborhoods as 'high crime areas' in officer's minds, moving then one step closer to a legal justification for a stop." [149]

Third, in *United States v. Curry*, the Fourth Circuit held that gunshots do not create "exigent circumstances."[150] The Fourth Circuit addressed the issue of whether the Fourth Amendment's exigent circumstances doctrine justified the suspicionless seizure of Curry.[151] Richmond police officers arrived in response to several gunshots that were fired nearby less than a minute before.[152] Five to eight men, including Curry, were independently away from the general area where the officers believed the shots originated.[153] With no suspect description, and with only corroborating reports of shots fired in the area, officers fanned out and began approaching the men.[154] Curry was stopped, an officer performed a pat down because he was not able to visually check for a bulge, and a struggle ensued leading to the discovery of a gun on Curry's person.[155]

The district court's ruling that exigent circumstances did not justify the suspicionless investigatory stop was reversed by an appellate panel.[156] An en banc Fourth Circuit disagreed, however, holding that the stop was not justified by exigent circumstances.[157] The Fourth Circuit reasoned that, if the officers were allowed to circumvent *Terry*'s individualized suspicion requirement, it "would completely cripple a fundamental Fourth Amendment protection and create a dangerous precedent."[158]

The Fourth Circuit's decision was correct because the young men were calmly walking away from the area, and there was no valid reason for the stop. The stop in *Curry* is likely the kind of stop that Carbado argues is enabled by existing Fourth Amendment jurisprudence.[159] Similarly, in such circumstances, Slobogin says that police sometimes engage in state-sanctioned harassment of people of color, even though articulable suspicion has yet to develop.[160] This most often occurs in "high crime" areas. These considerations were embraced by the Fourth Circuit. With the Black Lives Matter summer protests fresh in the minds of the judges, the Fourth Circuit acknowledged the realities of policing in communities of color:

148. CARBADO, *supra* note 1, at 120.
149. *Id.* at 120.
150. United States v. Curry, 965 F.3d 313, 331 (4th Cir. 2020).
151. *Id.* at 315.
152. *Id.* at 316.
153. *See id.* at 316-17.
154. *Id.*
155. *Id.*
156. *Id.* at 318.
157. *Id.* at 320.
158. *Id.* at 326.
159. CARBADO, *supra* note 1, at 181.
160. SLOBOGIN, *supra* note 2, at 113.

> In our present society, the demographics of those who reside in "high crime neighborhoods" often consist of racial minorities and individuals disadvantaged by their social and economic circumstances. To conclude that mere presence in a "high crime area" at night is sufficient justification for detention by law enforcement is to accept *carte blanche* the implicit assertion that Fourth Amendment protections are reserved only for a certain race or class of people. We denounce such an assertion.[161]

Judge Wynn's concurrence reflects the skepticism shared by many regarding predictive policing systems, such as ShotSpotter, in "high crime areas."[162] If the "high crime area" consideration is removed, he opined, then the police could make suspicionless stops of anyone after the sound of gunshot.[163]

Slobogin makes similar points regarding the potential for suspicionless stops, noting that under *Terry*, suspicious conduct must always be established before any physical detention of an individual.[164] Carbado likewise notes that non-serious violations, like jaywalking, or vague ones, like "loitering," enable police officers to easily establish the necessary probable cause to arrest nearly anyone, and Black people in particular.[165]

Based on these insights, the D.C. and Fourth Circuit's court rulings offer rationales that are more consistent with existing Fourth Amendment jurisprudence than the Seventh Circuit's reasoning in *Rickmon*. Although these cases can be factually distinguished from one another, they share similar facts sufficient to assume consistent results. With this in mind, the approach taken in *Delaney* and *Curry*, where the courts rejected the idea that the sound of gunshots casts a wide net of suspicion over all who may be nearby, is more reliable in terms of expected outcomes. Within this analytical framework, the sound of gunshots, without more, would not raise any individualized suspicion that a particular individual stopped was engaged in criminal activity under *Terry*. *Delaney* and *Curry* can serve as reminders to courts and law enforcement to take seriously the text and history of the Fourth Amendment to curb the exploitation of stop-and-frisks.[166]

2. State Appellate Courts

As litigation over the use of ShotSpotter as evidence is becoming more common in state courts, jurists are mindful that ShotSpotters merely tell officers where to go and do not, on their own, provide the necessary individualized suspicion required under

---

161. *Id.* at 331 (quoting U.S. v. Black, 707 F.3d 531, 542 (4th Cir. 2013)).

162. *Id.* at 334-36 (Wynn, J., concurring).

163. *Id.* at 337.

164. SLOBOGIN, *supra* note 2, at 121.

165. CARBADO, *supra* note 1, at 158.

166. *See* DAVID GRAY, THE FOURTH AMENDMENT IN AN AGE OF SURVEILLANCE 70-71 (2017) ("explaining that the Fourth Amendment "was drafted and adopted in response to concerns about the authority of government agents to conduct. . .broad and indiscriminate searches without fear of accountability. . ." and citing how the Fourth Amendment's text "guarantees a more general 'right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures' and commands that this right "shall not be violated.").

Terry. Defendants in each of the three state cases discussed in this Section were just walking down the street when the officer responded to the ShotSpotter alert. However, courts reached different conclusions on the question of reasonable suspicion. In *State v. Carter*, the Ohio Court of Appeals found that the ShotSpotter alert provided the requisite reasonable suspicion justifying a *Terry* stop and pat down of the defendant.[167] Yet in *State v. Henson*, the Ohio Court of Appeals found no error with the trial court granting the defendant's suppression motion because the officers did not have reasonable and articulable suspicion. [168] Finally, in *State v. Nimmer*, the Wisconsin Supreme Court ruled that a ShotSpotter alert contributed to reasonable suspicion in the arrest of the defendant.[169] As discussed below, facts of the case matter a great deal, and are often dispositive.

In *State v. Carter*, the Ohio Court of Appeals found that two officers, responding to ShotSpotter alerts detecting gunfire, had reasonable articulable suspicion justifying a *Terry* stop and pat down of Carter. This search turned up methamphetamine, but no gun.[170] Officers arrived at the designated address in less than four minutes and did not see any vehicles leaving the area or anything unusual.[171] Officers stopped Carter as he was casually walking from the immediate area and noticed Carter's right side was sloped away from them, and his voice was shaking and he acted nervous.[172] The court rejected Carter's argument that there was no evidence of committing a crime, as he was merely walking in an area where a gunshot may have occurred.[173] The court referred to *Rickmon*'s reasoning and result and concluded that Carter's body posture, combined with his nervous behavior, supported reasonable suspicion, [174] and the search for weapons did not exceed the scope of *Terry*.[175] However, the court's assessment is incorrect because Carter's nervous conduct and body angle is understandable under the circumstances. A reasonable person would probably have behaved the way Carter did if they were stopped by police in a "high crime area" at night, especially if they happened to be Black.

In concurrence, Presiding Judge Tucker found the encounter to be a casual interaction and cited to *Rickmon* to assert that a ShotSpotter alert, without more, does not provide reasonable, articulable suspicion that a person found in or near the provided gunshot radius is connected to the reported gunshot.[176] Nonetheless, Judge Tucker determined that "the ShotSpotter report and Carter's efforts to shield his right side from their officers' observation provided a reasonable suspicion that Carter

167. State v. Carter, 183 N.E. 3d 611, 629 (2022).

168. State v. Henson, Appeal No. C-210244, 2022 Ohio App. LEXIS 1482 at 15 (Ohio Ct. App. May 11, 2022).

169. State v. Nimmer, 975 N.W.2d 598, 617 (2022).

170. State v. Carter, 183 N.E. 3d 611, 629-30 (2022).

171. *Id.* at 612.

172. *Id.* at 613.

173. *Id.*

174. *Id.* at 633 (describing how officers claimed that Carter was "canting away" from officers as if trying to conceal something.).

175. *Id.* at 630.

176. *Id.* at 632 (Tucker, J., concurring).

was armed and dangerous, making the pat down search appropriate."[177] Like the majority, Tucker was wrong with his conclusion, but made a valid point about a ShotSpotter alert not constituting reasonable suspicion by itself.

In contrast, in *State v. Henson*,[178] the Ohio Court of Appeals concluded that the trial court did not err granting defendant's suppression motion because the officers did not have reasonable and articulable suspicion that defendant was armed and dangerous.[179] ShotSpotter dispatch directed police to a range of addresses on a residential dead-end street where, five minutes later, an officer encountered Henson.[180] Henson was loading three young children into his car when two additional officers—who had been patrolling this high gun activity area—arrived. Henson told officers that he did not hear any gunshots. Upon a pat down for weapons to ensure officer safety, Henson became slightly agitated and turned his body away from the officer. An officer found a loaded handgun in Henson's waistband, as well as drugs, and placed Henson under arrest.[181] Unlike *Carter*, the defendant in this case was merely agitated and lacked the shaky voice and nervousness that was pivotal to the outcome. *Henson* makes no mention of *Rickmon*, and its well-reasoned conclusion and judicial approach was more akin to those taken by the D.C. Circuit and Fourth Circuit.

Based on the totality of the circumstances, the majority held that the police officers did not have a reasonable and articulable suspicion to cause a reasonable officer to conclude that Henson was armed and dangerous and the officers' safety was in danger.[182] The officers did not observe any bulge in defendant's clothing indicative of concealing a weapon, to which the court observed, "certainly, the ShotSpotter alert gave the officers a justifiable concern for their safety. But the need to act out of the concern of officer safety does not legitimatize the 'indiscriminate stop and frisk,' of the first person observed on the scene."[183] However, a dissenting Judge Winkler insisted that the casual interaction was based on a legitimate *Terry* stop.[184] Henson was on a dead-end street in an area specified in the ShotSpotter alert, and he became agitated and turned his body away when he was subjected to the pat-down search.[185] Therefore, according to Judge Winkler, the officers were within their right to frisk Henson's outer clothing for concealed weapons based on their reasonable suspicion that he was armed and dangerous.[186] In making his finding, Judge Winkler downplays the facts that do not support a concern about officer safety: Henson's agitation was only slight, he merely turned away from the police, and lacked a bulge in his clothing that would have been indicative of him having a weapon on his person.

177. *Id.* at 633.
178. Appeal No. C-210244, May 11, 2022, 2022 Ohio App. LEXIS 1482.
179. *Id.* at 14-15.
180. *Id.* at 3-4
181. *Id.* at 4-5.
182. *Id.* at 8.
183. *Id.* at 14.
184. *Id.* at 15.
185. *Id.* at 19.
186. *Id.* at 16.

Some state courts cite *Rickmon* for analytical support justifying the court prioritizing governmental interests over individual rights, therefore justifying the stop in question. This happened in *State v. Nimmer*, when within a minute of a ShotSpotter alert, responding officers saw Nimmer walking on the sidewalk.[187] Nimmer quickened his pace as he dug around in his left pocket, and shielded his side from the officers' view.[188] Officers stopped Nimmer to investigate, and finding his actions to be suspicious, executed a pat down.[189] Nimmer had a gun in his waistband and was charged with being a "felon in possession of a firearm."[190]

Upon appeal, the Wisconsin Supreme Court ruled that a ShotSpotter alert contributed to reasonable suspicion in Nimmer's arrest.[191] Justice Bradley wrote the majority opinion, presenting key factors giving rise to reasonable suspicion that Nimmer was involved in criminal activity.[192] She recited the circuit court's finding that:

> 1) ShotSpotter generates reliable reports of gunfire in near real-time; (2) within a minute of receiving the ShotSpotter report, the officers arrived on the scene; (3) Nimmer was at nearly the exact location where ShotSpotter reported gunfire; (4) [he] was the only person the officers saw; and (5) [he] made furtive movements upon noticing the officers. In addition, the criminal activity being investigated—shooting in a highly residential area—supplemented the reasonableness of the officers' actions.[193]

Central to her analysis was the reasoning of *Rickmon*.[194] Given the officers' quick response, and in light of their observations upon arrival, it was reasonable to suspect Nimmer as being the shooter.[195] As in *Rickmon*, the dangerousness of the crime was of paramount concern in determining the requisite quantum of suspicion.[196] On this basis, Justice Bradley concluded that officers reasonably suspected Nimmer was involved in criminal activity.[197]

Justice Dallet authored a concurrence that raises skepticism of the efficacy of ShotSpotter. [198] Despite concurring with the majority upholding Nimmer's convictions, she worried that the decision would be applied too broadly by lower courts.[199] Justice Dallet's concurrence made two points. First, "the possibility that a crime has

187. State v. Nimmer, 975 N.W.2d 598, 605 (2022).
188. *Id.* at 599.
189. *Id.*
190. *Id.* at 601.
191. *Id.* at 617.
192. *Id.* at 603-612.
193. *Id.* at 605.
194. *Id.* at 610.
195. *Id.* at 609.
196. *Id.* at 610.
197. *Id.* at 609 ("In the course of responding within one minute after receiving a ShotSpotter report of gunfire in a residential neighborhood, officers saw a single suspect on the scene make furtive movements suggesting concealment of a handgun. Looking at 'the whole picture,' as the officers were required to infer that Nimmer might be the shooter.").
198. *Id.* at 617 (Dallet, J., concurring).
199. *Id.*

been committed in a certain neighborhood doesn't cast suspicion over everyone there."[200] Second, Dallet was skeptical of how some courts use the sound of gunshots as reasonable suspicion, stating "[n]o matter how accurate ShotSpotter is or how quickly officers respond to a ShotSpotter alert, it cannot be used as a dragnet to justify warrantless searches of everyone the police find near a recently reported gunshot."[201] Dallet added that "at its best, ShotSpotter gives officers only a reason to go to a particular place, but it's what they find there that is most relevant to the analysis of whether they had particularized, reasonable suspicion."[202] Just as with Judge Wood's dissent in *Rickmon*, Dallet's concurrence offers solid reasons for a applying a robust *Terry* analysis in ShotSpotter cases so as to not lazily pay deference to governmental interests over individual rights.[203]

Collectively, the federal and state cases illustrate how the use of ShotSpotter increases the frequency of police interactions, which also increases the risk of Black Americans becoming the victims of police brutality or harassment, as detailed by Carbado.[204] This racialized policing furthers ongoing state-sanctioned violence against Black Americans.

III. EVALUATING SLOGOBIN'S PROPORTIONAL ANALYSIS PROPOSAL AND CALL FOR A NEW FOURTH AMENDMENT

Slobogin's *Virtual Searches* concentrates its efforts on exploring how the Fourth Amendment's prohibition on unreasonable searches and seizures impacts emerging surveillance technologies.[205] Given the limitations of current Fourth Amendment doctrine in addressing the privacy issues that new policing technologies pose, Slobogin offers his theory for a new Fourth Amendment.[206] Slobogin argues we can better protect privacy interests by replacing the probable cause standard with a "proportionality principle" based on evaluations and public opinion on intrusiveness.[207]

While compelling, this theory is ultimately unworkable in practice and unlikely to be adopted by the Supreme Court, even after its landmark ruling in *Carpenter v. United States*.[208] *Carpenter* brought *Katz v. United States*[209] into the digital era by holding for the first time that a person has an expectation of privacy in all of their physical movements, so law enforcement agencies generally need a warrant to track

200. *Id.* at 618.

201. *Id.* at 619.

202. *Id.* at 620.

203. Goodman, *supra* note 8, at 825 (criticizing Seventh Circuit in Rickmon for making "too many assumptions that led to a flawed holding.").

204. *See, e.g.,* CARBADO, *supra* note 1, at 120.

205. The volume is a sequel to Professor Slobogin's earlier book, *Privacy at Risk: The New Government Surveillance and the Fourth Amendment* (2007).

206. SLOBOGIN, *supra* note 2, 40-44.

207. *Id.* at 40-44.

208. Carpenter v. United States, 585 U.S. 296 (2018).

209. Katz v. United States, 389 U.S. 347, 351-53 (1967). *Katz* superseded the prior Court rulings that defined "search" and "seizure" only in physical terms. Under the *Katz* two-prong expectation of privacy test, a search within the meaning of the Fourth Amendment takes place when the defendant manifests an actual expectation of privacy that society is willing to recognize as legitimate, justifiable, or reasonable. *See id.* at 353.

suspects' locations using cell site location information (CSLI).[210] Chief Justice Roberts, joined by Justices Ginsburg, Breyer, Sotomayor, and Kagan, ruled that cell phone users possess a reasonable expectation of privacy in the CSLI history associated with their cell phones.[211] Importantly, Chief Justice Roberts raised concerns in dicta about the current and future potential for abuse if the government is able to collect a week or more of a person's data without having to show probable cause, pointing out that tracking historical cell site records is much more invasive than GPS monitoring.[212]

Section A explains Slobogin's proposal in greater detail and pulls from various legal scholars and academics to critique the feasibility of this approach. Section B explores recent legislative efforts to regulate surveillance technologies in alignment with Slobogin's desire for a more democratic means of addressing growing privacy concerns.

A. Critique of Slobogin's Proportionality Approach

Professor Slobogin paints his "proportionality principle" for readers as an addition to the probable cause standard.[213] This Section further explains Slobogin's approach and evaluates the practicality of such a proposal.

Under Slobogin's proportionality principle regime, the more the public views a particular technique as intrusive, the more proof the government must have that the technique will turn up evidence justifying its use.[214] Professor Slobogin articulates his justification for this new analytic further, stating:

> The proportionality principle fits comfortably with the Fourth Amendment's reasonableness language. It finds support in the court's recent virtual search cases and in other areas of the law. And it allows courts to hold that virtual searches are governed by the Fourth Amendment and thus subject to regulation, while still allowing the government to carry out preliminary investigations on less than probable cause.[215]

In the context of predictive policing technology, Slobogin explains that stops and frisks based on predictive algorithms will require suspicious conduct at the time of the stop.[216] As such, Professor Slobogin states the police would need more justification for

210. Carpente*r,* 585 U.S. at 310.

211. *Id.* at 313; *see also* Orin Kerr, *Understanding the Supreme Court's Carpenter Decision*, LAW FARE BLOG (June 22, 2018), http://www.lawfareblog.com/understanding-supreme-courts-carpenter-decision.

212. Carpenter, 585 U.S. at 311.

213. SLOBOGIN, *supra* note 2, at 44.

214. *Id.*

215. *Id.* Other scholars have presented alternatives to the Court's Fourth Amendment analysis as well. For example, Professor Ric Simmons suggests that the Court replaces its practice of striking a balance between police power and civil liberties in Fourth Amendment cases dealing with new technology with a cost-benefit analysis. Professor Simmons asserts that cost-benefit analysis enables courts to adjust the legal standard of suspicion law enforcement must show before employing surveillance methods. *See* RIC SIMMONS, SMART SURVEILLANCE: HOW TO INTERPRET THE FOURTH AMENDMENT IN THE TWENTY-FIRST CENTURY 4-5 (2019).

216. SLOBOGIN, *supra* note 2, at 111.

stop and frisks. Proportionality analysis requires: (1) restricting the type of data that could be inputted into predictive algorithms; (2) requiring high level algorithm reforms to justify a significant police action; and (3) requiring triggering conduct by the individuals stopped by the police before any physical confrontation would be mandated by the algorithm.[217]

Slobogin additionally voices his disagreement with legal scholars and activists who want law enforcement to show probable cause in every instance.[218] As applied to virtual searches, he argues that the "probable-cause-forever" standard is problematic and that a new Fourth Amendment analysis is needed.[219] He suggests, "[j]ust as frisks of a person are less intrusive than full searches of the person, a particular virtual search technique can vary in intrusiveness depending on the circumstances. Some members of the Court in recent cases, have begun to recognize this type of distinction and make it constitutionally significant."[220]

Slobogin's proposal has been met with justifiable skepticism. Professor Orin Kerr considers Slobogin's proportionality principle to be unnecessarily complex and difficult to implement, arguing that "[e]xisting law could be tweaked to achieve Slobogin's desired result without requiring such a dramatic reconceptualization of the Fourth Amendment."[221]

Kerr's critique is agreeably well-founded. It would be challenging to determine the accuracy and veracity of public opinion surveys on which Slobogin's proportionality analysis is based. While the issues and concerns Slobogin brings up about the need to reform Fourth Amendment jurisprudence are valid, it is unlikely that the Court will adopt his approach any time soon. None of the key Supreme Court government surveillance rulings leading up to and including *Carpenter* discuss or even hint at a new Fourth Amendment that utilizes any kind of proportional analysis.[222] At most, the

217. *Id.* at 101-102.

218. *Id.* at 42.

219. *Id.*

220. *Id.* at 43.

221. Orin S. Kerr, *Do We Need a New Fourth Amendment?* 107 MICH. L. REV. 951, 958 (2009) (book review).

222. The slow evolution of Fourth Amendment doctrine regarding police use of surveillance technology is provided by the key Supreme Court government surveillance rulings: United States v. Jones, 565 U.S. 400 (2012), Riley v. California, 573 U.S. 373 (2014), Carpenter v. United States 585 U.S. 296 (2018), and Kyllo v. United States, 533 U.S. 27 (2001). In the 2001 *Kyllo* decision, the Court held that "the use of a thermal imaging device aimed at a private home from a public street to detect relative amounts of heat" and obtain information about the interior of a home constituted a "search" under the Fourth Amendment. *Id.* at 29, 34-35; *see also* Andrew E. Taslitz, *The Fourth Amendment in the Twenty-First Century: Technology, Privacy, and Human Emotions,* 65 LAW & CONTEMP. PROBS. 125, 133 (2005) ("The Supreme Court has generally failed to see any enhanced dangers to privacy caused by rapidly changing police surveillance technologies. . .the Court has addressed technology questions under the same analytical framework that it uses for resolving all Fourth Amendment search questions."). In 2012, under *United States v. Jones,* a unanimous Court expressed discomfort with the government's attachment of a GPS tracker on a jeep for twenty-eight days, ultimately determined to be a "search." 565 U.S. at 403, 404-05. Justice Scalia sidestepped the issue of applying *Katz* and instead used common law trespass theory to conclude that the Government "trespassorily" inserted the information gathering device when it encroached on Jones's jeep - a protected area. *Id.* at 406-07, 410. In the 2014 consolidated case *Riley v. California*, the Court addressed whether an officer's warrantless search of a defendant's cell phone incident to an arrest violated the Fourth Amendment. 573 U.S. at 378. Here, a

Court has recognized the challenges of applying Fourth Amendment doctrine to new surveillance technology.[223] There has been no shared consensus: four Justices, in their separate dissents in *Carpenter,* could not even agree to the same analytical approaches as it pertains to technology.[224] Adding to the uncertainty is the current Court composition with Justices Kavanaugh, Barrett, and Jackson whose perspectives on the Fourth Amendment and surveillance technology have yet to be clearly defined. While little is known about Justice Barrett's views on the Fourth Amendment, Kerr predicts that Justice Kavanaugh has historically sided with the government in Fourth Amendment cases and that Justice Jackson will favor expanding Fourth Amendment protections.[225] In light of this, Kerr predicts a return to more originalist arguments in Fourth Amendment cases, in stark contrast to Slobogin's proportionality schema.[226]

In addition, *Virtual Searches* downplays the continuing need for a probable cause requirement.[227] As I have suggested in previous publications, judging by the continual erosion of the Fourth Amendment in judicial rulings giving great deference to the government, coupled with the great lengths that the government will go in surreptitiously acquiring information in their investigations, a probable cause requirement is most appropriate.[228]

B. Legislative Efforts to Strengthen Fourth Amendment Protections

While Slobogin's ambitious call for a move away from a unitary standard of probable cause is unlikely to take flight, Slobogin is more persuasive in calling for more involvement of the citizenry and asking governments to create proper regulations that balance effective policing while still ensuring a free society.[229] Barry Friedman, Director of the Policing Project at N.Y.U. School of Law, suggests that the passing of meaningful legislation to effectuate change is more achievable. He proposes regulation of policing as a partial remedy in this police state that he calls "policing without permission."[230] He claims that "[w]e need policies - transparent rules adopted with

unanimous Court ruled that police generally must obtain a warrant to search the contents of cell phones. *Id.* at 403. The majority recognized the privacy interests in the kinds of vast data stored in modern cell phones that are so persuasive today. *Id.* Cell phones contain information about internet searches and browsing history and can reveal enough personal information and private interests, in the aggregate, to reconstruct a person's private life. *Id.* at 395-96.

223. *See* Orin Kerr, *First Thoughts on Carpenter v. United States*, THE VOLOKH CONSPIRACY (June 22, 2018), https://reason.com/volokh/2018/06/22/first-thoughts-on-carpenter-v-united-sta/.

224. *See* Amy Davidson Sorkin, *In Carpenter, The Supreme Court Rules, Narrowly, for Privacy*, THE NEW YORKER (June 17, 2018), https://www.newyorker.com/news/daily-comment/in-carpenter-the-supreme-court-rules-narrowly-for-privacy.

225. *See* Andrew Cohen, *Could Better Technology Lead to Stronger 4th Amendment Privacy Protections?* BRENNAN CENTER FOR JUSTICE (Apr. 6, 2022), https://www.brennancenter.org/our-work/analysis-opinion/could-better-technology-lead-stronger-4th-amendment-privacy-protections.

226. *Id.*

227. *Id.*

228. *See* Harvey Gee, *Almost Gone: The Vanishing Fourth Amendment's Allowance of Stingray Surveillance in a Post-Carpenter Age*, 28 S.C. REV. L.S.J. 409, 441-42 (2019).

229. SLOBOGIN, *supra* note 2, at 201-205.

230. *See* BARRY FRIEDMAN, UNWARRANTED: POLICING WITHOUT PERMISSION 16, 326 (2017).

public input - to deal with the use of force, with implicit racial bias, with police adoption of new technologies."[231]

There are reasons for optimism in the legislative arena. Several state legislatures have already passed legislation regulating the use of Stingray cell site simulators that track the location of cell phones and calling for transparency of Stingray policies. For example, Arizona, California, Colorado, Florida, Illinois, Indiana, Maine, Maryland, Minnesota, Missouri, Montana, Rhode Island, Tennessee, Utah, Virginia, Washington, and Wisconsin have all passed laws that protect citizens' cell phone data and require police to get a warrant to use a Stingray.[232] New York and approximately seventeen other localities are also developing similar legislation.[233]

More broadly, California's Electronic Communications Privacy Act (CalECPA) serves as model legislation for states until national laws are enacted to regulate the government's use of real-time surveillance technology.[234] CalECPA went into effect in 2016, requiring government entities in California to obtain a warrant based on probable cause before they can obtain a person's electronic communication information from that person's service provider or electronic device.[235] Additionally, CalECPA requires the government to "furnish notice. . . to the target of the investigation, and provides a suppression remedy for evidence gathered in violation of its

231. *Id.*

232. *See, e.g.*, Howard W. Cox, *Stingray Technology and Reasonable Expectations of Privacy on the Internet of Everything*, 17 FED. SOC'Y REV. 29, 32 (2016) (discussing the reaction by various state legislatures to the use of Stingrays and remarking that "at least twelve states have passed laws mandating that law enforcement use of a cell-site simulator must be based upon a court issued search warrant based upon a finding of probable cause."); Katherine M. Sullivan, *Is Your Smartphone Conversation Private? The Stingray Device's Impact on Privacy in States*, 67 CATH. U. L. REV. 388, 390, 407-08 (2018) (arguing for more state legislation to protect privacy of citizens); Mike Maharrey, *Arizona Bill Would Prohibit Warrantless Stingray Spying, Hinder Federal Surveillance Program*, TENTH AMEND. CTR. (Feb. 7, 2017), https://blog.tenthamendmentcenter.com/2017/02/arizona-bill-would-prohibit-warrantless-stingray-spying-hinder-federal-surveillance-program/; Mike Maharrey, *Florida Committee Passes Bill to Ban Warrantless Stingray Spying, Help Hinder Federal Surveillance*, TENTH AMEND. CTR. (Feb. 11, 2018), https://blog.tenthamendmentcenter.com/2019/02/florida-committee-passes-bill-to-ban-warrantless-stingray-spying-help-hinder-federal-surveillance-2; Mike Maharrey, *Missouri Committee Passes Bill to Ban Warrantless Stingray Spying; Help Hinder Federal Surveillance*, TENTH AMEND. CTR. (Feb. 21, 2018), https://blog.tenthamendmentcenter.com/2018/02/missouri-committee-passes-bill-to-ban-warrantless-stingray-spying-hinder-federal-surveillance/; Robert Snell, *Feds Use Anti-Terror Tool to Hunt Undocumented Immigrants Amid Trump's Crackdown*, DETROIT NEWS (May 18, 2018, 10:49 PM), https://www.detroitnews.com/story/news/local/detroit-city/2017/05/18/cell-snooping-fbi-immigrant/101859616 (offering that States can adopt laws requiring judicial authorization before local law enforcement is allowed to use Stingrays and limiting on how long they can retain the data and reserve their use only in cases implicating violence or harm to human life).

233. Andy Martino, *Black Lives Matter Activists Are Convinced the NYPD Hacked Their Phones*, THE OUTLINE (Apr. 7, 2017, 1:30 PM), https://theoutline.com/post/1360/black-lives-matter-police-surveillance-the-cops-hacked-their-phones. But some localities have pushed back against such transparency laws. *See* Michael Maharrey, *California Committee Kills Bill to Help End Unchecked Police Surveillance*, TENTH AMEND. CTR. (Aug. 22, 2018), https://blog.tenthamendmentcenter.com/2018/08/california-committee-kills-bill-to-help-end-unchecked-police-surveillance. For example, a California Assembly committee held up a bill in appropriations that would have increased oversight and transparency of law enforcement surveillance technology, preventing the bill from moving forward. *Id.*

234. Cal.Penal Code §1546 (West 2020).

235. *See* Susan Freiwald, *At the Privacy Vanguard: California's Electronic Communications Privacy Act (CalECPA)*, 33 BERKELEY TECH L. J. 131, 162-64, 174 (2018).

terms."[236] CalECPA protects information stored on electronic devices, and CalECPA does not distinguish on the basis of historical data as opposed to prospective or real-time data.[237]

California also passed the California Consumer Privacy Act (CCPA), the most expansive state privacy law in the United States.[238] CCPA includes biometric information within the definition of personal information.[239] This could prevent the use of facial recognition data, along with its inherent issues relating to inaccuracies: disproportionate impact on Black people, young adults, women, and its chilling effect on the First Amendment's guarantee of free speech and peaceful assembly at public gatherings.[240] Since 2019, legislatures in at least six states have also introduced laws that offer privacy protections similar to the CCPA.[241]

These legislative efforts seem to be aligned with Slobogin's position favoring the legislative process as a means to address emerging technologies and his desire for technology to be considered through the democratic process instead of the courts. Slobogin expresses this position in his discussion of *Leaders of a Beautiful Struggle v. Baltimore Police Department*, one of the latest cases to determine *Carpenter*'s reach.[242]

In *Leaders of a Beautiful Struggle*, grassroots community advocates in Baltimore moved to enjoin implementation of the Aerial Investigation Research (AIR) program, a pioneering aerial surveillance program operated by the Baltimore Police Department (BPD) that collected about twelve hours of coverage of around ninety percent of Baltimore every day.[243] A split Fourth Circuit affirmed the lower court's holding, agreeing that the plaintiffs were unlikely to succeed on the merits of their Fourth Amendment claim.[244] On appeal, the Fourth Circuit, rehearing the case en banc, reversed and remanded its earlier decision and awarded Leaders of a Beautiful Struggle a preliminary injunction.[245] Based on *Carpenter's* reasoning, the court found that the access of the aggregate data constituted a search and that warrantless use of

236. *Id.* at 141.

237. *Id.* at 174.

238. *See* Joseph J. Lazzarotti & Jason C. Gavejian, *State Law Developments in Consumer Privacy*, NAT'L L. REV. (Mar. 15, 2019), https://www.natlawreview.com/article/state-law-developments-consumer-privacy.

239. *See California Consumer Privacy Act (CCPA),* OFFICE OF THE ATTORNEY GENERAL, CALIFORNIA DEPT. OF JUSTICE (Mar. 13, 2023), https://oag.ca.gov/privacy/ccpa ("Sensitive personal information is a specific subset of personal information that includes. . .biometric information processed to identify a consumer. . .").

240. *See* CLARE GARVIE ET AL., GEO. L. CTR. ON PRIV. & TECH., THE PERPETUAL LINE-UP: UNREGULATED POLICE FACE RECOGNITION IN AMERICA 43, 46-47, 53 (2016), https://www.perpetuallineup.org.

241. *Id.*

242. SLOBOGIN, *supra* note 2, at 153-156 (discussing Leaders of a Beautiful Struggle v. Balt. Police Dep't, 2 F. 4th 330 (2021); Leaders of a Beautiful Struggle v. Baltimore Police Dep't, 979 F.3d 219 (4th Cir. 2020), *on reh'g en banc,* 2 F.4th 330 (4th Cir. 2021)).

243. Leaders of a Beautiful Struggle, 2 F.4th at 332, 334.

244. Leaders of a Beautiful Struggle, 979 F.3d at 222, 230.

245. Leaders of a Beautiful Struggle, 2 F. 4th at 348.

such data violated the Fourth Amendment.[246] The court also found that this use of detailed imagery data violates an individual's reasonable expectation of privacy.[247]

In his initial dissent, Judge Wilkinson countered that the appeal should have been dismissed as moot because AIR no longer existed, and that the decision to discontinue the program should have been left to the citizens of Baltimore, not the court.[248] Judge Niemeyer also dissented, and criticized the majority opinion as a "stunning example of judicial overreach."[249]

Like Judge Wilkinson, Slobogin is critical of the decision because from his vantage point, the Fourth Circuit overreached in adjudicating a matter that should have been resolved through the legislative and democratic process.[250] He offers a more nuanced critique by arguing that the court failed to distinguish between the issues of when AIR can be used to track down suspects and whether the program should even exist.[251] Slobogin argues that the authorization and regulation of AIR, as opposed to the use of its data in specific searches, does not implicate the Fourth Amendment and should therefore be under the purview of legislative and democratic processes.[252] Still, he makes clear that legislatures play instrumental roles as vanguards safeguarding Fourth Amendment protection and increasing privacy protections.[253]

IV. DECREASING RELIANCE ON SHOTSPOTTER: ALTERNATIVE APPROACHES TO REDUCING GUN VIOLENCE

Although there have been some developments regarding privacy protections, as noted above, the reality is Fourth Amendment jurisprudence is slow to change.[254] Thus, in addition to lawsuits to challenge the use of ShotSpotter and associated technologies, advocates and practitioners must also advance alternative pathways to protect constitutional rights and civil liberties. Local and state legislative efforts to promote alternatives to costly policing technologies provide one potential solution. This Section focuses on two specific alternatives to surveillance technologies that have the potential to reduce reliance on ShotSpotter, and thus to reduce racial profiling: (1) violence reduction strategies based on deterrence and community partnerships; and (2) gun violence restraining orders (GVROs). This Section discusses each of these alternatives in light of the themes uncovered in *Unreasonable* and *Virtual Searches*.

A. Violence Reduction Strategies

Proponents of ShotShopter argue that it is a necessary tool to curtail gun violence, which is a pressing issue in many communities.[255] Indeed, gun violence is a pressing

246. *Id.* at 341-46.
247. *Id.* at 342.
248. *Id.* at 353-55 (Wilkinson, J., dissenting).
249. *Id.* at 369 (Niemeyer, J., dissenting).
250. SLOBOGIN, *supra* note 2, at 134.
251. *Id.* at 135.
252. *Id.* at 134-35.
253. *Id.* at 152-156.
254. *See* Cohen, *supra* note 230.
255. *See* Tatiana Schlossberg, *New York Police Begin Using ShotSpotter System to Detect Gunshots*, N.Y. TIMES (Mar. 16, 2015), https://www.nytimes.com/2015/03/17/nyregion/shotspotter-detection-system-pinpoints-gunshot-locations-and-sends-data-to-the-police.html.

public health concern that requires immediate attention. However, ShotSpotter is not the only solution. There is a growing interest in Group Violence Intervention or Group Violence Reduction Strategies (GVRS). Efforts such as these can help address the negative impacts of surveillance technology by reducing gun violence *before* the sound of gunfire.

In *Bleeding Out: The Devastating Consequences of Urban Violence—and a Bold New Plan for Peace in the Streets*, criminal justice researcher Thomas Abt examines violence intervention approaches.[256] Abt puts forward a paradigm that calls for "cooperation" between communities and law enforcement to reduce gun violence.[257] This paradigm implicates crime and violence deterrence strategies that target high-risk offenders.[258] Abt argues that this should involve deploying additional police patrols to high crime neighborhood "hot spots" to quell criminal activity and get guns off the streets.[259]

As an example, Abt cites to Oakland's gun violence reduction program Ceasefire which is best known for its effectiveness in reducing serious gun and group violence by using focused deterrence.[260] Central to GVRS's success is its hyper-focused intervention with a specific range of behaviors among small groups and group members.[261] These interventions can be successful because they give individuals opportunities to take alternative paths.[262] Once the participants in the program are identified, police officers conduct a mandatory meeting with the participants, often at a church or community center.[263] Officers communicate the dangers associated with street conflict to the participants, and each participant is assigned a life coach who was formerly incarcerated and often gang affiliated, who mentors the participant.[264] As a result of these efforts, Oakland's Ceasefire program reduced fatal and nonfatal shootings in Oakland for five years straight pre-pandemic.[265]

---

256. THOMAS ABT, BLEEDING OUT: THE DEVASTATING CONSEQUENCES OF URBAN VIOLENCE - AND A BOLD NEW PLAN FOR PEACE IN THE STREETS 224-228 (2019).

257. *Id.* at 3.

258. *Id.* at 87-88.

259. *Id.* at 3.

260. *Id.* at 88-89; *see also* ANTHONY A. BRAGA ET AL., OAKLAND CEASEFIRE EVALUATION: FINAL REPORT TO THE CITY OF OAKLAND 7 (2019).

261. *See* MIKE MCLIVELY & BRITTANY NIETO, A CASE STUDY IN HOPE: LESSONS FROM OAKLAND'S REMARKABLE REDUCTION IN GUN VIOLENCE 24–26 (2019), https://policingequity.org/images/pdfs-doc/reports/A-Case-Study-in-Hope.pdf.

262. *See generally*, ABT *supra* note 256, at 183-185; NAT'L INST. CRIM. JUST. REF., OAKLAND'S SUCCESSFUL GUN VIOLENCE REDUCTION STRATEGY 5–6 (2018).

263. *See* Annie Berman, *Oakland's Operation Ceasefire is Working, According to Story*, OAKLAND NORTH (Sept. 6, 2018), https://oaklandnorth.net/2018/09/06/ceasefire/.

264. *Id.*

265. *See* ANTHONY A. BRAGA ET AL., OAKLAND CEASEFIRE EVALUATION: FINAL REPORT TO THE CITY OF OAKLAND 1, 2, 7 (2019) (summarizing the effectiveness of Oakland's ceasefire) (finding that "[t]here was a strong consensus among study participants that Ceasefire greatly enhanced the City's capacity to systematically and thoughtfully reduce shootings and homicides") (citing that "[b]etween 2010 and 2017, total Oakland shooting victimizations peaked at 710 in 2011. . . and decreased by 52.1 percent to a low of 340 in 2017") (finding that "[t]he Ceasefire intervention was associated with an estimated 31.5% [citywide reduction in gun homicides]"); *see also* NAT'L INST. FOR CRIM. JUST. REFORM, OAKLAND'S SUCCESSFUL GUN VIOLENCE REDUCTION STRATEGY 1 (2018).

Another factor supporting the success of these programs is investment in the community. For example, Oakland Unite's programs, funded by tax-payer dollars, focus on present and future violence prevention.[266] Oakland Unite offers intervention services and strategies such as outreach, crisis response advocacy and case management for victims, and reentry programs.[267] Another partner is Oakland's Department of Violence Prevention, which was created in 2017 and has invested $17 million to combat the increase in homicides and violent crime in the city.[268] The Department relies on violence interrupters who live in crime-impacted neighborhoods and serve as mediators trained in tactics to de-escalate conflicts.[269] These community members also respond directly to individuals and families of victims, which can, among other things, discourage attempts of retribution.[270]

This latter intervention of violence interrupters outside of the police force holds particular promise in light of the lessons learned in *Unreasonable*. Although Abt contends that a focus on deterrence is substantively different than simply increasing police,[271] the danger of this approach is that it starts to replicate the exact policing of "high crime areas," described *supra*. As discussed above, these "high crime areas"—which are precisely the neighborhoods being targeted for ShotSpotter—are actually predominantly Black neighborhoods that are simultaneously over-policed with surveillance and under-policed when it comes to emergency services.[272] In order for a violence interruption program to be successful, it must address the shortcomings of our Fourth Amendment jurisprudence as described above, and as such, should seek to involve community members outside of law enforcement.

B. Gun Violence Restraining Orders

Outside of violence interruption programs, another strategy is to try and increase restrictions on individuals who have a prior history with gun violence. This more targeted approach could reduce the need to engage in wholesale surveillance of communities through technologies like ShotSpotter. An increasing number of states have

266. *See* City of Oakland, The City of Oakland Allocates Largest Investment Ever Made Into Violence Prevention, July 7, 2022, https://www.oaklandca.gov/news/the-city-of-oakland-allocates-largest-investment-ever-made-into-violence-prevention.

267. *See* Sarah Ravani, *Oakland Invests Big in Violence Prevention Department*, S.F. CHRONICLE (July 19, 2021), https://www.governing.com/community/oakland-invests-big-in-violence-prevention-department.

268. *See* Department of Violence Prevention, CITY OF OAKLAND, https://www.oaklandca.gov/departments/violence-prevention (last visited Mar. 16, 2024).

269. *About Oakland Unite*, CITY OF OAKLAND HUMAN RESOURCES DEPARTMENT, http://oaklandunite.org/about/(last visited Mar. 16, 2024).

270. *See* Florence Middleton, *What Violence Prevention in Oakland, Berkeleyside* (Aug. 7. 2023), https://oaklandside.org/2023/08/07/gun-violence-prevention-oakland/.

271. *Id.*

272. *See* Robin Smyton, *How Racial Segregation and Policing Intersect in America*, TUFTSNOW (June 17, 2020), https://now.tufts.edu/2020/06/17/how-racial-segregation-and-policing-intersect-america. (noting that in a "high-crime" area, the frequent stops by police affect innocent residents of poor, communities of color.).

passed what are known as "emergency gun violence protection laws" to curb gun violence in recent years.[273]

A GVRO, California's version of an extreme risk protection order or red flag law, is a tailored, individualized tool to deter homicide, suicides and even mass shootings.[274] It allows law enforcement to intervene when harm appears imminent, without having to wait for an injury, fatality, or criminal actions to occur.[275] More specifically, a GVRO is a "red flag" law which allows the police to petition a state court to order the temporary removal of firearms from a person who may present a danger to themselves or others.[276]

GVROs are designed for situations in which the waiting period for a full court appearance could undermine the effectiveness of the order or waiting would be inadequate under the circumstances.[277] A court decides whether to issue a GVRO based on statements or actions by the gun owner.[278] Evidence might include threats of violence by the individual (toward themselves and others), a violation of a domestic violence restraining order, or recent acquisition of a significant number of firearms.[279] A GVRO lasts between one and five years, and the person subject to the order is given the opportunity to request a hearing to terminate the order.[280] Refusal to comply with the order is punishable as a criminal offense.[281] After a set time, the guns are returned to the person from whom they were seized.[282] Whereas ShotSpotter surveillance facilitates indiscriminate stops by police of persons walking down the street in "high crime areas," GVROs provide greater due process protection.

Presently, twenty-one states and the District of Columbia have laws that allow for the removal of firearms from individuals found posing an imminent risk of harming

273. *See* Joseph Blocher & Jacob D. Charles, *Firearms, Extreme Risk, and Legal Design: "Red Flag" Law and Due Process*, 106 VA. L. REV. 1285, 1296 (2020) (at the time the article was published, states with such laws included California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Indiana, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, Washington, and the District of Columbia); Chelsea Parsons et al., *Promising Approaches for Implementing Extreme Risk Law: A Guide for Practitioners and Policymakers*, EVERYTOWN RESEARCH POLICY (May 30, 2023), https://everytownresearch.org/report/extreme-risk-laws-guide/.

274. Public Affairs, *Why Are 'Red Flag' Laws and How Can They Prevent Gun Violence?* UC DAVIS HEALTH (Jan. 11, 2023,) https://health.ucdavis.edu/news/headlines/what-are-red-flag-laws-and-how-can-they-prevent-gun-violence/2023/01.

275. *Id.*

276. *See e.g.,* IAN AYRES & FREDERICK E. VARS, WEAPON OF CHOICE; FIGHTING GUN VIOLENCE WHILE RESPECTING GUN RIGHTS 104 (2020); Clay Calvert & Ashton Hampton, *Raising First Amendment Red Flags About Red Flag Laws: Safety, Speech and the Second Amendment,* 30 GEO. MASON U. CIV. RTS. L.J. 351, 353 (2020); Joseph Blocher & Jacob D. Charles, *Firearms, Extreme Risk, and Legal Design: "Red Flag" Law and Due Process*, 106 VA. L. REV. 1285, 1293-95 (2020); Coleman Gay, *"Red Flag" Laws: How Law Enforcement's Controversial New Tool to Reduce Mass Shootings Fits Within Current Second Amendment Jurisprudence* 61 B.C. L. REV.1491 (2020).

277. CAL. PENAL CODE §18175(b)(2) (West).

278. CAL. PENAL CODE §18175(b)(1) (West).

279. CAL. PENAL CODE §§ 18155(b)(1), b(2) (West).

280. CAL. PENAL CODE §18175(e)(1) (West).

281. *See Speak for Safety, California's Gun Violence Restraining Order: A Prevention Tool for Law Enforcement*, https://speakforsafety.org/wp-content/uploads/2018/02/SpeakForSaftey-Handout-GVROsAndLawEnforcement-2020.pdf.

282. *Id.*

themselves or others.[283] Red flag laws satisfy procedural due process requirements and receive more bipartisan support than other forms of gun control legislation because of their targeted nature and their ability to balance the interests of gun owners against the effects of gun violence.[284] Although GVROs are still in their infancy, there is growing evidence showing that GVROs may be an effective tool for preventing violence.[285]

GVROs fill the gap where other remedies are unavailable or inadequate.[286] This includes critical incidents where there is insufficient probable cause to arrest a person or seize firearms, that fail to meet the guidelines for a criminal filing, or that do not meet the criteria for a mental health hold.[287]

GVROs are constitutionally permissible under the new standard announced in the landmark case *New York State Rifle & Pistol Association, Inc. v. Bruen* ("*Bruen*"), holding that a century-old New York gun safety law, which required a license to carry concealed weapons in public places, was unconstitutional.[288] The Court adopted a

283. Jurisdictions with these laws include: California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia. *See Appendix B: Extreme Risk Laws Save Lives – Extreme Risk Laws By State,* EVERYTOWN.ORG, https://www.everytown.org/solutions/extreme-risk-laws/(last updated Apr. 5, 2023).

284. See Patrik Johnsson & Noah Robertson, *If Uvalde Inspires Gun Control, 'Red Flag" Laws Are Most Likely*, CHRISTIAN SCI. MONITOR (May 27, 2022), https://www.csmonitor.com/USA/2022/0527/If-Uvalde-inspires-gun-control-red-flag-laws-are-most-likely; Mark Gollum, *'Red Flag' Laws to Prevent Mass Shootings Could Be on the U.S. Political Table. But Do They Work?* CBC NEWS (May 27, 2022), https://www.cbc.ca/news/world/red-flag-laws-shooting-texas-buffalo-guns-1.6467169; Amber Phillips, *What Are Red-Flag Laws?* WASH. POST (June 14, 2022), https://www.washingtonpost.com/politics/2022/06/14/what-is-a-red-flag-law/.

285. *See, e.g.,* Veronica Pear, et al, *Gun Violence Restraining Orders in California, 2016-2018: Case Details and Respondent Mortality,* 28 INJURY PREVENTION 465 (2022); Sydney Johnson, *How Effective Are California's Red Flag Gun Laws? San Francisco and San Diego Are Trying to Find Out*, KQED (Jan. 30, 2023), https://www.kqed.org/news/11939499/red-flag-laws-in-california-san-francisco-san-diego.

286. Professors Ian Ayres and Frederick E. Vars do not believe red flag laws go far enough, and favor voluntary self-restriction laws like "Donna's Law," a voluntary self-registry prohibition to gun sales for individuals choosing to create self-defense against suicide. *See* IAN AYRES & FREDERICK E. VARS, WEAPON OF CHOICE: FIGHTING GUN VIOLENCE WHILE RESPECTING GUN RIGHTS 2-3 (2020). These scholars perceive such laws as a form of "choice-enhancing" gun control that allows people to protect themselves, and which receive bipartisan support in red states. *Id.* at 1-3. Ayres and Vars advocate for replacing the discretionary judgment of risk of present red flag laws with an objective trigger such as evidence of increased risk of dangerousness. *Id.* at 104; 112. They claim that a symptom-based approach has a better potential to prevent gun violence who are never diagnosed or treated for mental illness.

Id. at 111.

287. CAL. WELF. & INST. CODE § 5150 (West 2023).

288. *See e.g.*, Andrew R. Morral et al., *State Gun Regulations Are a Messy Patchwork. The Supreme Court's Bruen Decision Won't Help*, RAND BLOG (Aug. 22, 2022), https://www.rand.org/pubs/commentary/2022/08/state-gun-regulations-are-a-messy-patchwork-the-supreme.html; William Baude, *Of Course the Supreme Court Needs To Use History. The Question Is How*, WASH. POST (Aug. 8, 2022, 9:27 AM), https://www.washingtonpost.com/opinions/2022/08/08/supreme-court-use-history-dobbs-bruen/; Lisa Vicens & Samuel Levander, *The Bruen Majority Ignores Decision's Empirical Effects*, SCOTUSBLOG (July 8, 2022, 1:14 PM), https://www.scotusblog.com/2022/07/the-bruen-majority-ignores-decisions-empirical-effects/; Saul Cornell, *Cherry-Picked History and Ideology-Driven Outcomes: Bruen's Originalist Distortions*, SCOTUSBLOG (June 27, 2022, 5:05 PM), https://www.scotusblog.com/2022/06/cherry-picked-history-and-ideology-driven-outcomes-bruens-originalist-distortions/; Theresa Inacker, *From Constitutional Orphan To Treasured Heirloom: The*

new test stating modern gun laws must have an analogue in text, history, and tradition.[289] To the dismay of gun rights advocates, *Bruen* does not signal the death knell for GVROs and red flag laws. To the contrary, the historical tradition of disarming violent and dangerous persons is consistent with the country's founding-era understanding of the right to keep and bear arms.[290] Reviewing the history and traditions from England, the colonial and founding periods, and the Nineteenth century reveals one controlling principle: violent or otherwise dangerous persons could be disarmed.[291] Protecting public safety was always of paramount importance.[292]

GVROs fit squarely within the historical tradition of prohibiting dangerous people from possessing guns.[293] In the modern era, mass shootings have become commonplace, and the need to prevent dangerous individuals from possessing guns has never been greater.[294] Just as legislatures have historically prohibited dangerous people from possessing guns, the California legislature adopted GVROs in 2014 to do

Second Amendment Is No Longer a Second-Class Right, SCOTUSBLOG (Jul. 11, 2022, 4:30 PM), https://www.scotusblog.com/2022/07/from-constitutional-orphan-to-treasured-heirloom-the-second-amendment-is-no-longer-a-second-class-right/; Esther Sanchez-Gomez, *The Right To Fear, in Public: Our Town Square After Bruen*, SCOTUSBLOG (Jun. 29, 2022, 1:44 PM), https://www.scotusblog.com/2022/06/the-right-to-fear-in-public-our-town-square-after-bruen/.

289. New York State Rifle & Pistol Assn., Inc. v. Bruen, 597 U.S. 1, 3 (2022).

290. See Joseph G.S. Greenlee, *The Historical Justification for Prohibiting Dangerous Persons from Possessing Arms*, 20 WYO. L. REV. 249, 272 (2020).

291. *Id.*

292. As one scholar notes, the proposals from the ratifying conventions of Massachusetts, New Hampshire, and Pennsylvania allowed the disarming of only dangerous persons. "[E]very arms prohibition throughout American history to that point had been based—justified or not—on perceived dangerousness. And the non-criminal basis—'real danger of public injury'—was self-evidently based on dangerousness." See Joseph G.S. Greenlee, *The Historical Justification for Prohibiting Dangerous Persons from Possessing Arms*, 20 WYO. L. REV. 249, 267 (2020).

293. A GVRO defines dangerous persons as someone who poses a danger to themselves or another. The definition of dangerous has been explored by judges and scholars. In *United States v. Boyd*, 999 F.3d 171, 185 (3rd Cir. 2021), the Third Circuit stated, "presumptively dangerous persons . . . . have been historically excluded from the Second Amendment protections." There, a criminal defendant challenged his conviction for possessing firearms while subject to a domestic violence protective order and the constitutionality of the criminal statute that was applied to him. *Id.* at 175.The court held that the defendant failed to distinguish himself from a class of presumptively dangerous persons historically not entitled to the Second Amendment's protections. *Id.* at 185. "The primal fear of dangerous person with guns is backed by longstanding historical support 'demonstrat[ing] that legislatures have the power to prohibit dangerous people from possessing guns,' including 'dangerous people who have not been convicted of felonies.'" *Id.* at 186. Professors Joseph Blocher and Catie Carberry focus on non-felon groups disarmed because they were thought to be dangerous. See *Historical Guns Laws Targeting 'Dangerous' Groups and Outsiders*, in NEW HISTORIES OF GUN RIGHTS AND REGULATIONS IN NEW HISTORIES OF GUN RIGHTS AND REGULATION: ESSAYS ON THE PLACE OF GUNS IN AMERICAN LAW 131 (eds. Joseph Blocher, et al., 2023).The authors explain that lawmakers relied on text, history, and tradition, in the Founding era or during Reconstruction, to identify groups deemed to be dangerous because safety was a consideration. *Id.* at 144-146. In evaluating *Bruen*'s analytical framework, the authors argue the current Court should not focus on a historical analogue, but to identify a principle of preventing those individuals and groups though to be dangerous. *Id.* at 146. This would be used to justify a firearm regulation, and the government must show that the regulation is "consistent with this Nation's historical tradition of firearm regulation." *See* New York State Rifle & Pistol Assn., Inc. v. Bruen, 597 U.S. 1, 4 (2022).

294. *See generally* Dean Hansell & Marina Melikyan, *Issuing a Gun Violence Restraining Order in California*, DAILY J., (Aug. 21, 2019), https://www.dailyjournal.com/mcle/506-issuing-a-gun-violence-restraining-order-in-california.

the same thing.[295] A GVRO orders the temporary removal of firearms from a person who may present a danger to themselves or others.[296] GVROs, like other red flag laws, are designed to prevent dangerous people from having access to firearms.[297]

To curb gun violence, New York enacted its own Extreme Risk Protection Order (ERPO) in 2019.[298] Like California's GVROs, the law is designed to prevent gun crimes by temporarily restricting individuals considered dangerous to themselves or others from accessing a firearm.[299] The law includes the right to petition for a temporary order—compelling gun owners to surrender their weapons if they fear a person's behavior and know or suspect the individual could own or possess guns.[300] After the application is submitted to the respondent's local Supreme Court and a hearing is held, a judge will review the application and decide if an ERPO should be issued. A final order issued after a hearing can last for up to one year in New York.[301]

If we want to reduce gun violence and save lives, more cities should pass red flag laws which are "common-sense gun legislation which ha[ve] the potential to bridge the gap between [National Rifle Association] supporters and gun control advocates."[302] Support for extreme risk law implementation efforts is reflected in Congress's passage of The Bipartisan Safe Communities Act in 2022, which included $750 million in new federal

295. *Id.*

296. *See* e.g., Kelly Roskam & Vicka Chaplin, *The Gun Violence Restraining Order: An Opportunity for Common Ground in the Gun Violence Debate*, 36 DEV. MENTAL HEALTH L. 1, 22 (2017) (research indicates that the GVRO is an effective tool for suicide prevention).

297. See Caroline Shen, *A Triggered Nation: An Argument for Extreme Risk Protection Orders*, 46 HASTINGS CONST. L. Q. 683, 685 (2019) (arguing for the crucial need for extreme risk protection orders).

298. N.Y. C.P.L.R. 63-A (MCKINNEY 2019).

299. N.Y. C.P.L.R. § 6342(1) (MCKINNEY 2019).

300. *Id.*

301. N.Y. C.P.L.R. §6343(3)(c) (MCKINNEY 2019). New York courts haven taken divergent analyses about the constitutionality of an ERPO. The rulings discussed below mention *Bruen*, but they do not interpret the analysis and reasoning of the ruling as changing anything about the procedural due process required for deprivation of Second Amendment rights, or the determination of who can be prohibited from possessing firearms. At least two courts have upheld the constitutionality of ERPOs. In *Haverstraw Town Police v. C.G.*, one New York Supreme Court judge concluded that the ERPO Law does not violate the Second Amendment. *See* 190 N.Y.S. 3d 588, 593-94 (Sup. Ct. 2023). In *J.B. v. K.S.G*, JB observed that the ERPO law is focused on likelihood of harm rather than mental illness, and argued that requiring identical alignment with the procedural protections of the Mental Hygiene Law is illogical. *See* 189 N.Y. S 3d 888, 889-890 (Supreme Ct., Cortland Cnty., Apr. 6, 2023). Not swayed, the court upheld the ERPO law under a due process analysis because the extreme risk protection statute provides ample procedural safeguards against an improper deprivation of an individual's Second Amendment right to keep and bear arms. *Id.* at 193. Two other courts have rule that ERPOs are unconstitutional. Supreme Court judges, Thomas Moran in Monroe County and Craig Stephen Brown in Orange County, ruled in separate ERPO cases that the law is unconstitutional because it does not provide due process for the plaintiffs. First, Judge Moran in *G.W. v. C.N.* struck down the ERPO law as unconstitutional.*See* 181 N.Y.S. 3d 432, 441 (Supreme Ct., Monroe Cnty. Dec. 22, 2022). Moran argued that ERPOs offers no due process to the non-respondent residents prior to the guns being taken, "[a]s a result, the non-respondent residents have become the victims of a search and seizure, conducted against them without any probable cause whatsoever, and in complete violation of the non-respondents' Second and Fourth Amendment rights." *Id.* Second, in *R.M. v. C.M.* Judge Brown held, "New York's Red Flag Law, as currently written, lacks sufficient statutory guardrails to protect a citizen's Second Amendment Constitutional right to bear arms." 189 N.Y.S. 3D 425, 427 (Supreme Ct. Orange Cnty., Apr. 4. 203).

302. *See* Caroline Shen, *A Triggered Nation: An Argument for Extreme Risk Protection Orders*, 46 HASTINGS CONST. L. Q. 683, 688 (2019).

grant funding for states over the next five years in part to support ERPO implementation.[303]

Additionally, in September 2023, President Biden established the first-ever White House Office of Gun Violence Prevention to reduce gun violence, and implemented and expanded upon key executive and legislative action intended to save lives.[304] Recently, as part of its Safer States Initiative, the Office, headed by Vice President Harris, provided states with tools and federal support to reduce gun violence.[305]

In testimony before the Vermont legislature, Professor Jeffrey Swanson stressed that there is a need to broadly implement ERPOs.[306] In his opinion, these laws offer due process protections and respect the Second Amendment, are supported by majorities of Americans, including majorities of gun owners, and can save lives. Further, Swanson called for broad implementation of ERPOs nationwide because he views them as a critical tool for gun violence prevention. [307]

Momentum is building on the issue of gun violence and jurisdictions should capitalize on this moment to pass critical legislation that advances constitutional rights and civil liberties. Alternatives to surveillance technologies such as GRVOs and group violence reduction strategies are both less costly and more effective. By reducing reliance on concerning new policing technologies, these innovative interventions help protect the rights of communities most impacted by racialized policing.

CONCLUSION

In sum, Fourth Amendment law currently allows police officers to target and engage Black pedestrians without any evidence of wrongdoing. As *Unreasonable* illustrates, and police use of technologies such as ShotSpotter and HunchLab confirms, the daily policing and interrogating of Black people contradicts the Supreme Court's colorblind approach to Fourth Amendment jurisprudence and proves that race has always mattered. In a similar vein, *Virtual Searches* shows how new policing technologies, such as predictive policing, are accelerating the continual erosion of the Fourth Amendment. Given the corresponding reality that a new Fourth Amendment is not likely to be created anytime soon, a more realistic pathway to protect constitutional rights and civil liberties is to approach these issues on the legislative level, after engaging

303. *See* Nick Wilson, et al. *The Bipartisan Safer Communities Act, 1 Year Later,* CENTER FOR AMERICAN PROGRESS (Aug. 10. 2023), https://www.americanprogress.org/article/the-bipartisan-safer-communities-act-1-year-later/.

304. *See* WHITE HOUSE, OFF. OF GUN VIOLENCE PREVENTION, https://www.whitehouse.gov/ogvp/(last visited Dec. 17, 2023).

305. *See generally* WHITE HOUSE, *Safer States Agenda* (Dec. 2023).

306. *See* JEFFREY SWANSON, EXTREME RISK PROTECTION ORDERS, H. COMM. ON HEALTH CARE (H. R. VT. 2023) https://legislature.vermont.gov/Documents/2024/WorkGroups/House%20Health%20Care/Suicide%20Prevention/W~Jeffrey%20Swanson~Extreme%20Risk%20Protection%20Orders~2-14-2023.pdf.

307. *Id.*

with them in public forums, and involving community stakeholders. Local and state legislative efforts to promote alternatives to costly policing technologies are already underway and have shown significant promise. *Unreasonable* and *Virtual Searches*, timely and well-researched books, contribute to the ongoing debate about balancing the needs to address gun violence while also protecting our civil liberties and acknowledging our country's legacy of racialized policing.