

Discretionless Policing: Technology and the Fourth Amendment

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What if we could eliminate police discretion from traffic stops by using a computer to accomplish what police officers do without racial prejudice? The technology and a plan to automate law enforcement exist, yet neither has received serious attention. An automated enforcement program would eliminate stops based on nearly all the most frequently used justifications to stop drivers, including speeding, record checks and other vehicle code violations. If the war on drugs continued to exist, it would no longer use the traffic stop. Recent federal regulatory approval of the technical standards for the federal intelligent highway initiative shows that this is a real and practicable solution to the problem of police discretion in traffic stops, one that sidesteps entrenched difficulties in Fourth Amendment law and politics. This Essay further explores a technological solution to reducing discretion in policing.

INTRODUCTION

What if we could eliminate police discretion from traffic stops? What if a computer could accomplish what police officers do, with efficiency and accuracy, and more importantly, without racial prejudice? How would this technology work? Would its use be consistent with the Fourth Amendment? And if constitutional, would the public accept this automated enforcement? Could the war on drugs continue, once traffic stops became discretionless?¹

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1. See Garrine P. Laney, *Racial Profiling: Issues and Federal Legislative Proposals and Options*, CONG. RES. SERV. Report RL32231 (Feb 17, 2004) (observing that the police have “been accused of practicing racial profiling” in order “to prevent illicit drug activity”).

These are not just hypothetical questions, at least not for long. This Essay proposes a solution to the problems associated with police discretion in traffic stops that originates neither in constitutional law nor in politics, but in technology. Both the technology and a plan to automate law enforcement exist, yet neither has received serious attention.

In a recent but little-known² decision, the Federal Communications Commission established technical standards to make this automation possible.³ The federal government's Intelligent Transportation Systems initiative proposes a future where all cars use wireless technology to communicate with devices embedded in the road and with other cars. Vehicles would exchange data such as the car's location and speed, as well as problems with the car's mechanics or registration. Currently, policymakers advocate the use of this technology, also known as "dedicated short-range communications" (DSRC),⁴ because it will have important safety benefits. Car manufacturers support DSRC because it will provide a means for drivers to purchase goods and services while on the road. Yet this little-known technology demands the attention of criminal procedure scholars, as DSRC could also revolutionize how the police interact with drivers by permitting remote and automatic enforcement of the traffic laws, thereby reducing or eliminating traffic stops by the police.

This technology sidesteps many of the difficulties traffic stop critics have faced in pursuing Fourth Amendment change through litigation and political pressure. The political route has failed because while scandals attract media attention, they too infrequently result in long-term changes in policing.⁵ Further, the Supreme Court has not shown a particular willingness to become involved in managing police officer discretion. Ever since the Warren Court's revolution in criminal procedure,⁶ numerous decisions have imposed constitutional constraints on the police, yet none of

2. See, e.g., Amy Zuckerman, *Standards for Intelligent Transportation System Will Speed Up Supply Chains*, *WORLD TRADE*, Nov. 1, 2004, at 60 (noting significance of the "little known" FCC decision). The Director of Vehicle Safety Systems at Intelligent Transportation Systems of America, described the public's lack of awareness about the ITS program as "shocking." Telephone Interview with Suzanne Murtha, Director of Vehicle Safety Systems, Intelligent Transportation Society of America (ITSA) (June 17, 2005). For more details of the interview, see *infra* note 17, and accompanying text.

3. See *infra* Part II.A.

4. A caveat on terminology: the 5.9 GHz standard approved by the FCC and described *infra* is a wireless standard, like current 802.11 Wi-Fi standards. It would be used by the on-board units and roadside units described in Part II.A. This type of communications system, permitting vehicle-to-vehicle and vehicle-to-infrastructure communication, is also sometimes referred to in federal agency documents as the Vehicle Systems or Vehicle Integration Initiative. For the sake of simplicity, I only use the term "DSRC systems."

5. See *infra* Part II.B.

6. See, e.g., LUCAS A. POWE, JR., *THE WARREN COURT AND AMERICAN POLITICS* 379-444 (2000) (discussing dramatic changes in the recognition of criminal defendants' constitutional rights during the Warren Court era); see also MORTON HORWITZ, *THE WARREN COURT AND THE PURSUIT OF JUSTICE* (1998) (same).

them curb police discretion to any meaningful degree.⁷ This has not been for want of opportunity. As recently as the 2000-2001 term, the Court considered but declined to place all but the loosest of limitations on a police officer's choices in conducting an otherwise lawful arrest. In *Atwater v. City of Lago Vista*, the Court held that an officer's decision to conduct a warrantless arrest did not violate the Fourth Amendment so long as probable cause existed, despite the fact that the officer possessed the option to cite the arrestee for what the Court described as a "very minor criminal offense."⁸

Largely unchecked by the Court, the problem of police discretion—particularly in the practice of traffic stops—has generated attention from two groups of commentators. Concerned about the impact of police discretion on minority communities, commentators like Tracey Maclin and David Harris have called for the reinterpretation of the Fourth Amendment so that it provides more detailed limitations on when, why, and how the police conduct stops, arrests, and searches.⁹

These scholars join an earlier generation of commentators who have discussed the strains that unbridled police discretion places on a democratic society. These scholars of the police, including Kenneth Culp Davis and Joseph Goldstein, have demanded political and administrative solutions that focus on changing the culture of police organizations. Administrative guidelines that spell out *ex ante* constraints on police discretion and attitudinal changes within the insular world of police culture are essential, they have argued, to actual changes in police behavior on the street.¹⁰

To complicate matters, more recent voices in this debate have contended that discretion need not be scrutinized as closely when the very groups promoting broad police discretion that impacts racial minorities are themselves minority communities. Dan Kahan and Tracey Meares forcefully but unsuccessfully advanced this thesis in defense¹¹ of the Chicago anti-gang ordinance that the Supreme Court struck down as unconstitutionally void for vagueness in *City of Chicago v. Morales*.¹²

7. Cf. David Sklansky, *Traffic Stops, Minority Motorsits, and the Future of the Fourth Amendment*, 1997 SUP. CT. REV. 271, 273 (1997) (concluding that recent Supreme Court law means "that police officers, if they are patient, can eventually pull over almost anyone they choose").

8. 532 U.S. 318, 354 (2001).

9. See *infra* Part I.C.

10. See *infra* Part I.C.

11. See Dan M. Kahan & Tracey L. Meares, *The Coming Crisis of Criminal Procedure*, 86 GEO. L.J. 1153 (1998); but see David Cole, *Discretion and Discrimination Reconsidered: A Response to the New Criminal Justice Scholarship*, 87 GEO. L.J. 1059, 1074-75 (1999) (critiquing strength of community support argument raised by Kahan and Meares); Albert Alschuler & Stephen J. Schulhofer, *Antiquated Procedures or Bedrock Rights?: A Response to Professors Meares and Kahan*, 1998 U. CHI. L. FORUM 215, 215-16 (1998) (disputing uniformity of community support in *Morales*).

12. 527 U.S. 41 (1999).

It may seem far-fetched to suggest that technology could offer a real solution to a problem that has captured the attention of academic lawyers for fifty years. But in April 2005, the United Arab Emirates announced a contract with I.B.M. to install smart-box technology, similar to DSRC systems, in cars sold in that country. Beginning in 2007, United Arab Emirates law will require every car owner to have an in-vehicle smart-box that communicates information about a driver's speed and triggers the automatic issue of a traffic ticket.¹³ In addition, automated law enforcement in one form or another is already an accepted practice in Europe, Asia, and even in the United States.¹⁴ The very existence of other programs premised on the idea of automated enforcement counters objections that automated traffic stops are the stuff of fantasy.

Because no one has written about the potential changes to police discretion that could result from new technology, we lack a thorough assessment of DSRC technology,¹⁵ including the relative merits of automated enforcement. Yet the effects of a widespread automated enforcement regime would be dramatic. Traffic stops are often pretextual, a means for discovering evidence of other crimes unrelated to the justification for the initial stop.¹⁶ Thus, if traffic stops were eliminated through widespread automated enforcement, the nature of policing could be drastically different.

Of course, "automated traffic stops" will not address all abuses of police discretion. No one suggests that the Department of Transportation intends to influence the enforcement of drug or firearms laws.¹⁷ The use of automatic enforcement should supplement larger efforts to constrain police discretion in all areas. And if the intelligent highway is to have a significant impact on traffic stops, it would have to be integrated into a

13. See *Black Box is the New Speed Cop*, SUNDAY TIMES (U.K.), June 5, 2005, at 2 (describing UAE initiative).

14. Indeed, DSRC systems, as well as similar technologies, are being used in London, Germany, and Switzerland for electronic tolls, fleet management, and traffic alerts. See *The Road Tolls for Thee*, ECONOMIST, June 12, 2004, at 31; see also *infra* Part III.B.2 for examples in the United States.

15. In this sense, this Essay contributes to two bodies of commentary that are often treated distinctly: the persistent problem of racial bias and policing, on the one hand, and the conceptual difficulties raised by technological advances in policing, on the other.

16. While much recent commentary on traffic stops focuses on the use of racial bias by the police, the "pretextual stop" includes sources of police motivation other than racial bias. See *infra* Part I.C. Indeed, much of the commentary on the use of race by the police in traffic stops discusses the pretextual stop without defining it. See *infra* Part I.C. and accompanying footnotes.

17. I do not argue that the federal government intends to establish automated enforcement programs as soon as transponders are installed in new vehicles. What is clear is that: a) DSRC technology makes automated enforcement possible; b) the Department of Transportation and ITSA have clearly considered the use of automated enforcement; and c) such a program has established precursors in red-light enforcement, photo radar, and more recent proposals for electronic vehicle registration. For the moment, automated enforcement for private vehicles is not being actively pursued, according to ITSA, because of privacy concerns. Telephone Interview with Suzanne Murtha, ITSA Director of Vehicle Safety Systems (June 17, 2005).

policy that simultaneously reduces or eliminates traffic law enforcement by the police themselves. Concerns about the effects of this new technology on individual privacy¹⁸ expressed by critics¹⁹ and even advocates²⁰ also merit attention.

Nevertheless, at a moment when the technology is advancing rapidly with little public debate, “he who names it and frames it, claims it.”²¹ Rather than to provide definitive normative conclusions, the aim of this Essay is to advance discussion on the merits of a law enforcement program that is uniform and automatic, rather than irregular and discretionary. Surely, the potential to change police discretion should be a key element in the debate over the regulation and structure of the information highway that our real highways are rapidly becoming.

The Essay proceeds as follows: Part I frames the central dilemma of police discretion. Briefly stated, we cannot expect the police to fully enforce the law everywhere, yet their freedom to make choices in enforcing the law can have harmful effects because enforcement may be

18. One vision statement prepared for the Federal Highway Administration projects that in 2022: “The tremendous integration brought about by [Intelligent Transportation Systems] has created an enormous distributed data resource. Many regions through either publicly owned or privately contracted facilities now summarize and archive huge amounts of data from every corner of their transportation networks.” Architecture Development Team, *National ITS Architecture ITS Vision Statement*, at 8 (2003), http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_pr/45p01!.pdf.

19. See, e.g., *Intelligent Highway Systems v. Privacy*, USA TODAY, Dec. 1, 1995, at 14 (describing information to be collected from drivers); Robert Weisberg, IVHS, *Legal Privacy, and the Legacy of Dr. Faustus*, 11 SANTA CLARA COMPUTER & HIGH TECH. L.J. 75, 77 (1995) (arguing that current law “will probably mean that ‘substantive’ Fourth Amendment doctrine will put little constraint on the designers and users of [Intelligent Transportation Systems]”).

20. Even a chief supporter of Intelligent Transportation Systems, John Worthington, has expressed concern over the development of a “kind of an Orwellian all-singing, all-dancing collector/aggregator/disseminator of transportation information . . . that is being driven by some giant data center.” Worthington is the president and chief executive officer of Transcore, one of the companies involved in developing DSRC technology. See Excerpts from the Final INTI Workshop Session: “Next Steps,” available at http://www.ntoctalks.com/icdn/INTI_nextsteps.php. The potential of Intelligent Transportation Systems to collect and aggregate driver data also contributes to widespread concerns about the ability of private and public entities to assemble massive information databases containing individuals’ personal information. For a sampling of the literature in this area, see DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE* 13-26 (2004) (describing threats to individual privacy posed by new technologies); *TECHNOLOGY AND PRIVACY: THE NEW LANDSCAPE* (Philip E. Agre & Marc Rotenberg eds., 1997); A. Michael Froomkin, *The Death of Privacy?*, 52 STAN. L. REV. 1461 (2000) (cataloguing threats to privacy posed by new technologies and emerging responses); Stan Karas, *Privacy, Identity, Databases*, 52 AM. U. L. REV. 393 (2002) (arguing for greater protection of consumer information privacy); Helen Nissenbaum, *Privacy as Contextual Integrity*, 79 WASH. L. REV. 119 (2004) (proposing model of contextual integrity to evaluate threats to informational privacy); Neil M. Richards, *Reconciling Data Privacy and the First Amendment*, 52 UCLA L. REV. 1149 (2005) (responding to First Amendment critique of data privacy regulations); Daniel Solove, *Access and Aggregation: Public Records, Privacy and the Constitution*, 86 MINN. L. REV. 1137 (2002) (arguing for greater protection of public records that are widely available and easily accessed).

21. Ted Koppel, *Take My Privacy, Please!*, N.Y. TIMES (editorial), June 13, 2005, at A17 (expressing concern over the widespread use of OnStar and E-ZPass programs).

discriminatory and arbitrary. Part II examines why legal challenges and political pressure serve as inadequate checks on police discretion. Using the traffic stop as its focus, Part III introduces the technological alternative as a check on discretion, in the form of the federal intelligent highway initiative and the Federal Communications Commission decision permitting the establishment of a nationwide network of computers and car-installed sensors that may radically reduce police discretion. Finally, Part IV considers and responds to potential objections arising from the replacement of human discretion with automatic law enforcement.

I

THE DILEMMA OF POLICE DISCRETION: THE CASE OF THE TRAFFIC STOP

A. *Police Discretion Defined*

Most people rarely find themselves in contact with the police;²² but if they do, the interaction will most likely take the form of a traffic stop.²³ The driver will most likely receive a citation.²⁴ Yet for a significant minority of drivers, that interaction will escalate into something more serious: an arrest, a search, and perhaps even mistreatment by the police.²⁵ What determines whether a stop will result in an admonished driver, a criminal defendant, or a civil rights litigant? We can attribute part of the uncertainty to discretion, which is integral to all aspects of a traffic stop: who will be stopped, how long the stop will last, who will be warned, who will be questioned, and who will be arrested.²⁶ While discretion plays a part in many aspects of police decision making, the fact that the greatest number of police-citizen encounters occur in the context of traffic stops makes the use of discretion there particularly worthy of attention.

22. See MATTHEW R. DUROSE ET AL., U.S. DEP'T OF JUSTICE, CONTACTS BETWEEN POLICE AND THE PUBLIC: FINDINGS FROM THE 2002 NATIONAL SURVEY iv (2005) (reporting that only 21% or about 45.3 million U.S. residents aged sixteen or older had at least one face-to-face contact with the police). This was the same rate reported in the previous national survey.

23. See DUROSE, *supra* note 22, at iv (stating that traffic stops were the "most common reason for police contact" (39.8%) in 2002 survey). Other kinds of contacts are much less common. See *id.* at 3 (reporting non-traffic stop contacts included crime reporting (26.4%); traffic accidents (13%); assistance or service calls (7.2%); police investigation (5.8%); police suspicion (2.6%). The 2002 survey reported a lower number of traffic stops than that of the previous survey. See Patrick A. Langan, *Contacts between Police and the Public: Findings from the 2002 National Survey* 1 (2001) (stating that 52% of face-to-face contacts with police reported by this group took the form of a traffic stop).

24. See DUROSE, *supra* note 22, at iv (reporting that police issued tickets to 58.6% of those involved in traffic stops).

25. See *id.* at iv-v (stating that of those drivers stopped, police carried out a search on 5%, handcuffed 2.8%, arrested 2.7%, used or threatened force against 1.1%, and used or threatened force considered excessive against 1%).

26. There are several classic studies on the police that address discretion in whole or in part, including: KENNETH CULP DAVIS, *POLICE DISCRETION* (1975); MICHAEL K. BROWN, *WORKING THE STREET: POLICE DISCRETION AND THE DILEMMAS OF REFORM* (1988).

Ever since the discovery of police discretion by American Bar Foundation researchers in the 1950s, the topic has commanded considerable academic attention in legal and sociological scholarship.²⁷ Police discretion poses an uncomfortable paradox in a democratic society.²⁸ We entrust the police to enforce the law, to maintain order, and to use legitimate force if necessary.²⁹ The police must not only shoulder this task, but we also expect them to accomplish these tasks by treating the public in a fair and even-handed way. Yet it is difficult to confirm, let alone guarantee,³⁰ that this happens since the character of police work—decisions born of exigency yet made in isolation³¹—means we very seldom know why the police choose some options over others.³²

Moreover, the police cannot do everything we expect them to do. Police discretion is defined by the distinction between legally permissible police action versus the real acts of police officers.³³ At its most basic, discretion is the freedom to decide between at least two possible choices.³⁴

27. Prior to the 1950s, policymakers and scholars routinely assumed that police work, such as the decision to arrest, involved hardly any discretion at all. Empirical research disproved these assumptions, and opened up a universe of scholarly questions for a generation of police scholars. *See, e.g.*, GEORGE L. KELLING, U.S. DEP'T OF JUSTICE, "BROKEN WINDOWS" AND POLICE DISCRETION 1980-1990 3-20 (1999); SAMUEL WALKER, TAMING THE SYSTEM: THE CONTROL OF DISCRETION IN CRIMINAL JUSTICE 6-12 (1993). This essay does not attempt to summarize this literature in its entirety, but rather focuses on those aspects of police discretion that are most relevant to the traffic stop analysis. For an overview of the literature in the criminal justice system generally, *see* WALKER, *id.*, at 3-20.

28. *See* JEROME H. SKOLNICK, JUSTICE WITHOUT TRIAL: LAW ENFORCEMENT IN DEMOCRATIC SOCIETY 69 (Macmillan 1994) (1966) ("If the central task of the administration of criminal law is to balance the conflicting principles of order and of legality, the dilemma is epitomized in the question of police discretion."); *see also* Albert J. Reiss, Jr., *Police Organization in the Twentieth Century*, in MODERN POLICING 51, 74 (Michael Tonry & Norval Morris eds., 1992) (noting that "[a]lthough the foundation of policing is the legal order and its rules, police officers, nevertheless, have enormous discretionary powers to apply the law").

29. I refer to sociologist Max Weber's classic definition of the state in terms of its monopoly over the use of legitimate force. *See* MAX WEBER, POLITICS AS A VOCATION 2 (H.H. Gerth & C. Wright Mills, trans. 1965 (1946)).

30. *See* DEBORAH RAMIREZ ET AL., DEP'T OF JUSTICE, A RESOURCE GUIDE ON RACIAL PROFILING DATA COLLECTION SYSTEMS 9 (2000) (observing that "[m]any police departments have not developed formal, written, standards directing officers on how to use [their] discretion [in traffic stops]").

31. *See* KELLING, *supra* note 27, at 38 (noting that "policing realities" include the following observations: 1) "The majority of police work is conducted by an officer working alone or with a partner."; 2) "The officer must make decisions outside the purview of supervisors or a command system."; and 3) "The officer must make decisions based on internalized knowledge and skill.").

32. *See* RAMIREZ, *supra* note 30 at 9 (noting that traffic stop decisions are "seldom documented and rarely reviewed").

33. The emphasis in this Essay focuses on what the police are permitted to do, i.e. how they may act pursuant to delegated discretion. Actual police behavior, however, also encompasses exercises of authority for which no lawful basis is present, i.e. unauthorized discretion. Jerome Skolnick posed this contrast in his classic study of policing, JUSTICE WITHOUT TRIAL. *See* SKOLNICK, *supra* note 28, at 69-71 (3d ed. 1994).

34. *See, e.g.*, Erik Luna, *Transparent Policing*, 85 IOWA L. REV. 1107, 1133 (1999) (defining discretion); WALKER, *supra* note 27, at 23 (1993) ("[C]ontrolling discretion is usually not a matter of

When defined in this way, police discretion is just one instance of the executive discretion shared not only by other actors in the criminal justice system (including prosecutors), but also other government executives like the President, state governors, and dog-catchers.³⁵ Unlike these other actors, however, discretion in law enforcement is usually exercised covertly and with minimal oversight.³⁶ Most citizens lack the equivalent of a sunshine law to review the decisions made by officers in their local police departments.³⁷ In contrast, a number of federal, state, and local statutes, such as the Freedom of Information Act,³⁸ exist to provide this information regarding other executive decisions.

B. *Reasons for the Existence of Police Discretion*

1. *Enforcement Priorities*

The exercise of discretion results from influences on the police both at the organizational and individual level. At the organizational level, local police department must choose some “priorities of enforcement” over others.³⁹ These choices reflect social and political choices that prevent a police organization from “full enforcement.”⁴⁰ enforcing the law every time a violation is observed.⁴¹ The form of these organizational choices varies. Some choices are informal understandings among officers, while others are formal policies. Formal policies are typically imposed internally

simply forbidding something; it is more often a matter of encouraging officers to choose one option over another.”)

35. See Luna, *supra* note 34, at 1134. (distinguishing the oversight of the police from that exercised over other executive officials).

36. See Kenneth Culp Davis, *An Approach to Legal Control of the Police*, 52 TEX. L. REV. 703, 704 (1974) (observing that most police work is “kept secret from those who are affected by it”); see also Joseph Goldstein, *Police Discretion Not to Invoke the Criminal Process: Low-Visibility Decisions in the Administration of Justice*, 69 YALE L.J. 543, 552 (1960) (“[P]olice decisions not to invoke the criminal process, except when reflected in gross failure of service, are not visible to the community.”).

37. See Luna, *supra* note 34, at 1141 (providing examples of such laws outside of the criminal justice system).

38. 5 U.S.C. § 552 (2006).

39. See Goldstein, *supra* note 36, at 561.

40. Goldstein defined full enforcement as follows:

(1) the investigation of every disturbing event which is reported to or observed by them and which they have reason to suspect may be a violation of the criminal law; (2) following a determination that some crime has been committed, an effort to discover its perpetrators; and (3) the presentation of all information collected by them to the prosecutor for his determination of the appropriateness of further invoking the criminal process.

Goldstein, *supra* note 36, at 559-560. See also CULP, *supra* note 26, at 166 (observing that “selective enforcement” results from a conflict between the expectation to enforce the law fully and the lack of resources to do so).

41. Others have taken yet another step back and observed that the police are also prohibited from enforcing every violation of the law because of legal constraints imposed by federal and state constitutions, as well as statutes. See, e.g., Goldstein, *supra* note 36, at 554 (noting that such “total enforcement” is thus prohibited); Luna, *supra* note 34, at 1136-37 (characterizing executive discretion in the criminal justice system as those decisions left after discounting for laws that have been deemed substantively or procedurally invalid).

by the department or as a matter of local law.⁴² As an example of the former, local police departments around the country have been particularly successful in formalizing appropriate use of deadly force standards, a practice once left largely to individual discretion.⁴³ Other times a municipality decides what policies to pursue, such as making the enforcement of laws against prostitution a low priority for the local police.⁴⁴

More concrete constraints—time, personnel, and budget—also prohibit the police from enforcing the law in every instance in which they may legally do so.⁴⁵ Thus, while police discretion may sometimes be used as shorthand for “abusive police practices,” discretion is more accurately a neutral description of the gap between full enforcement and what police can realistically achieve.

2. *Police Culture*

Discretion is more than a product of enforcement priorities; it also emerges from the distinct world view of police culture. As many scholars of the police observe, people who become police officers are assimilated into a professional culture that views the job in terms of two primary attributes: danger and authority.⁴⁶ Sociologist Jerome Skolnick famously described these attributes as constituting the “working personality” of the police officer.⁴⁷

Because police officers perceive their job as one of continuous potential violence, officers develop a “perceptual shorthand” to identify some people as “symbolic assailants.”⁴⁸ These are persons whose characteristics an officer comes to associate, by professional experience rather than by academic proof, with violating the law. In a working environment often characterized by social isolation and public

42. It should not be assumed that enforcement priorities always lead to the underenforcement of “minor” crimes. The widespread adoption of the broken windows model of policing, first fleshed out by George Kelling and James Q. Wilson, relied on aggressive police enforcement of quality of life crimes such as public urination, noise ordinances, etc. See James Q. Wilson & George L. Kelling, *Broken Windows: The Police and Neighborhood Safety*, *THE ATLANTIC MONTHLY* 29 (March 1982).

43. WALKER, *supra* note 27, at 25-33.

44. See, e.g., Byron Williams, *Prostitution Issue Feeds Dialogue of Preconceived Notions*, *OAKLAND TRIB.*, Oct. 29, 2004 (discussing Berkeley, California’s proposed Measure Q that would make enforcement of existing prostitution laws the lowest priority of the Berkeley police department).

45. See Goldstein, *supra* note 36, at 560-061 (observing that full enforcement is not a “realistic expectation” for these reasons).

46. This is true even though the job may sometimes be less dangerous than the work of meat-cutters or construction workers.

47. See SKOLNICK, *supra* note 28, at 43.

48. See *id.* at 44-45.

resentment,⁴⁹ the identification of symbolic assailants is a necessary and efficient measure of self-protection.

In theory, the tendency of police officers to use a perceptual shorthand in their jobs has analogies in other professions, and thus tells us little that is distinctive about the police. All professions develop short-cuts:⁵⁰ doctors develop a shorthand for categories of patients,⁵¹ taxi drivers categorize potential customers, and even criminals mark their victims.⁵²

What does distinguish the police is their unique recourse to legitimate violence, and their ability to exercise this force over the public at large. When that potential for legitimate violence is coupled with illegitimate reasons for stopping, questioning, or otherwise interfering with the lives of citizens, police discretion exhibits dramatic, widespread harms that other professions do not.

C. *The Harms and Abuses of Unchecked Police Discretion*

While harboring stereotypes is not a characteristic peculiar to the police, the authority delegated to the police makes stereotyping especially dangerous in that profession. As we will later see, the Fourth Amendment does not impose especially restrictive limits on the ability of police to stop or arrest people⁵³. What, then, guides the choice of an individual officer, who is trained to be suspicious as a professional matter?⁵⁴

The perceptual shorthand already described provides a starting point, and by itself may not be objectionable. After all, collective police experience may result in useful knowledge about criminal behavior, particularly about local patterns and habits.⁵⁵ The difficulty arises when suspicious behavior is reduced to an assumption that racial minorities are more likely to be engaged in criminal behavior than other groups. Police attention will then focus more on these groups than others.

49. See *id.* at 47-56 (describing how the variables of danger and authority reinforce the social isolation of the police, and consequently, the notable solidarity of police culture).

50. Indeed, if we think of police officers as rational actors in an organization like any other, one institutional reform that could affect discretion is the use of incentives for model police behavior. See Erik Luna, *Race, Crime, and Institutional Design*, 66 LAW & CONTEMP. PROBS. 183, 196 (2003) (discussing the possibility of such a reward structure).

51. See HOWARD S. BECKER, *TRICKS OF THE TRADE* 153-54 (1998) (identifying use of term "crocks" by medical students).

52. See, e.g., Erving Goffman, *On Cooling the Mark Out: Some Aspects of Adaptation to Failure*, 15 PSYCHIATRY 451 (1952) (defining the mark as the potential victim of illegal exploitation, usually in the confidence game).

53. See *infra* Part II.A.

54. See SKOLNICK, *supra* note 28, at 47 (describing suspicion as part of officer's "working personality.")

55. Indeed, well before police conceived of themselves as professionals engaged in "police science," practical necessity moved them to compile "rogues' galleries" consisting of recidivists and other recurrent suspects. See, e.g., SIMON A. COLE, *SUSPECT IDENTITIES: A HISTORY OF FINGERPRINTING AND CRIMINAL IDENTIFICATION* 20-26 (2002).

That conclusion has been borne out in reality, particularly in the practice of traffic stops. Evidence from civil rights lawsuits and social science studies suggest that the police stop African American and Latino drivers out of proportion to their numbers in the general population, primarily on the basis of their race, a practice commonly referred to as “racial profiling.”⁵⁶ That traffic stops so heavily burden minority drivers has been captured in the moniker of being pulled over for “driving while black.”⁵⁷ Research suggests that minority drivers do not violate the traffic laws significantly more than do whites.⁵⁸ Rather, minority drivers are the road’s “symbolic assailants.” Traffic law violations provide a convenient (and legal) means for police to investigate their suspicions.

These abuses occur in the form of pretextual stops: occasions when the justification offered for the detention is legally sufficient, but is not the actual reason for the stop.⁵⁹ When patrolling the streets, police officers

56. There is a voluminous literature on racial profiling and traffic stops, itself part of a larger body of scholarship on race and criminal procedure law, a comprehensive summary of which is beyond the scope of this essay. For a representative sampling of this commentary, see, e.g., DAVID COLE, NO EQUAL JUSTICE: RACE AND CLASS IN THE AMERICAN CRIMINAL JUSTICE SYSTEM 34-41 (1999) (discussing pretextual stops of minority motorists); Devon Carbado, (*E*)*Racing the Fourth Amendment*, 100 MICH. L. REV. 946 (2002) (discussing how the Fourth Amendment’s silence on race constructs race itself as a concept); Angela J. Davis, *Race, Cops, and Traffic Stops*, 51 U. MIAMI L. REV. 425 (1997) (discussing interplay between discretion and traffic stops and effects on minority drivers); David A. Harris, “*Driving While Black*” and *All Other Traffic Offenses: The Supreme Court and Pretextual Traffic Stops*, 87 J. CRIM. L. & CRIMINOLOGY 544 (1997) (arguing that Whren, discussed *infra*, approves of both the unchecked power of the police in traffic stops and the use of that power primarily against Black and Hispanic drivers); Sheri Lynn Johnson, *Race and the Decision to Detain a Suspect*, 93 YALE L.J. 214 (1983) (discussing relationship between race and probable cause determination); Tracey Maclin, *Race and the Fourth Amendment*, 51 VAND. L. REV. 333 (1998) (arguing for the consideration of race in Fourth Amendment analysis); Anthony C. Thompson, *Stopping the Usual Suspects: Race and the Fourth Amendment*, 74 N.Y.U. L. REV. 956 (1999) (demonstrating how race has been excised from Fourth Amendment analysis and its harms).

57. See generally David A. Harris, *The Stories, the Statistics, and the Law: Why “Driving While Black” Matters*, 84 MINN. L. REV. 265 (1999).

58. See, e.g., Ramirez, *supra* note 30, at 32 (describing findings of Dr. John Lamberth in which Black drivers on the New Jersey Turnpike comprised 13.5% of all drivers, 15% of all speeders, 35% of those stopped by police, and 73 % of those arrested).

59. See John Burkoff, *The Pretext Search Doctrine: Now You See It, Now You Don’t*, 17 U. MICH. J.L. REFORM 523 (1984) (offering this definition). Edwin Butterfoss makes a further distinction between “legal pretexts” and “fabricated pretexts.” A legal pretext is one where “the government offers a justification that is not the true reason for the police activity, but that, if the motivation of the officer is not considered, legally justifies the activity. A fabricated pretext occurs when “the government offers a justification that is not in fact the true reason for the police activity and, in fact, is legally insufficient because it is not supported by the facts.” Edwin J. Butterfoss, *Solving the Pretext Puzzle: The Importance of Ulterior Motives and Fabrications in the Supreme Court’s Fourth Amendment Pretext Doctrine*, 79 KY. L.J. 1, 5-6 (1990); see also Mark M. Dobson, *The Police, Pretextual Investigatory Activity, and the Fourth Amendment: What Hath Whren Wrought?*, 9 ST. THOM. L. REV. 707 (1997) (comparing these two positions). Surprisingly, while much incisive commentary has been written about the use of race in traffic stops, the term “pretextual stop” is often left without precise definition. See, e.g., Harris, “*Driving While Black*” and *All other Traffic Offenses: The Supreme Court and Pretextual Traffic Stops*, *supra* note 56, at 545 n.8 (discussing without defining pretextual stops by the police and their impact on black drivers); Maclin, *supra* note 56, at 336 (same).

often make use of traffic laws to stop and question drivers whom they suspect of involvement in illegal drug and firearm offenses.⁶⁰ Because the vehicle code provides an officer with a reason to stop virtually any one,⁶¹ traffic stops are well suited for this instrumental use.⁶² Traffic offenses encompass not only “moving violations” (e.g. speeding), but also “equipment violations” (broken taillights) that may be “almost wildly hypertechnical.”⁶³ Unsurprisingly, traffic law enforcement has been called the “general warrant of the twentieth century.”⁶⁴ That arrests for drugs and firearms charges are often the result of stops ostensibly for broken taillights, driving too slowly, or too quickly, or failing to signal, is well-documented.⁶⁵ Often the targets of these traffic stops are young minority men.⁶⁶ And, many commentators have offered reasons why this particular

60. See Ramirez, *supra* note 30, at 9. (stating police “often use traffic-stops as a means of ferreting out illicit drugs and weapons”).

61. See *id.* at 9 (“Many traffic officers say that by following any vehicle for 1 or 2 minutes, they can observe a basis on which to stop it.”); see also Harris, *supra* note 56, at 558 (“Police officers in some jurisdictions have a rule of thumb: the average driver cannot go three blocks without violating some traffic regulation.”); Sklansky, *supra* note 7, at 273 (“Since virtually everyone violates traffic laws at least occasionally, the upshot of [the Supreme Court’s Fourth Amendment Cases] is that police officers, if they are patient, can eventually pull over almost anyone they choose . . .”).

62. Of course, police also stop drivers because they have reasonable suspicion or probable cause to believe that either the driver or the passenger is involved in specific criminal activity. Impermissible biases may also enter into these decisions, but they are less of a systematic problem than the use of traffic laws, and thus are excluded from the discussion here.

63. Harris, *Driving While Black*, *supra* note 56, at 558.

64. Barbara C. Salken, *The General Warrant of the Twentieth Century? A Fourth Amendment Solution to Unchecked Discretion to Arrest for Traffic Offenses*, 62 TEMP. L. REV. 221 (1989); see also Sklansky, *supra* note 61, at 299.

65. See, e.g., Harris, *Driving While Black*, *supra* note 56, at 546 (“In fact, searching cars for narcotics is perhaps the major motivation for making [traffic stops against African-American and Hispanic drivers]”); see also Harris, *The Stories, the Statistics, and the Law: Why “Driving While Black” Matters*, *supra* note 57, at 277-288 (1999) (reviewing disproportionate impact of traffic stops on black drivers in New Jersey, Maryland, and Ohio); A sampling of reported federal appellate decisions from 2005 comparing the kind of charge ultimately faced by the defendant and the reason for the traffic stop is illustrative: *United States v. Carpenter*, 406 F.3d 915 (7th Cir. 2005) (drugs: evading a red light); *United States v. Hanlon*, 401 F.3d 926 (8th Cir. 2005) (drugs: failure to use turn signal); *United States v. Santos*, 403 F.3d 1120 (10th Cir. 2005) (drugs: driving 82 m.p.h. in 75 zone); *United States v. Smart*, 393 F.3d 767 (8th Cir. 2005) (firearms: license plate violation); *United States v. Solomon*, 399 F.3d 1231 (10th Cir. 2005) (drugs and firearms: speeding); *United States v. Teemer*, 394 F.3d 59 (1st Cir. 2005) (firearms: stop sign violation); *United States v. Tibbetts*, 396 F.3d 1132 (10th Cir. 2005) (drugs: wiring across windshield and undersized mud-flaps); *United States v. Weatherspoon*, 410 F.3d 1142 (9th Cir. 2005) (firearms: broken brake light); *United States v. West*, 393 F.3d 1302 (D.C. Cir. 2005) (drugs: stop sign violation); *United States v. Williams*, 403 F.3d 1203 (10th Cir. 2005) (drugs and firearms: lack of seat belt and speeding).

66. Cf. Ramirez et al., *supra* note 30, at 6 (noting that “the most common complaint by members of communities of color is that they are being stopped for petty traffic violations such as underinflated tires, failure to signal properly before switching lanes, vehicle equipment failures, speeding less than 10 miles above the speed limit, or having an illegible license plate”). This is true although persons of color are no more likely to be engaged in traffic violations than whites or to be in possession of narcotics or other contraband. See, e.g., *id.* at 7, 10.

use of discretion by the police harms not only those who are stopped, but also the basic integrity of criminal procedure rules.⁶⁷

As many have observed, the harms of this abuse of police discretion extend beyond the wasted time and annoyance of minority drivers. It is a demoralizing experience for an individual to be singled out primarily due to race or ethnicity.⁶⁸ When repeated hundreds or thousands of times against members of a particular racial or ethnic group, however, these experiences alienate the entire affected community. This abuse of police discretion signals that the targeted group has a diminished political and social standing.⁶⁹

And while many questionable traffic stops involve race, not all do. In this way, the use of pretext in traffic stops is really a more general problem of police discretion than the narrower, albeit important, problem of racial discrimination. That insight is important, for while racial discrimination is a serious problem, it is a historically and socially contingent one.⁷⁰ In other times and places, other groups—religious minorities, for instance—may bear the burden of overzealous police attentions.

II

THE FAILURE OF LAW AND POLITICS TO CURB POLICE DISCRETION

A citizen complaining of police abuse usually follows one of two courses: filing a lawsuit or complaining to the media.⁷¹ Not surprisingly, motorists who have felt that they were the victims of pretextual traffic stops have turned to these means of redress. Yet as this part explains, neither decisions by the courts nor pressure from the public have resulted in significant, long-term changes.⁷²

67. See Sklansky, *supra* note 7, at 317 n. 214 (citing scholarship on this topic).

68. Indeed, some individuals have the misfortune of being stopped on a regular basis by the police for reasons that appear to be based almost entirely on race. In one case, Dr. Almo Randolph, a forty-two year old African American dentist, had been stopped more than fifty times by New Jersey troopers on his commute between Bergen County to Newark, New Jersey between 1991 to 2000. RAMIREZ, *supra* note 30, at 5; see also Kevin R. Johnson, *Racial Profiling After September 11: The Department of Justice's 2003 Guidelines*, 50 LOY. L. REV. 67, 70 (2004) (noting widespread observation that "racial profiling inflicts serious injuries on the dignity of African Americans and Latina/os.").

69. Andrew E. Taslitz, *Stories of Fourth Amendment Disrespect: From Elian to the Internment*, 70 FORDHAM L. REV. 2257, 2355 (2002) (stating that racial profiling "arguably [has] the effect of reducing [minority] groups' social status and increasing their sense of isolation from the broader American political community").

70. But see Maclin, *supra* note 56, at 334-336 (arguing that current racial profiling by the police can be traced back to parallel means of social control over slaves in the ante-bellum South).

71. Another, less prominent course of action is the filing of a complaint to a citizen review board, if one exists locally.

72. See, e.g., David A. Harris, *Racial Profiling Redux*, 22 ST. LOUIS U. PUB. L. REV. 73, 75 (2003) ("It is no exaggeration to say that the courts have been largely ineffective in the battle against profiling.").

A. *The Supreme Court's Fourth Amendment Cases*

The Supreme Court's Fourth Amendment jurisprudence provides the police with considerable powers during the course of a traffic stop.⁷³ The more significant rules can be quickly summarized. While a traffic stop is a Fourth Amendment seizure,⁷⁴ and thus must be reasonable,⁷⁵ a temporary detention is permissible so long as it is "justified at its inception."⁷⁶ Even the use of a trained dog to sniff for contraband, if sufficiently brief, will not alter the reasonableness of the initial stop.⁷⁷ Probable cause that a traffic violation has occurred, or reasonable suspicion that someone in the car has been involved in criminal activity, is sufficient justification.⁷⁸

Once authorities stop a car, a police officer may order the driver or the passenger out of the car.⁷⁹ If the officer suspects the driver is armed and dangerous, the officer may conduct both a physical pat-down and a search of the passenger compartment for weapons.⁸⁰ Arrests of the car's occupants automatically permits physical searches of them⁸¹ and the passenger compartment of the car itself.⁸² The officer may also search the car without a warrant if he develops probable cause during the course of the stop to believe the car contains contraband or evidence of a crime.⁸³ Beyond the requirement that the officer's actions be objectively reasonable, the Supreme Court has issued few specific rules about the scope of traffic stops.⁸⁴

I. *Whren: Challenges to Discretion Made Impracticable*

The Court's decisions have also made challenges to police discretion in these stops difficult in theory and nearly impossible in practice. In *Whren v. United States*, the Court held that a traffic stop resulting in an arrest on drug charges did not violate the Fourth Amendment.⁸⁵ In *Whren*,

73. Sklansky, *supra* note 7, at 274-75.

74. U.S. CONST. amend. IV.

75. *See, e.g.*, Delaware v. Prouse, 440 U.S. 648, 653 (1979).

76. *See Terry v. Ohio*, 392 U.S. 1, 20 (1968).

77. Illinois v. Caballes, 543 U.S. 405 (2005) (holding that use of dog sniff during a traffic stop is not a "search" for Fourth Amendment purposes).

78. *See Brown v. Texas*, 443 U.S. 47, 51 (1979).

79. *See Pennsylvania v. Mimms*, 434 U.S. 106 (1977) (drivers); Maryland v. Wilson, 519 U.S. 408 (1997) (passengers).

80. *See Terry*, 392 U.S. at 27 (permitting physical pat-down); Michigan v. Long, 463 U.S. 1032, 1049-50 (1983) (permitting "frisk" of car).

81. *See United States v. Robinson*, 414 U.S. 218 (1973).

82. *See New York v. Belton* 453 U.S. 454, 460-61 (1981).

83. *See California v. Acevedo*, 500 U.S. 565, 569-70 (1991); Pennsylvania v. Labron, 518 U.S. 939, 940 (1996). A citation, however, does provide sufficient grounds for a search of the vehicle, even if the officer could have arrested the driver but chose not to. *See Knowles v. Iowa*, 525 U.S. 113, 114 (1998).

84. Sklansky, *supra* note 7, at 275 (citing United States v. Sharpe, 470 U.S. 675 (1985)) (noting "few sharp rules" regarding roadside stops).

85. 517 U.S. 806 (1996).

the plainclothes vice squad officer justified his initial stop of the two African-American defendants in a “high drug area” of Washington, D.C. by referring to the local civil traffic law.⁸⁶ The police claimed that the driver had turned without signaling and drove off at an unreasonable speed.⁸⁷

In rejecting the defendants’ argument that the officer’s decision should be based on whether a “reasonable officer” would have stopped them for the traffic violation, the Court instead found the stop was reasonable for Fourth Amendment purposes so long as the police officer “could have” stopped the defendants.⁸⁸ (Incidentally, departmental policy actually prohibited plainclothes officers from conducting ordinary traffic stops.⁸⁹) As long as a legal justification existed, the Court held that the officer’s subjective intent was irrelevant. Thus, *Whren* effectively eliminated challenges to police discretion when using traffic law enforcement as a means to discover evidence of unrelated crimes.⁹⁰

2. *Atwater: When Personal Animus Dictates Police Discretion*

Nor is the problem of police discretion in traffic stops limited to racial bias or to the enforcement of drug laws. In *Atwater v. City of Lago Vista*, the Court rejected Gail Atwater’s claim that her warrantless arrest for a minor criminal offense—failure to wear a seat belt—violated the Fourth Amendment.⁹¹ Although Texas law permitted the arrest of anyone who failed to wear a seat belt,⁹² the facts of Atwater’s case suggest that her arrest was based on the arresting officer’s personal animosity towards her. Upon stopping her truck, he allegedly “‘yelled’ something to the effect of ‘we’ve met before’ and ‘you’re going to jail.’”⁹³

Like the defendants in *Whren*, one in Atwater’s situation might claim to have been the victim of a pretextual seizure. But *Atwater* rendered such a complaint irrelevant. So long as a police officer has probable cause for the offense, the Court explained, an otherwise permissible warrantless arrest is constitutional. By contrast, Justice O’Connor, writing in dissent,

86. *Id.* at 808

87. *Id.*

88. *Id.* at 819.

89. *Id.* As Kevin Johnson notes, “[e]ither the police were just plain lucky to find drugs in plain view while deviating from departmental policy, or one of the vice officers had a hunch that the occupants of the vehicle were engaged in drug activity and used an alleged violation of the traffic laws a pretext to stop the sports utility vehicle.” Kevin R. Johnson, *The Story of Whren v. United States: The Song Remains the Same*, in *RACE STORIES* 9 (Devon Carbado & Rachel Moran, eds. forthcoming 2006).

90. *See, e.g.*, Johnson, *supra* note 89, at 23 (“The decision today is the boilerplate citation for the proposition that subjective motive of the police in making a stop is irrelevant in evaluating that stop under the Fourth Amendment.”).

91. 532 U.S. 318 (2001). The same officer had previously stopped Atwater for what he believed (erroneously) was a seat belt violation. *Id.* at 324 n.1

92. *Id.* at 323.

93. *Id.* at 324.

expressed concern for the “grave potential for abuse” in “[s]uch unbounded discretion.”⁹⁴

None of this means that individuals whom police have subjected to dubious or abusive exercises of police discretion have no legal recourse.⁹⁵ But the Court has made it clear that the law of criminal procedure is not the place to address questionable exercises of police discretion.⁹⁶

B. *Political Pressure and Institutional Change*

Because we now know much more about police behavior during these stops than ever before, minority communities have also turned to the realm of politics to attempt to alter police practices in traffic stops.⁹⁷ As a result of state legislation,⁹⁸ voluntary departmental change,⁹⁹ and litigation,¹⁰⁰ police departments around the country have begun to collect data on the race or ethnicity of motorists in routine traffic stops. Twenty-nine of the nation’s state police agencies with primary highway patrol duties collect this information.¹⁰¹

Yet insufficient attention has been given to the practical uses of this voluminous data: specifically, its interpretation and its role in crafting permanent reforms.¹⁰² A 2000 Department of Justice report observes, for

94. *Id.* at 372 (O’Connor, J., dissenting).

95. *See, e.g., Whren*, 517 U.S. at 813 (noting that “the constitutional basis for objecting to intentionally discriminatory application of laws is the Equal Protection Clause, not the Fourth Amendment”); *but see Sklanksy*, *supra* note 7, at 308 (observing that Equal Protection Clause provides no protection against unconscious bias and very little practical protection against easily masked subjective intentions); Harris, *Driving While Black*, *supra* note 56, at 551 (noting that those affected by pretextual stops “do not have the resources, knowledge, or wherewithal to complain; they have learned that complaining about this treatment brings nothing (except maybe trouble), or that they may make unattractive plaintiffs unlikely to engender any jury’s sympathy, regardless of the injuries to their rights”). Not all legal challenges have failed, however. Several instances of either lawsuits alleging “racial profiling” by police departments or intense public criticism have resulted in consent decrees and departmental changes. *See, e.g., Ramirez et al.*, *supra* note 30, at 17-42 (describing events leading to traffic stop changes and/or data collection in San Jose, California; San Diego, California, North Carolina, New Jersey, and Great Britain).

96. *See, e.g. Johnson, The Story of Whren*, *supra* note 89, at *26 (“Many observers find problematic the discretion that the Supreme Court’s Fourth Amendment analysis has afforded police and the difficulty such discretion has created for the efforts to end racial profiling.”); Johnson, *Racial Profiling After September 11*, *supra* note 68, at 72 (noting Whren “effectively eliminated the Fourth Amendment as a tool to eliminate racial profiling”).

97. Brandon Garrett, *Remedying Racial Profiling*, 33 COLUM. HUM. RTS. L. REV. 41, 82 (2001).

98. *See Johnson, Racial Profiling After September 11*, *supra* note 68, at 74; Garrett, *supra* note 97, at 81-85 (discussing statistical data collection legislation); Harris, *supra* note 72, at 85-86 (discussing state legislation regarding data collection as well as training and policies regarding profiling).

99. Garrett, *supra* note 97, at 43; Harris, *Racial Profiling Redux*, *supra* note 72, at 86.

100. Garrett, *supra* note 97, at 61-81.

101. Matthew J. Hickman, *Traffic Stop Data Collection Policies for State Police, 2004*, DEP’T OF JUSTICE (2005).

102. *See Laney*, *supra* note 1 at 8 (observing that “analyzing data on the nature, character, and demographics of law enforcement practices to determine racial profiling is very complex”); Garrett,

instance, that “[m]ore research is needed to determine the most useful way to analyze data on stops and searches.”¹⁰³ Consent decrees obtained by the Department of Justice promise better results, but they too suffer serious shortcomings, such as short duration and lack of community involvement.¹⁰⁴

Political pressure and accompanying media scrutiny have also prompted some police organizations to set forth formal rejections of the use of race as a primary justification for traffic stops.¹⁰⁵ Similarly, in 2003, the Department of Justice issued formal guidelines prohibiting the use of race by federal law enforcement agencies in “traditional law enforcement activities,” such as “ordinary traffic stops,” unless agencies have “trustworthy” information that a person of a particular race has committed a crime.¹⁰⁶ Such public stances have certainly had the effect of bringing national attention to racial profiling in traffic stops: a majority of Americans are familiar enough with the practice to say that they disapprove of its use.¹⁰⁷ Though these pronouncements are well intentioned, it is unclear how or if they have altered police behavior on the street.

Outside of the Fourth Amendment context, political pressures have resulted in action: data has been collected and formal denunciations of race-based traffic stops have followed. But data collection by itself does not produce practical change; nor do formal rejections of race-based policing promise changes in individual officer behavior. To the contrary, despite the widespread attention to these problems, reports of alleged abuses of police discretion remain prevalent. Thus, political pressures on the police to render their own practices transparent or to embrace a fully

supra note 97, at 91 (arguing that “[t]hese laws appear meaningless because they provide no guidance as to how to interpret data[, and they] lack teeth because they do not require concrete steps to be taken once a disparity is found”).

103. Ramirez, *supra* note 30, at 54.

104. See Garrett, *supra* note 97, at 102-105.

105. See, e.g., Laney, *supra* note 102, at 7 (discussing formal oppositions to racial profiling by the International Association of Chiefs of Police, Black Law Enforcement Executives, and the Fraternal Order of Police).

106. U.S. Dep’t of Justice, Civil Rights Division, *Guidance Regarding the Use of Race by Federal Law Enforcement Agencies* (2003), available at http://www.usdoj.gov/crt/split/documents/guidance_on_race.htm (last visited January 6, 2006). These guidelines exempt, however, the use of race or ethnicity in terrorism-related investigations. See U.S. DEPT’ OF JUSTICE, JUSTICE DEPARTMENT ISSUES POLICY GUIDANCE TO BAN RACIAL PROFILING, FACT SHEET, June 17, 2003; U.S. DEP’T OF JUSTICE, RACIAL PROFILING, FACT SHEET, June 17, 2003; Eric Lichtblau, *Bush Issues Federal Ban on Racial Profiling, but Exempts Security Inquires*, N.Y. TIMES, June 18, 2003, at A1. For a critique of the Guidelines’ efforts to justify any use of race by federal law enforcement authorities, see Johnson, *Racial Profiling After September 11*, *supra* note 68, at 81-87.

107. Laney, *supra* note 102, at 5. Notably, a majority of Americans do approve of racial profiling to combat terrorism. See *id.*

democratic policing ideal have yielded only limited success in reducing or eliminating the improper use of police discretion.¹⁰⁸

Furthermore, only highly organized and motivated groups can even attempt to exert political pressure on a police department. Civil rights organizations concerned about heavy reliance on race in traffic stops have been successful in drawing attention to the plight of minority drivers. As discussed in Part I.C, the improper use of police discretion extends beyond considerations of race. Those whom police target for other illegitimate reasons like personal animosity, but who lack a committed group to champion their interests are unlikely to have the chance to exert pressure on the police other than through an individual complaint.

III

A TECHNOLOGICAL SOLUTION TO CURB POLICE DISCRETION

Outside of the legal and political arena, a plan developed by the Department of Transportation to create Intelligent Transportation Systems offers an unexpected solution to the problems of police discretion. In its aim to computerize the nation's public roads, Intelligent Transportation Systems may render obsolete the litigation, public criticism, and academic critique centering on the illicit use of police discretion. This Part begins by introducing the type of technology that would support an automated law enforcement system. It then discusses the development of a federal plan to automate the public roads, and then focuses on how traffic stops themselves could be incorporated into such an automated system.

A. *Information Technology and the Modern Highway*

This Essay's discussion of automated enforcement will make use of telematics: a catchall term used to describe the use of telecommunications for sending, receiving, and collecting information.¹⁰⁹ Telematics refers to a variety of specific technologies, many of which have been put to use to send information between cars and private or public infrastructures. Two examples are illustrative.

Car manufacturers put telematics to use as a service for their customers so that they may receive driving directions and locate lost or stolen vehicles. These services, offered by companies like General Motors in its OnStar program, use both cellular and global positioning satellite

108. See Johnson, *Racial Profiling After September 11*, *supra* note 68, at 71 (observing that "[e]fforts through the courts and political action have failed to do much in terms of stopping police from unduly relying on race in law enforcement").

109. Dorothy J. Glancy, *Privacy on the Open Road*, 30 OHIO N.U. L. REV. 295, 302 (2004) (defining telematics as two-way telecommunications devices built into vehicles).

(GPS) technology. Through the use of satellites, GPS technology can calculate a location that is accurate within ten to twenty meters.¹¹⁰

Another familiar use of telematics is the electronic toll transponder. States such as New York and California permit drivers who register for transponders to pay tolls automatically as they pass through toll points rather than queue for toll payment at a manned station. This automated system makes use of radio frequency identification devices (RFID). For an RFID system to work, an item—such as a toll transponder—is tagged with a silicon chip and an antenna. RFID readers—such as the device that records the identity of a registered toll transponder—can then record and process the unique information from the tagged item.¹¹¹ The reader then sends all of this information to an electronic database for collection and interpretation.

Dedicated short-range communications (DSRC) refer to a variety of RFID technologies more powerful than the types that are used today.¹¹² Libraries that use RFID technology to keep track of their books employ passive tags that must be activated by an electronic reader in order to respond with a signal regarding the information sought.¹¹³ By contrast, DSRC technology acts as a peer-to-peer system, permitting either side of an electronic conversation to initiate the transfer of information.¹¹⁴ It is DSRC technology that will permit the rapid, real-time data exchange that will make any automated enforcement program possible.

B. *The Federal Plan to Automate Highways*

To fully understand how an automated system could eliminate the traffic stop, one must possess some familiarity with a federal plan dating back fifteen years. Congress directed the Secretary of Transportation to

110. Obstacles such as trees or buildings can impede GPS operation. Greater accuracy can be achieved through the use of receivers with “differential global positional systems” technology. See Smithsonian National Air and Space Museum, *How Does GPS Work?*, <http://www.nasm.si.edu/exhibitions/gps/work.html> (last visited Oct. 7, 2006). When DGPS receivers are available more widely, they will provide the accuracy necessary for DSRC systems. See Camp Vehicle Safety Communications Consortium, *Vehicle Safety Communications Project Task 3 Final Report: Identify Intelligent Vehicle Safety Applications Enabled by DSRC 45* (March 2005), available at <http://www.nrd.nhtsa.dot.gov/pdf/nrd-12/1665CAMP3web/images/CAMP3scr.pdf> [hereinafter *Task 3 Final Report*] (noting that nationwide DGPS “should allow the geopositioning requirements of many of the vehicle safety applications envisioned”); see also *OnStar Basics*, http://www.onstar.com/us_english/jsp/explore/onstar_basics/technology.jsp (last visited Oct. 7, 2006) (describing operation of OnStar program).

111. FEDERAL TRADE COMM’N, RADIO FREQUENCY IDENTIFICATION: APPLICATIONS AND IMPLICATIONS FOR CONSUMERS 3-5 (2005).

112. Jonathan Collins, *Automotive RFID Gets Rolling*, RFID J., Apr. 13, 2004.

113. FCC Report, *infra* note 117, at 10.

114. Unlike cell phone technology, DSRC systems do not require knowledge of the number to be called. DSRC systems also have a low delay or “latency” of less than 100 milliseconds that is superior to other existing alternatives. This permits DSRC systems to provide immediate “crash avoidance” data to cars. *Task 3 Final Report*, *supra* note 110, at 40, 45.

“promote the widespread use and evaluation of intelligent vehicle-highway systems technology as a component of the Nation’s surface transportation systems” by passing the Intermodal Surface Transportation Efficiency Act of 1991.¹¹⁵ The Department of Transportation selected the Intelligent Transportation Society of America (ITSA), a non-profit association comprised of local governments and private companies, to serve as its Federal Advisory Committee¹¹⁶ on the development of intelligent highway technology.¹¹⁷ ITSA has since authored many of the key documents describing the technology to be used.

While the Intelligent Transportation Systems plan envisions a variety of technological innovations and infrastructure improvements, the term refers principally to a system in which cars are engaged in a continuous digital conversation with one another and with public and private entities, like local traffic control agencies.¹¹⁸ For instance, this digital conversation could alert a driver that a different car ahead on the road—though perhaps out of the driver’s line of sight—has suddenly slowed down and requires a rapid response.

The plan for an Intelligent Transportation System is far more ambitious in scope than the existing uses of telematics. According to an ITSA Ten Year Vision statement, all new cars¹¹⁹ would contain factory-installed on-board units connected to the cars’ internal sensors and controls.¹²⁰ These units would communicate information such as driver

115. Pub. L. 102-240 § 6053 (1991), codified at 23 U.S.C. § 307, repealed by Intelligent Transportation Systems Act of 1998, Pub. L. 105-178 § 5201-5213. Section 5203 of the 1998 Act is substantially similar to the language quoted above.

116. Federal Advisory Committee Act, Pub. L. No. 92-463, 86 Stat. 770 (1972).

117. FEDERAL COMMUNICATIONS COMM’N, REPORT AND ORDER FCC 03-324, at 6 n.12 (Released Feb. 10, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-324A1.pdf. [hereinafter FCC REPORT] (noting that, as of 2003, ITSA had over 600 members from business, academia, and government). The DOT did not recognize ITSA as its FAC in 2003, but did indicate to the FCC that this did not reflect a change in the Department’s views on ITSA. *Id.* at 6 n.14.

118. Regrettably, the government’s plans constitute an alphabet soup of acronyms, so keeping track of the different systems can be tricky. While initially the plan to establish car-to-roadway communications was named the Intelligent Vehicle Highway System (IVHS), most recently the same plan has been renamed Intelligent Transportation Systems (ITS). It is also sometimes referred to as the Integrated Network of Transportation Information (INTI).

119. An automaker working group predicts that “the earliest possible deployment of DSRC [car applications] on production vehicles is likely to be 2007.” Widespread installation in new cars is expected to take another decade. *Task 3 Final Report*, *supra* note 110, at 140. *See also* FCC REPORT, *supra* note 117, at 11 (“[The Department of Transportation] envisions a 5.9 GHz [Dedicated Short Range Communications Service] unit . . . in every vehicle, working in conjunction with a substantial infrastructure of DSRC roadside units.”); *see also* *Transport: The Road Tolls for Thee*, ECONOMIST, June 12, 2004, at 79 (“So expect the car you buy in, say, 2020 to come with a built-in OBU, capable of charging you depending on where and when you drive and how much traffic there is.”).

120. *See* Department of Transportation, Intelligent Transportation Systems, *Vehicle Infrastructure Integration Overview*, available at http://www.its.dot.gov/vii/vii_overview.htm (“The VII vision is that every car manufactured in the U.S. would be equipped with a communications device and a GPS unit so that data could be exchanged with a nationwide, instrumented roadway system.”); FCC REPORT,

location and speed to road-side units embedded in public roadways.¹²¹ Both public agencies (such as local transportation agencies) and private companies (such as gas stations, hotels, and restaurants) would be able to communicate with cars.¹²² These on-board units would also communicate with similar units installed in other cars, regardless of manufacturer; they would help to avoid collisions and to increase fuel efficiency by permitting platooning of vehicles, or controlling several vehicles together.¹²³

This literal information highway requires a common technical platform that would (1) permit communications among cars and with roadside units, and (2) provide the rapid exchange of real-time data necessary to reduce collisions.¹²⁴ Attempts at establishing this common technical platform have been made in recent years. In 1997, ITSA petitioned the Federal Communications Commission to dedicate radio frequency bandwidth for dedicated short-range communications.¹²⁵ In February 2004, the Commission issued a Report and Order that set aside the requested bandwidth for Intelligent Transportation Systems and adopted a technical standard for DSRC devices nationwide.¹²⁶

The FCC order means that bandwidth dedicated to Intelligent Transportation Systems now exists, thus eliminating the possibility of interference from other unrelated devices. The order also decreases the likelihood that conflicting proprietary systems (a problem with state electronic toll systems today) might hinder a nationwide system.¹²⁷

What does this mean for the average driver? Your new car would come equipped with a transponder, or on-board unit, linked to your car's

supra note 117, at 5 (noting that "DOT envisions DSRC unit in every new motor vehicle for lifesaving communications").

121. Glancy, *supra* note 109, at 311-312.

122. *Id.* at 311.

123. See, e.g., INTELLIGENT TRANSPORTATION SOCIETY OF AMERICA & U.S. DEP'T OF TRANSPORTATION, NATIONAL INTELLIGENT TRANSPORTATION SYSTEMS PROGRAM PLAN: A TEN-YEAR VISION 63 (2002), available at <http://www.itsa.org/research.html> [hereinafter A TEN-YEAR VISION]; *Task 3 Final Report*, *supra* note 110, at 27.

124. See FCC REPORT, *supra* note 117, at 10-11.

125. See FCC REPORT, *supra* note 117, at 8. The Report was published in summary form as Dedicated Short Range Communication Services and Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Service in the 5.850-5.925 GHz Band (5.9 GHz Band), 69 Fed. Reg. 46438-01 (August 3, 2004) (to be codified at 47 C.F.R. Parts 0, 1, 2, 90 and 95).

126. *Id.* at 5-6 (adopting standards). The technical standard is specifically called the ASTM-DSRC standard. The FCC REPORT explains:

The ASTM-DSRC Standard enables wireless communications over short distances between information sources and transactions stations and mobile units... DSRC operations generally occur over line-of-sight distances of less than 1000 meters between roadside units and most high speed (up to 120 mph), but occasionally stopped and slow moving vehicles, or between high speed vehicles.

Id. at 15-16.

127. FCC REPORT, *supra* note 117, at 10 (noting that electronic toll collection is "plagued with proprietary systems for individual toll of regulatory entities that cause incompatibility and/or interference that hampers interstate commerce").

controls.¹²⁸ Reducing car accidents is the formal objective of the program,¹²⁹ but the incentive to install the necessary equipment on new cars stems from these devices' potential to provide the private sector with a new marketplace.¹³⁰ Factory-installed on-board units will permit location-specific advertising, on-demand entertainment, and electronic payment for gas and other consumer services.

Road-side units¹³¹ would be embedded along the roads at regular intervals to receive from passing cars information such as location and speed.¹³² A DSRC-enabled car would have the capacity to warn you of sudden moves from other cars;¹³³ aid in driving around curves;¹³⁴ issue an in-vehicle "Amber Alert";¹³⁵ permit rapid clearance across the Mexican or Canadian border;¹³⁶ provide instant local traffic data;¹³⁷ transmit information about your "electronic license plate";¹³⁸ and request a car with a particular identity to respond.¹³⁹ And more importantly for present

128. ITSA recommends that the federal government consider mandating "the inclusion of monitoring technology in new vehicles and the retrofitting of older vehicles." INTELLIGENT TRANSPORTATION SOCIETY OF AMERICAN IN COOPERATION WITH DEPARTMENT OF TRANSPORTATION, HOMELAND SECURITY AND ITS: USING INTELLIGENT TRANSPORTATION SYSTEMS TO IMPROVE AND SUPPORT HOMELAND SECURITY 25 (2002).

129. See, e.g., *Vehicle Infrastructure Integration Overview*, *supra* note 120 (stating that "a significant reduction in [the 43,000 deaths on U.S. highways each year] could be achieved through coordinated development of a nationwide wireless communication infrastructure that would allow communication between vehicles and between the vehicle and the roadside."); A TEN-YEAR VISION, *supra* note 123, at 25 ("The goal is to reduce annual transportation-related fatalities by 15% overall by 2011, saving 5,000 to 7,000 lives per year.").

130. FCC Report, *supra* note 117, at 12 ("The record clearly establishes that non-public safety use of this band is essential to promote early deployment of all DSRC applications.").

131. An ITSA report provides this technical summary:

The system is based on "events and snapshots" in a read zone when an OBU enters the communication zone of an RSU. In this case, the RSU sends messages on the control channel and the OBU listens and then responds with public/private data. In the case of [vehicle to vehicle] communication, one of the OBUs will start the transaction by taking on many characteristics of an RSU (i.e. sending the initial interrogation).

DSRC Industry Consortium, DSRC Technology and the DSRC Industry Consortium (DIC) Prototype Team: White Paper, at 4 (Jan. 28, 2005).

132. While ITS technologies were originally designed to collect information on an anonymous basis, over time a "greater emphasis on targeting individuals began to emerge." See Glancy, *supra* note 109, at 303.

133. *Task 3 Final Report*, *supra* note 110, at 21.

134. *Id.* at 16.

135. *Id.* at 19.

136. A TEN-YEAR VISION, *supra* note 123, at 102 ("There exists a memorandum of understanding between the U.S. DOT and the Canadian Ministry of Transport to work together to coordinate their ITS architectures and ITS initiatives. Mexico is also working toward an ITS architecture.").

137. *Task 3 Final Report*, *supra* note 110, at 36.

138. *Id.* at 39.

139. *Id.* at 6-39 (describing possible uses of DSRC). A device that records information on driving location and speed could also presumably be used to tax drivers by the mile. Such a suggestion has been made recently by California Department of Motor Vehicles director Terry Tamminen. See Robert Salladay, *DMV Chief Backs Tax By Mile*, L.A. TIMES, Nov. 16, 2004, at B1 (describing this proposal for California drivers and noting experiments with taxing by the mile in Seattle and Oregon).

purposes, a DSRC-enabled car would also permit automated law enforcement of the vehicle code.¹⁴⁰

C. How Automated Law Enforcement Curbs Discretion

By remotely and automatically enforcing the laws normally used by police to conduct traffic stops, DSRC systems could eliminate or drastically reduce the number of police-conducted traffic stops.¹⁴¹ Automated enforcement is a proposed policy option: “Crashes could be significantly reduced through *automated enforcement*. The proper intent of these systems is to reduce violations by modifying driver behavior.”¹⁴²

An automated enforcement program could eliminate stops based on excessive speeding, and the other justifications police officers most frequently use to stop drivers. For instance, from a safety perspective, driver alertness—whether from alcohol, fatigue, or other physical impairment—is a major cause of crashes. To address this concern, advocates of the Intelligent Highway System note that the technology is available to “assure that an operator is appropriately licensed, unimpaired and alert,” by means of “positive identification techniques (fingerprint recognition, retinal scan, voiceprint) cross-checked in real-time against licensing authority records.”¹⁴³ DSRC systems permit this real-time verification. Police rely on a relatively short list of reasons to justify traffic stops¹⁴⁴ and, as Table I demonstrates, the most frequently cited reasons for stops are amenable to automated enforcement. Because a DSRC enabled car regularly broadcasts information about the car and the driver to the infrastructure, enforcement by the police becomes unnecessary. As we will

140. ITSA also points out that it would save the resources of the police for other matters. See A TEN-YEAR VISION, *supra* note 123, at 61 (stating that “spot enforcement programs” for traffic violations “have been effective, but they divert police personnel from other public safety priorities and are costly”).

141. To be sure, automated enforcement is not the focal point of the intelligent highway system. And ITSA documents offer few details on the operation of an automated enforcement program. An automated enforcement program would eliminate stops based on excessive speeding, but for all of the most frequently used justifications to stop drivers.

142. A TEN-YEAR VISION, *supra* note 123, at 63 (emphasis added). Automated enforcement is a persistent theme. See also *id.* at 5 (“Unprecedented levels of safety, mobility and efficiency will be made possible through the development, integration and deployment of a new generation of in-vehicle electronics, vehicle and highway automation and selective automated enforcement, including the determination of fitness to drive.”) (emphasis added); 32 (stating potential benefits of automated enforcement); 59 (same); 61 (same); 69 (same); 70 (same); see also Letter from Suzanne J. Murtha to Jane Dion, National Highway Traffic Safety Administration (“Automated enforcement, if carefully and legally applied, also has the potential to eliminate many crashes.”); cf. INTELLIGENT TRANSPORTATION OF SOCIETY OF AMERICA & U.S. DEP’T OF TRANSPORTATION, HOMELAND SECURITY AND ITS: USING INTELLIGENT TRANSPORTATION SYSTEMS TO IMPROVE AND SUPPORT HOMELAND SECURITY 12 (2002) (“One key area of protection for which ITS is central is the ability to safely halt surface vehicles that have been identified as threatening.”), available at <http://www.its.org/resources.nsf>.

143. A TEN-YEAR VISION, *supra* note 123, at 61.

144. See Durose, *supra* note 22, at 5.

see, the only real obstacles to an automated enforcement regime arise from social objections, not technical problems.¹⁴⁵

Table 1

Reasons Most Often Cited by the Police for Traffic Stops (in order of frequency)¹⁴⁶	Candidate for automatic enforcement?
Speeding	Yes ¹⁴⁷
Record Check	Yes ¹⁴⁸
Vehicle defect	Yes ¹⁴⁹
Stop light or Traffic light violation	Yes ¹⁵⁰
Illegal Turns	Yes ¹⁵¹
Seat belt violations	(unknown) ¹⁵²
Drunk Driving	Yes ¹⁵³

An automated law enforcement program will only have an impact on police discretion if it replaces, wholly or substantially, those traffic stops that would have been conducted by a police officer. What might such a program look like? Official discussions on intelligent highways are vague in this regard. One possibility is that a state, county, or municipality seeking to curb police discretion in traffic stops would have the local traffic agency enable the DSRC infrastructure to enforce motor vehicle laws

145. See A TEN-YEAR VISION, *supra* note 123, at 67 (“Driver Qualification Issue is Social, Not Technical. Are we prepared to demand that drivers, whether of private passenger cars or of commercial vehicles, public transit vehicles, or trains, demonstrate their credentials and unimpaired status on a routine, proactive basis? So far, the answer has been ‘no.’”).

146. Figures for this table are derived from a 2002 survey conducted by the Bureau of Justice Statistics. Specific percentages are as follows: speeding (54.8%); record check, such as insurance coverage (11.5%); vehicle defect, such as a burned out headlight (9.3%); stoplight or stop sign violation (7.1%); illegal turn (4.9%); seat belt violation (4.4%); other traffic offenses (4.2%); drunk driving roadside check (1.3%). A small percentage (2.1%) report that police gave no reason for the traffic stop. Durose, *supra* note 22, at iv.

147. See *Task 3 Final Report*, *supra* note 110. The literature on DSRC applications refers only to information that can be received by or transmitted to cars with on-board units, without discussion of using this information for law enforcement. Automated enforcement is, however, a topic raised multiple times in the intelligent highways literature. The decision to use information regarding, say, whether a car is driving in excessive of the legal limit is a policy choice, rather than a technical obstacle.

148. See *id.* at 39 (discussing “non-safety” applications such as electronic license plates and “vehicle lock-down”).

149. See *id.* at 20-21 (discussing information on vehicle diagnostics).

150. See *id.* at 6-7, 9 (discussing stop sign and traffic signal violation detection).

151. See *id.* at 8 (discussing application for turn signals).

152. See discussion *infra* Part III.A.2.

153. See A TEN-YEAR VISION, *supra* note 123, at 61.

rather than enable it to provide only warnings to drivers. In turn, the corresponding police department would as a matter of policy cease or substantially limit the kinds and amounts of traffic stops conducted by its own officers. Of course, the processing and oversight of such an enforcement program could remain ultimately with the police. Only the discretionary aspect of this enforcement would be eliminated.

True, the above proposal is in some ways modest; automated enforcement would not extend beyond the traffic stop. Police would still possess considerable discretion in encounters on the street, in their investigations, and so forth. Nevertheless, if one considers that in 2002 nine million drivers were stopped for speeding alone,¹⁵⁴ even a selective use of automated enforcement would have a far-reaching impact on the number of traffic stops conducted by the police.

I. Whren v. United States and Atwater v. Lago Vista Revisited

Let us reconsider the facts of *Whren v. United States*.¹⁵⁵ Recall that Michael Whren and James Brown were stopped by the D.C. Metropolitan police for failing to signal while turning and for driving at an “unreasonable” speed.¹⁵⁶ Based on these alleged traffic law violations, the police stopped their vehicle and discovered the evidence of more serious crimes. While Whren and Brown argued that the traffic law violations were pretextual, the Court rejected their claims. As long as the officers “could have” stopped the vehicle, the stop was reasonable for Fourth Amendment purposes.¹⁵⁷

A DSRC system could detect turn signal violations and speeding, among other things.¹⁵⁸ Had the District of Columbia replaced officer discretion with automated enforcement, Whren and Brown would not have been involved in a traffic stop at all. Their traffic law violations would have been enforced automatically and remotely. Any suspicions about their involvement in illegal drug activity would have been investigated by other means: namely, stops based on reasonable suspicion or probable cause related to the actual reasons why the police suspect these drivers. To argue that pretextual traffic stops serve the interests of justice because they so often turn up evidence of more serious criminal activity translates into an ends justifying means approach that contrasts with much of our criminal procedure jurisprudence.

The vehicle code violations for which Whren and Brown were stopped are typical reasons cited by the police in conducting traffic stops.

154. See Durose, *supra* note 22, at 6 (stating that 9,199,342 drivers were stopped for speeding by the police according to 2002 survey).

155. 517 U.S. 806 (1996)

156. *Id.* at 808.

157. *Id.* at 819.

158. See Table 1, *supra*.

Improper lane changes, excessive speed, and failure to signal are the types of infractions cited by the police as turning up evidence of more serious crimes. Remote detection and enforcement could eliminate police discretion in all these matters.

And what about Gail Atwater? She was stopped for failing to wear a seat belt. Unfortunately, the Intelligent Highway initiative literature does not specify whether this particular vehicle code violation is amenable to remote enforcement. We do know that an automated, and relatively low-tech substitute for police enforcement of seat belt violations has long existed, but has not been implemented.¹⁵⁹ In 1973, the National Highway Transportation Safety Administration required all new passenger cars to have a seat belt ignition interlock device, preventing ignition of the car if any front seat passenger was not buckled up.¹⁶⁰ A year later, Congress passed a law prohibiting the requirement of any seat belt ignition interlock that remains in effect today.¹⁶¹ In 2003, the NHTSA urged Congress to reconsider lifting its ban on ignition interlocks requirements.¹⁶²

Such a device, if legally required, would have prevented Atwater from driving her car in the first place. Moreover, there is no reason that seat belt use could not be incorporated into a DSRC system. But as the NHTSA observes, unless these technologies are required, the only alternative to increased safety is aggressive police enforcement.¹⁶³ A technological option would have avoided the law enforcement problem altogether. However, as Part IV discusses, this failed attempt to automate seat belt wearing reflects resistance from the public on overly intrusive restrictions on their own choices about whether or not to break the law.

In both *Whren* and *Atwater*, technological choices could have prevented encounters that were humiliating or discriminatory.

2. *Prior Experiences with Automated Law Enforcement*

Not only is a comprehensive automated enforcement program possible, but we have already had limited experience with its use. In 1993, New York City became the first American city to install photo radar to

159. By contrast, many states require ignition interlocks for those who have been convicted of multiple drunk driving offenses. Recently, Mothers Against Drunk Driving initiated a campaign to require such devices for first time drunk driving offenders in every state. See Matthew L. Wald, *A New Strategy to Discourage Drunk Driving*, N.Y. TIMES, Nov. 20, 2006, at A1.

160. TRANSPORTATION RESEARCH BOARD, SPECIAL REPORT 278, BUCKLING UP: TECHNOLOGIES TO INCREASE SEAT BELT USE 4 (2003), available at <http://onlinepubs.trb.org/onlinepubs/sr/sr278.pdf> (last visited Oct. 17, 2006).

161. Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. 93-492, 15 U.S.C. 1410b (1974) (repealed in 1994; replaced with 49 U.S.C. 30124).

162. TRANSPORTATION RESEARCH BOARD, *supra* note 160, at 14.

163. See *id.* at 89 (suggesting that current seat belt technologies such as warning lights are only part of a program that includes the ability of the police "to pull over and cite" noncompliant drivers).

catch red-light violations.¹⁶⁴ Typically, photo radar works as follows.¹⁶⁵ Sensors embedded in the roadway close to an intersection record the speed of cars traveling over them. If that car exceeds a preset minimum speed while the light is red, a camera at the intersection takes at least one, and sometimes two, pictures to record the car's license plate. Technicians review the photographs for clarity and send the registered owner of the car copies of the photographs and a citation. American cities have been slow to widely adopt a technology that has been available since the 1960s and has been used in Europe since the late 1970s.¹⁶⁶ One recent estimate identified the use of photo radar for red-light enforcement in only eighty cities in twenty states.¹⁶⁷

Nor is automated enforcement limited to the public sector. A recent case from the Connecticut Supreme Court discussed the speed enforcement policy of American Car Rental, Inc., which installed a GPS device in each of its cars in order to record each car's speed and location.¹⁶⁸ Rental agreements with the company included the following statement: "Vehicles driven in excess of [seventy-nine miles per hour] will be charged a \$150 fee per occurrence. All our vehicles are GPS equipped."¹⁶⁹ Whenever the GPS device recorded an 'occurrence' of driving more than seventy-nine miles per hour for two minutes or longer, the device would transmit the car's location and speed to a third party vendor that would, in turn, send the information to American Car Rental for a fee assessment.¹⁷⁰

Thus, the use of DSRC to catch speeders, reckless drivers, and tardy registrants is less remarkable for its replacement of humans by machinery than it is for its potential scale.

164. Tara Di Trolio, *Slow Yield on Red*, GOVERNING MAG., Nov. 2003 (observing reluctance of cities and states to adopt red-light cameras).

165. See Steven Tafoya Naumchik, *Stop! Photographic Enforcement of Red Lights*, 30 MCGEORGE L. REV. 833, 846-847 (1999) (describing operation of a typical photo-radar installation).

166. See Di Trolio, *supra* note 164 (observing reluctance of cities and states to adopt red-light cameras); see also *Modernizing Traffic Law Enforcement Through Automation: U.S. Lags Behind, Special Issue: Automated Enforcement*, INSURANCE INSTITUTE FOR HIGHWAY SAFETY STATUS REPORT 37, No. 5, May 4, 2002, at 4, 7, available at <http://www.iihs.org/sr/pdfs/sr3705.pdf> (describing popularity of photo radar for speed (Australia, Austria, Israel, the Netherlands, Norway, and U.K.) and for red-light (Australia, Canada, "many European countries," Israel, Singapore, South Africa, and Taiwan) enforcement); Joey Ledford, *Cameras Put Brakes on Red Light Scofflaws*, ATLANTA-JOURNAL CONST., Apr. 2, 2004, at 2D (reporting 97 American jurisdictions with red-light cameras).

167. See Di Trolio, *supra* note 164.

168. *Am. Car Rental, Inc. v. Comm'r of Consumer Prot.*, 273 Conn. 296 (2005).

169. *Id.* at 299.

170. *Id.* The Connecticut Supreme Court affirmed the lower court's judgment that this speeding provision could not be justified as a permissible liquidated damages charge protecting the company's property, and thus violated the state's unfair practices law as an illegal penalty. *Id.* at 310.

IV POTENTIAL OBJECTIONS

Of course, if a law enforcement program meets too many objections it will not be realized, its practical feasibility and social merit notwithstanding. This section raises and addresses what are likely to be the strongest arguments in favor of leaving our current situation as it stands: the legality of an automated enforcement program; the possible inevitability of police discretion; the reliance of the public on partial police discretion; and the possible social and political value of police discretion in these encounters.

A. The Legality of Automated Law Enforcement

Because the precise logistics of automated enforcement remain unresolved, analysis of its legality must be somewhat imprecise.¹⁷¹ Here is one scenario: a car's on-board unit sends data regarding, for instance, evidence of excessive speeding to a road-side unit that then relays this information to a processing station administered by the local police department. Perhaps an initial violation would trigger only an in-vehicle warning, but the second would automatically transmit the violation to the police. A ticket would follow in the mail.¹⁷²

Would such a program be constitutional?¹⁷³ According to the Supreme Court, police activity constitutes a search when it intrudes upon an actual expectation of privacy and one that "society is prepared to recognize as reasonable."¹⁷⁴ Yet in our speeding example, that test is surely difficult to meet when a car is constantly transmitting information such as driving speed not only to avoid collisions, but to provide information for automated enforcement.¹⁷⁵

The installation of an on-board unit and the collection of information from it are two analytically distinct acts. If the on-board units were built

171. The Department of Justice has not yet made any decision about an automated enforcement program, and even it had, the decision to adopt such a program and its precise operational details would be a local matter. Telephone Interview, Mike Schagrin, Dep't of Justice: Manager, Cooperative Intersection Collision Avoidance Systems Initiative; Integrated Vehicle Based Safety Systems Initiative; Intelligent Vehicle Initiative Coordinator (June 23, 2005).

172. Kermit Whitfield, et al., *Electric Steering Gets a Boost*, AUTOMOTIVE DESIGN & FUNCTION, June 1, 2005, at 26, available at 2005 WLNR 9421701 (describing how UAE smart-box technology will issue speeding tickets).

173. To be clear, the scope of this Essay is relatively narrow: it focuses only on police discretion in the use of traffic law enforcement. If, for example, the police attempted to retrieve personal information from DSRC communications other than information about the car's speed, location, etc., federal and state wiretapping laws are probably applicable in those cases. See Electronic Communications Privacy Act, 100 Stat. 1848, codified as 18 U.S.C. § 2510-2521 (2006).

174. *Katz v. United States*, 389 U.S. 347, 361 (1967) (internal quotation mark omitted).

175. See, e.g., *Task 3 Final Report*, *supra* note 110, at 4 (noting that some applications will require "vehicles to make periodic broadcasts (e.g. every 100 [milliseconds]) in order to identify their position on the roadway").

into the cars by automakers themselves,¹⁷⁶ as is currently planned, that installation would lack the predicate of state action to classify its installation as a governmental search or seizure.¹⁷⁷ Federal laws requiring the installation of transponders, however, may present a different case. Much depends on characterization or whether these transponders are like the vehicle identification numbers or like surveillance devices.

What about police collection of information from that device? Two factors weigh in favor of its constitutionality. First, information that is deliberately or knowingly exposed to public view receives no Fourth Amendment protection.¹⁷⁸ Second, as the Court has stated repeatedly, the fact that cars are highly regulated affords drivers a lesser degree of privacy than that assumed by home-dwellers, pedestrians, or others.¹⁷⁹ For these reasons, drivers lack any reasonable expectation of privacy in the movement of cars on public roadways and all other information that may be observed there.¹⁸⁰ Technological enhancement of the senses does not transform the nature of that calculation.¹⁸¹ Unlike surveillance of a private conversation, the information exchanged would be sent directly from a car's transponder for the purpose of providing information for enforcement. To the extent that DSRC systems transmit information that a police officer might otherwise observe, the Fourth Amendment should not bar the use of that information as a basis for automated enforcement—either as a warrantless search or seizure.

176. See Suzanne Murtha, Telephone Interview, *supra* note 17.

177. See, e.g., *Burdeau v. McDowell*, 256 U.S. 465 (1921) (finding no Fourth Amendment violation exists when private actors conduct search). Even the installation of an electronic tracking device on a car's exterior by the police has been determined to be neither a search nor a seizure under the Fourth Amendment. See also *United States v. McIver*, 186 F.3d 1119, 1126-1127 (9th Cir. 1999); *but see State v. Jackson*, 76 P.3d 217, 264 (Wash. 2003) (holding that attachment of GPS tracking device on defendant's car constituted a search as a matter of state constitutional law).

178. See *Katz*, 389 U.S. at 351. See also *California v. Greenwood*, 486 U.S. 35 (1988) (holding that defendant lacked reasonable expectation of privacy in garbage left on curb for trash collection).

179. See, e.g., *New York v. Class*, 475 U.S. 101, 113 (1986) (“[A]utomobiles are justifiably the subject of pervasive regulation by the State. Every operator of a motor vehicle must expect that the State, in enforcing its regulations, will intrude to some extent upon that operator's privacy.”).

180. Cf. *United States v. Knotts*, 460 U.S. 276, 281 (1983) (“A person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in this movements from one place to another.”). In *Knotts*, the police placed a beeper in a container that was then sold to one of the co-defendants. The beeper enhanced what the police could have seen by visual inspection: the driver's movement on the highway. There is, however, a line drawn in the Court's Fourth Amendment cases at the boundaries of the home. See, e.g., *United States v. Karo*, 468 U.S. 703, 715 (1984) (holding that Fourth Amendment violation occurs when “the Government surreptitiously employs an electronic device to obtain information that it could not have obtained by observation from outside the curtilage of the house.”).

181. See, e.g., *Knotts*, 460 U.S. at 282 (“Nothing in the Fourth Amendment prohibit[s] the police from augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afforded them in this case.”); *but cf. Kyllo v. United States*, 533 U.S. 27 (2001) (holding that technological enhancement of the senses to retrieve information that could not have otherwise been obtained constitutes a “search,” albeit in the context of a home).

Although the Supreme Court's development of Fourth Amendment law with respect to cars would not render an automated enforcement program unconstitutional, the applicable regulatory framework remains unsettled. There are, as of this writing, no statutes that clearly address the proper uses of DSRC systems by the government.¹⁸² The FCC order already discussed approves technical standards, but mentions no applicable standards to be applied when the police access the data.¹⁸³ Federal telecommunications law protects the privacy of cell phone information, including the location of the cell phone customer,¹⁸⁴ but it is unclear whether DSRC communication between on board units and roadside units would be covered under these laws.¹⁸⁵ Also, any formal program of automated enforcement in which driver information was directly communicated to the police would seem unlikely to run afoul of federal wiretapping laws. Presumably information regarding the driver's traffic offense would not be intercepted by the police but received as part of a formal enforcement program.¹⁸⁶

In short, the appropriate regulatory framework remains unsettled, and the Court's development of Fourth Amendment law with respect to cars would provide little or no protection from collecting data that would lead to enforcement of laws that cover speeding, proper vehicle registration, failure to use turn signals and similar offenses.

182. Glancy, *supra* note 109, at 373 (observing that "considerable uncertainty remains about the privacy of the new [DSRC] applications"); *cf.* David Bender, *Recent Online Privacy Developments*, 823 *PLI/PAT* 153, 201 (2005) ("There is no body of law in the United States that deals with RFID tags").

183. Glancy, *supra* note 109, at 312 ("Among the interesting features of the FCC's authorization of DSRC for ITS is the absence of any mention of standards or controls with regard to the privacy or security of the information transmitted.").

184. See 47 U.S.C. § 222 (c)(1) (2006) (limiting use, disclosure or access to customer proprietary network information to provision of telecommunications service or to related necessary services, except "as required by law or with the approval of the customer"). Customer proprietary network information is "information that related to the quantity, technical configuration, type, destination, location, and amount of use of a telecommunications service subscribed to by any customer of a telecommunications carrier, and that is made available to the carrier by the customer solely by virtue of the carrier-customer relationship"). *Id.* at (h)(1)(A). On the other hand, the Communications Assistance for Law Enforcement Act mandates that wireless carriers make locational information available to law enforcement agencies "pursuant to a court order or other lawful authorization." See 47 U.S.C. § 1002 (2006).

185. See Glancy, *supra* note 109, at 373 ("As a practical matter, some of the DSRC technology, particularly the geographically limited stand-alone roadside units, might not be treated as interstate telecommunications carriers under federal law and, as a result, not [Customer Proprietary Network Information]").

186. See 18 U.S.C. § 2511(1) (2006) (prohibiting unlawful "interception" of electronic communications).

B. *The Inevitability of Discretion*

It may be premature to predict the death of discretion. Some argue that no technology, no matter how sophisticated, can eliminate discretion. Policing scholar Jerome Skolnick provides insight into this objection.

In part of his influential study of the Westville Police Department, Skolnick analyzed the role of discretion in the seemingly mundane task of parking enforcement.¹⁸⁷ In the abstract, this kind of police work epitomizes the simple and virtual elimination of discretion: the meter officer's task is simply to read the meter and issue a ticket if necessary. Yet as Skolnick noted, room for discretionary judgment exists whenever "a person enters the scene."¹⁸⁸ The violator may ask for leniency if he returns to his car before the officer writes a ticket.¹⁸⁹ Once the officer has begun to write, the exercise of discretion is more difficult, since each numbered ticket must be accounted for, yet it can be exercised nevertheless.¹⁹⁰ As a result, Skolnick concluded that "it is impossible to eliminate discretion entirely from the administration of criminal law, even for such a simple and routine operation as the enforcement of parking meter violations."¹⁹¹

Skolnick's conclusion contains an important qualification: discretion is unavoidable whenever "a person enters the scene."¹⁹² The ITSA plan envisions a transfer of data devoid of human judgment. Automated enforcement would contain no means for a violator to plead her case to a sympathetic ear, nor a means for a police officer to conduct a traffic stop on a pretext.¹⁹³

In a larger sense, Skolnick is right. The degree to which discretionary judgments exist will depend on the details of an enforcement program. Automated enforcement of traffic laws would not do away with ordinary policing patrols. Critics of the traffic stop may claim that as long as police are permitted to patrol the public roads, they will find other justifications to conduct stops on public roads. Automated enforcement simply changes the permissible reasons. Pretextual seizures based upon race, class, or personal bias would simply adopt a form other than traffic stops. Although automation may not eliminate discretion, it can severely curtail its exercise in many circumstances, including where undesirable bias has been used.

187. JEROME H. SKOLNICK, *JUSTICE WITHOUT TRIAL* 72-74 (Macmillan 1994) (1966).

188. *Id.* at 86.

189. *Id.* at 72.

190. *Id.*

191. *Id.*

192. *Id.* at 86.

193. Of course, discretion would not entirely disappear from the entire process, only the in the interaction between police officer and citizen. Presumably, personal judgment would reappear in the form of an appeals process. The difference, however, between discretion at the policing level and at the judicial or administrative level is significant. Police encounters typically lack the kind of paper record and transparency that would be afforded to persons who appeal.

C. Public Reliance on Partial Enforcement

Even if an automated enforcement program were legal, other obstacles pose some serious and potentially fatal challenges to any program on the scale contemplated by the Intelligent Transportation Systems plan. These impediments are social rather than technical.

ITSA itself sees public resistance as the most difficult challenge to automated enforcement. For instance, ITSA documents observe that:

The deployment of automated enforcement systems will be limited by the level at which the public accepts them. The 'Big Brother is Watching' syndrome is likely to play heavily in the mind of the public and of legislators who can prevent their deployment. . . . The public and their legislators may be more willing to accept automated enforcement systems if a direct correlation between these systems and their safety can be made."¹⁹⁴

Critics of programs like the Intelligent Highways Initiative worry that the privacy interests of citizens will be intruded upon.¹⁹⁵ In a basic sense, simply collecting massive amounts of data on driving habits infringes our autonomy or the ability to make decisions and to retain a sphere of private activity free from surveillance.¹⁹⁶ Once that data is amassed, legitimate concerns arise regarding the potential for personal information misuse by the government or private actors,¹⁹⁷ beyond the official purposes of any formal traffic management or policing program.

And the concerns that ITSA mentioned seem to have just cause. When photo radar first became available, some state legislatures responded by banning its use altogether.¹⁹⁸ Such reactions may not reflect uniform public

194. A TEN-YEAR VISION, *supra* note 123, at 67. "Most of the challenges which transportation faces relate less to creating new basic technology than to the need to change and update existing institutions and the need to change deep-seated habits and attitudes." *See also id.* at 16 Similarly, Claire Corbett and Frances Simon, writing about British traffic law offenders, dismissed the potential of "automatic policing systems:"

The difficulty here is that our society, with its somewhat ambivalent attitudes to traffic law, has yet to be properly tested on how far it will accept curtailment of what are likely to be perceived as its civil liberties. Western governments are unlikely to relish such a politically sensitive test.

Claire Corbett & Frances Simon, *Decisions to Break or Adhere to the Rules of the Road, Viewed from the Rational Choice Perspective*, 32 BRIT. J. CRIMINOL. 537, 548 (1992).

195. This brief summary is only meant to hint at the considerable scholarship that has arisen on the impact of new technologies on personal privacy.

196. *See, e.g.*, Glancy, *supra* note 109, at 322 (discussing "autonomy privacy interests"); Weisberg, *supra* note 19, at 95 ("[I]f motorists are all vaguely aware or generally aware that the police can follow their movements all the time [. . .] then [this] may create an insidious but lulling sense of uncertainty as to who is being followed at any one time, and for what purposes, and cause the public to fear or disdain the police.").

197. *See, e.g.*, Glancy, *supra* note 109, at 324 (discussing "information privacy interests").

198. These include Nevada, New Jersey, and Wisconsin. *See* Shari R. Kendall, *Is Automated Enforcement Constitutional?* Insurance Institute for Highway Safety, Automated Enforcement Laws (May 2004), available at http://www.iihs.org/laws/state_laws/pdf/automated_enforcement.pdf.

opinion; survey evidence now shows strong public support for red-light cameras.¹⁹⁹

How should we interpret this anticipated resistance to automated enforcement? Privacy concerns probably cannot by themselves justify total bans on the remote enforcement of traffic laws. Concerns about the ability to identify a car's location in real-time may warrant some statutory protections in this regard, but rejecting the use of automated response is too broad a response.

Privacy is likely only one reason for public rejection. We might also interpret this rejection as a default preference for human enforcement. Ronald Clarke, criminologist and former head of the British Home Office Research and Planning Unit, is an expert on the use of situational crime prevention techniques that include automated enforcement.²⁰⁰ Clarke is puzzled over this reluctance: “[p]erhaps all these devices offend people’s sense of fair play. People have to be given a sporting chance of getting away with crime, especially the ordinary everyday offenses that all of us might commit.”²⁰¹ The existence of discretion, and therefore the possibility of its abuse, may be a cost people are willing to assume in order to break some traffic laws. Reliance on traffic law enforcement by the police ultimately reduces the certainty that any one person will be caught for violating the law.²⁰² Yet the prevalence of that preference, which is ultimately a claim to escape enforcement of the law, does not justify its acceptability.

Alternatively, perhaps a legitimate objection would arise not out of people’s sense that they deserve a chance to break the law, but rather from their view that there is a meaningful distinction between technical legal violations, and abiding by the purpose for which the laws exist. Traffic laws exist to make illegal unsafe driving, a standard that is perhaps best judged by a person rather than by a machine. And survey research suggests that there are “rules for breaking the rules,”²⁰³ just as there are commonly

199. Robert Puentes, *An Intelligent Transportation Policy*, THE BROOKINGS REV. (2001), available at <http://www.brook.edu/metro/its.htm> (reporting results of survey by Insurance Research Council that “83% of respondents favor use of red light cameras”).

200. Ronald V. Clarke, *Situational Crime Prevention*, 19 CRIME & JUST. 91, 108 (1995) (categorizing photo radar as “formal surveillance” in typology of situational crime prevention techniques); Cf. Susan J. Kayler, *Focus on Photo Radar*, 34 ARIZ. ATT’Y 13, 15 (June 1998) (“The privacy argument—that taking a picture of us in our autos somehow invades our privacy—really is an argument for a uniformed police officer to stop vehicles and personally issue a ticket.”).

201. See Clarke, *supra* note 200, at 135.

202. Cf. Corbett & Simon, *supra* note 194, at 544 (observing that in interview research with drivers, a common justification for frequent traffic offenders was the perceived low risk of being caught).

203. Maykel Verkuyten et al., *Rules for Breaking Formal Rules: Social Representations and Everyday Rule-Governed Behavior*, 128 J. PSYCHOL. 485, 494 (1994) (“Behavior, including rule-breaking behavior, is endowed with meaning and regulated by commonsense notions that provide order and regularity.”).

held justifications for obeying the law. People will deliberately ignore a red traffic light not for idiosyncratic reasons, but because compliance appears unwarranted in a particular situation, such as at a deserted rural intersection, rather than in front of a school during the day.²⁰⁴ It is these situations in which the police are probably least likely to stop drivers.

The problem is that we cannot accept the positive good of discretion without the attendant risks and potential harms. Balancing those harms against whatever values may in fact exist behind objections to automated enforcement is ultimately a political decision. The existence of DSRC technology, however, permits us to make a reasoned choice.

D. *The Political and Social Values of Police Discretion*

Finally, some may object to automated traffic law enforcement because they see the struggle to curb discretion as a valuable social and political process between a community and its police. Critics of pretextual police stops, especially against minority drivers, may argue that a technological solution is no solution at all.²⁰⁵

Researchers in the field of procedural justice have repeatedly pointed out the correlation between personal experiences and general attitudes towards the law.²⁰⁶ When people feel they have been treated fairly in their personal experiences with the police, these experiences encourage their sense of trust in the police, as well as reinforce their beliefs in the legitimacy of the law.²⁰⁷ In fact, that fair procedures have been used is more important to these public attitudes than personally favorable outcomes.²⁰⁸ These feelings of trust and legitimacy are central to voluntary compliance with the law, a much less costly means of securing compliance than the conventional deterrence model.²⁰⁹ The converse is true as well; experiences with the police in which people feel they have been treated

204. *See id.* at 489-491, 494 (finding “strong agreement” on “acceptable reasons” for running a red light).

205. *Cf. Harris, The Stories, the Statistics, supra* note 57, at 302 (arguing that even if discretion could be eliminated, “frankly . . . this would not necessarily be a desirable goal. Officers need discretion to meet individual situations with judgment and intelligence, and to choose their responses so that the ultimate result will make sense.”).

206. Voluntary compliance with the law is premised on two interrelated ideas: procedural justice and motive-based trust. Procedural justice refers to the perception that legal authorities like the police and judges have used fair procedures in justifying outcomes. Motive based trust, by contrast, refers to how much trust is attributed to the intentions of these same legal authorities. *See TOM R. TYLER & YUEN J. HUO, TRUST IN THE LAW: ENCOURAGING PUBLIC COOPERATION WITH THE POLICE AND COURTS* 14, 15 (2002).

207. *See id.* at 131.

208. *See id.* at 16.

209. *See id.* at 11-12.

unfairly can lead people to feel less confident in the legitimacy of the law, and thus less willing to abide by the law generally.²¹⁰

Replacing police with technology might produce the same effects as encounters with officers that appear to be procedurally unfair, if doing so would make people feel alienated from the law.²¹¹ While technologically-induced alienation has long been a favorite topic of science fiction writers, it is unclear whether automated enforcement would produce such sentiments. Nevertheless, this is an important objection particularly because race-based abuses of police discretion also have the effect of distancing a community from its police. It would be difficult to justify replacing a system of discretion with an automated enforcement system that has the same alienating effects.

Another objection is that technology-based policing does not solve the underlying problem. True reform lies in the adaptation of officer attitudes, which in turn affect more general relationships between the police and the communities they serve. This is an appealing objection, and efforts to change the attitudes of the police themselves must certainly continue. Yet this objection need not be fatal because automated enforcement that would replace officer discretion in a limited arena: the enforcement of traffic laws. Were such a program adopted, it would leave untouched the myriad ways in which people expect contact with the police, particularly in the community policing movement.

CONCLUSION

Technology cannot offer comprehensive solutions to a seemingly intractable problem like racial discrimination in policing. The development of a technology that could radically change policing in a particularly troublesome area like traffic stops is worth serious consideration because it forces us to think about the ultimate goal of litigants, activists, and commentators critical of pretextual policing.

The use of the pretextual stop represents one example of the potential dangers associated with the discretion afforded to police officers in their day-to-day activities. Most fundamentally, the problem of discretion is part of the structure of policing: we expect the police to make sensible and fair decisions among the many choices they have. In doing so, some police officers rely upon assumptions regarding race and criminal propensity. While the use of race in traffic stops has been familiar to the public for more than a decade, there has been limited success in producing change,

210. *See id.* at 131. DEBORAH RAMIREZ & JACK McDEVITT, ET AL., A RESOURCE GUIDE ON RACIAL PROFILING DATA COLLECTION SYSTEMS, DEP'T OF JUSTICE 4 (2000) ("Recent survey data . . . confirm a strong connection between perceptions of race-based stops by police and animosity toward local and state law enforcement.").

211. *Cf. supra* Part I.C.

either through constitutional law challenges or application of political pressure.

The introduction of DSRC technology provides us with a different potential response to pretextual traffic stops. Automated vehicle code enforcement could eliminate many traffic stops conducted by the police. There will always be situations on public roads involving police-citizen contacts (in emergencies, for example) but the intelligent highway initiative offers us a chance to reevaluate the resources devoted both to traffic stops and to efforts to reduce improper police motives during them.

The greatest obstacles to implementing such a program will not arise from technology or the Constitution, but likely the desirability of the end result: fewer traffic stops and probably increased enforcement of traffic laws against everyone, black and white. No doubt some will welcome this change. Greater law enforcement that is more evenhanded is preferable to disproportionately focusing on a minority of citizens. Others are likely to question whether automation resolves the police discretion problem so much as it dampens debate. The possibility of automated law enforcement, however, encourages us to address these alternatives honestly and directly.