THE STATISTICAL EVIDENCE OF RACIAL PROFILING IN TRAFFIC STOPS AND SEARCHES: RETHINKING THE USE OF STATISTICS TO PROVE DISCRIMINATORY INTENT

Abstract: This Note summarizes and synthesizes developments in statistical analyses of racial profiling data and the legal response to the use of such methods in civil rights cases. Researchers have developed new strategies specifically designed to measure statistical associations between a driver's race and the frequency of vehicle stops and searches. Courts' responses to the use of the statistical evidence derived from these methods are varied. This Note argues that modern developments in data collection and statistical methodology to detect racial profiling support a legal rule that strong statistical associations in well-developed studies should constitute prima facie evidence sufficient to prove discriminatory intent.

INTRODUCTION

"Racial profiling" has become a pervasive practice in recent times, beginning with the War on Drugs and gaining new followers in the War on Terror.[1] To date, the term "racial profiling" has been used to encompass a wide array of topics, such as jury selection, enrollment at institutions of higher learning, disparities in the quality of public education, and searches conducted on passengers at airport termi-

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[1] *See* A. Allen-Bell, *The Birth of the Crime: Driving While Black (DWB),* 25 S.U. L. Rev. 195, 202–03 (1997). The modern day War on Drugs was declared in 1973, when President Richard Nixon established the Drug Enforcement Administration, pledging to reduce drug-related crime. Message to the Congress Transmitting Reorganization Plan No. 2 of 1973 Establishing a Drug Enforcement Administration, 1 Pub. Papers 228 (Mar. 28, 1973). The War on Terror began when President George W. Bush addressed a joint session of Congress and the entire nation on September 20, 2001, stating, "Our war on terror begins with Al Qaeda, but it does not end there." Address Before a Joint Session of the Congress on the United States Response to the Terrorist Attacks of September 11, 2 Pub. Papers 1140, 1141 (Sept. 20, 2001). The effects of racial profiling on airport travel are the most frequently cited example of this new rise in racial profiling. *See* Melissa C. Bancroft, *Congress Urged to Ban Government Agencies from Racial Profiling,* JURIST, Jan. 28, 2007, http://jurist.law.pitt.edu/paperchase/2007/01/congress-urged-to-ban-government.php; *see also* End Racial Profiling Act of 2004, S. 2132, 108th Cong. § 2(a)(11) (2004).

nals.[2] Racial profiling in traffic stops has resulted in "the proportion of African-Americans among the drivers searched by police far exceed[ing] the proportion in the general population of drivers."[3]

In the 1990s, allegations of racial profiling drew political discourse, but congressional efforts to combat racial profiling gradually faded from the media spotlight in the wake of September 11th and the commencement of the War on Terror.[4] As one scholar has noted, "it appears that the events of September 11th have derailed Congress's motivation to pass federal legislation banning racial profiling."[5] Nevertheless, racial profiling concerns have reemerged in the press, both with respect to a new type of profiling in the War on Terror and new findings on profiling in an older, on-going struggle—the War on Drugs.[6]

In April of 2005, the Bureau of Justice Statistics released results from a survey of 80,000 people which indicated that minority drivers were three times more likely to have their vehicles searched following traffic stops than white drivers.[7] The political fallout and subsequent

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[2] *See* Steven R. Wolfson, *Racial Profiling in Texas Departments of Public Safety Traffic Stops: Race Aware or Race Benign?*, 8 Scholar 117, 124–29 (2006). For the purposes of this Note, racial profiling is defined as the practice of conducting traffic stops and subsequent police actions in part due to the officer's reliance on the vehicle occupant's race. *See id.* Various definitions for racial profiling have been given. *Id.* For example, the American Civil Liberties Union refers to racial profiling as "the discriminatory practice by law enforcement officials of targeting individuals for suspicion of crime based on the individual's race, ethnicity, religion or national origin." *See* American Civil Liberties Union, Racial Profiling: Definition (Nov. 23, 2005), www.aclu.org/racialjustice/racialprofiling/21741res20051123. html. The U.S. Department of Justice defines racial profiling as "any police-initiated action that relies on the race, ethnicity, or national origin rather than the behavior of an individual or information that leads the police to a particular individual who has been identified as being, or having been, engaged in criminal activity." *See* Deborah Ramirez et al., A Resource Guide on Racial Profiling Data Collection Systems 3 (2000), *available at* http://www.ncjrs.gov/pdffiles1/bja/184768.pdf.

[3] *See* Wolfson, *supra* note 2, at 131; *see also* John Knowles et al., *Racial Bias in Motor Vehicle Searches: Theory and Evidence,* 109 J. Pol. Econ. 203, 204 (2001).

[4] *See* Albert W. Alschuler, *Racial Profiling and the Constitution,* 2002 U. Chi. Legal F. 163, 163–64.

[5] Floyd D. Weatherspoon, *Ending Racial Profiling of African-Americans in the Selective Enforcement of Laws: In Search of Viable Remedies,* 65 U. Pitt. L. Rev. 721, 730 (2004).

[6] *See, e.g.*, Gerald G. Ashdown, *The Blueing of America: The Bridge Between the War on Drugs and the War on Terrorism,* 67 U. Pitt L. Rev. 756, 757–58 (2006) (arguing that the emphasis on law enforcement led to a decline in civil liberties that first began as a slow and thus largely unnoticed result of the War on Drugs, and has been greatly exacerbated by the War on Terror); Robert M. Chesney, *Civil Liberties and the Terrorism Prevention Paradigm: The Guilt by Association Critique,* 101 Mich. L. Rev. 1408, 1411–12 (2003) (discussing the debate between national security and civil liberties perspectives regarding the effects of the War on Terror on U.S. citizens).

[7] *See* Dan Eggen, *Official in Racial Profiling Study Demoted,* Wash. Post, Aug. 25, 2005, at A7.

demotion of the Chief of the Bureau of Justice Statistics overshadowed other possible implications of this emerging body of statistical literature—namely, what role these statistics should play, if any, in civil rights claims brought by alleged victims of racial profiling during traffic stops.[8]

Public policy concerns demonstrate that civil litigation is a necessary tool in the battle to combat discrimination on the nation's roadways.[9] The hurdle, however, of proving discriminatory intent, as required to succeed in racial profiling claims, has been nearly insurmountable.[10] Statistical evidence can serve as a powerful tool to establish intent and overcome this preliminary burden.[11]

Part I of this Note reviews the traditional approaches statisticians use to detect associations between race and traffic stops/searches by law enforcement officers.[12] It also examines the common obstacles statisticians face when analyzing racial profiling data.[13] In particular, this Part considers: (1) the populations and data used to compare minority with non-minority drivers stopped; (2) how large a statistical disparity must be to be considered a "strong" association; and (3) the common weaknesses and concerns, from the statistician's perspective, with analyzing racial profiling data.[14] Part II discusses modern data collection initiatives and recent improvements in statistical methodologies that are designed, in part, to address the difficulties that arise when attempting to draw statistical inferences from racial profiling data.[15] Part III reviews the spectrum of common law approaches to the use of statistics to demonstrate discriminatory intent in racial profiling claims.[16] Part IV argues that improvements in the ability of statistics to detect racial profiling warrant the adoption of a rule that evidence of strong statistical associations between driver's race and subsequent vehicle stops/searches may be used as prima facie evidence of discriminatory intent in racial profiling claims.[17]

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[8] *See* Eric Lichtblau, *Profiling Report Leads to a Demotion,* N.Y. Times, Aug. 24, 2005, at A1.

[9] *See infra* notes 244–260 and accompanying text.

[10] *See infra* notes 136–147 and accompanying text.

[11] *See infra* notes 84–126 and accompanying text.

[12] *See infra* notes 18–83 and accompanying text.

[13] *See infra* notes 18–83 and accompanying text.

[14] *See infra* notes 18–83 and accompanying text.

[15] *See infra* notes 84–126 and accompanying text.

[16] *See infra* notes 127–170 and accompanying text.

[17] *See infra* notes 171–260 and accompanying text.

I. Laying the Foundation for the Statistics of Intent: Traditional Approaches to the Analysis of Racial Profiling Data

A. *Statistics to Estimate Disparities in Vehicle Stop/Search Rates*

Any statistical study of racial profiling must address: (1) whether racial profiling is related to the frequency of traffic stops and searches; (2) how strong of a relationship between the racial profiling and stops/searches exists; and (3) whether the observed measure of disparity in treatment by law enforcement can be explained by some factor other than racial profiling.[18]

To demonstrate a statistical showing of racial profiling, one must show that the disparity in the risk of being stopped by law enforcement is not only higher for a racial minority group, but also that the disparity cannot be explained by some other nondiscriminatory factor or chance variations in selecting whom to stop.[19] In general, all estimates of racial profiling involve comparisons of two populations: those who belong to a minority group believed to be targeted due to racial profiling, and those similarly situated drivers who differ, at least theoretically, only with respect to race.[20] These populations are compared by calculating a statistic of interest to measure the disparity in traffic stops and searches.[21] Researchers have proposed using such measures of disparity as differences in proportions of traffic rule violators stopped, ratios of the relative risk of being stopped for minority versus nontargeted groups, regression correlation coefficients measuring the association between race and traffic stops and searches, and odds ratios that compare the odds of minority drivers being stopped to the odds of nontargeted drivers being stopped.[22]

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[18] *See* Julia Lamber et al., *The Relevance of Statistics to Prove Discrimination: A Typology,* 34 Hastings L.J. 553, 583 (1983). For the purposes of this Section, analogies have been drawn to the analysis of employment discrimination and jury selection statistical analyses, which have been extensively gathered and published. *See generally* D. Baldus & J. Cole, Statistical Proof of Discrimination 153 (1980). The premises, however, of all these analyses are the same: one compares the proportion of those affected with the baseline of all persons who could be affected by the decision to stop vehicles by law enforcement officers. *See id.*

[19] *See* Oscar H. Gandy, Jr., *Journalists and Academics and the Delivery of Race Statistics: Being a Statistician Means Never Having to Say You're Certain,* 4 Race & Soc'y 149, 157 (2001).

[20] *See* 1 McCormick on Evidence § 209, at 799 (John W. Strong ed., 5th ed. 1999).

[21] *See* Lamber et al., *supra* note 18, at 590.

[22] *Id.* at 591. It is important to note that for the purposes of detecting racial profiling, we must examine whether minority group members are stopped disproportionately when compared with other racial groups, even though they are driving in a similar manner, with

Next, researchers examine the strength of the observed associa-tion.[23] Researchers typically determine variability of the estimate—i.e., how precise the measure is.[24] They then look at whether the plausible range of estimates supported by the data falls outside the bounds of what one would expect if the likelihood of being stopped or searched were equal among racial groups.[25] In addition, they calculate the prob-ability of observing a disparity as large as, or even larger than the one actually observed if there were no racial profiling and the differences were due to chance.[26] This is known as the p-value, and the smaller the p-value, the more likely the observed disparity in stops/searches be-tween minority and nontargeted groups was due to something other than chance.[27] Stated in another way, researchers compare the ob-served stop/search rate with that which would be expected if there were no racial profiling.[28] "Statistically significant" results help elimi-nate the alternative explanation that the observed relationship between race and traffic stops or searches is due simply to chance.[29] Results achieve a pre-set level of statistical significance if the likelihood of achieving a result/statistic more extreme than the one observed is less than a certain cutoff, often set at five percent.[30]

Finally, researchers are left with the difficult task of examining whether the observed relationship was really the result of some other, legitimate reason for the observed disparity.[31] If comparison popula-

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similar vehicle equipment, at similar times of day and days of year, and within similar geo-graphical locations. *See id.*

[23] *See* McCormick on Evidence, *supra* note 20, at 802.

[24] *Id.*

[25] *Id.*

[26] *Id.*

[27] *See id.*

[28] *See* Lamber et al., *supra* note 18, at 579–80.

[29] *See* David Barnes, *Too Many Probabilities: Statistical Evidence of Tort Causation,* 64 Law & Contemp. Probs. 191, 210 (2001).

[30] *See id.* at 198–99. Statistical evidence can be suggestive of racial profiling even if it fails to meet some arbitrary cutoff, such as five percent. *See id.* However, many courts reject evidence that is not strong enough to achieve statistical significance because it appears that experts are speaking outside their field, and advocating values that would otherwise not prove conclusive in statistical literature. *See id.* at 199 n.6. The U.S. Court of Appeals for the Fourth Circuit has ruled that in all racial discrimination cases, statistical disparities observed or calculated must achieve a level of significance at least two standard deviations greater than the level that would be expected in the absence of racial profiling. *See generally* Hazelwood Sch. Dist. v. United States, 433 U.S. 299 (1977); Moultrie v. Martin, 690 F.2d 1078 (4th Cir. 1982); D.H. Kaye, *Is Proof of Statistical Significance Relevant?*, 61 Wash. L. Rev. 1333 (1986).

[31] *See* Lamber et al., *supra* note 18, at 583, 590. If we were merely interested in dispa-rate impact, we would compare the rates of being stopped/searched in a targeted group

tions were truly identical with respect to all characteristics other than race, then any difference would be due to racial profiling.[32] It is difficult, however, to obtain data regarding other crucial characteristics of driving populations, such as who is on the roadway, who is violating traffic laws, and what other possible discretionary factors police consider when determining whether to stop and search a vehicle.[33] For this reason, one of the most typical concerns regarding racial profiling estimates is the data from which they are derived.[34]

The reliability of study results and the applicability of a study to an individual's personal experience with law enforcement depend on far more than just the statistical strength of the relationship between race and stops/searches calculated for a particular study.[35] Statistical significance is not the same as reliability of study results.[36] There are several sources of uncertainty involved in quantifying the relationship between race and law enforcement stops and searches.[37] These all may affect the ability to rely on results to infer discriminatory intent.[38] Some of these include the adequacy of the sample size to detect a relationship, the reliability of the sample data collected, the need to control/adjust for other factors that may actually explain an apparent relationship, the difficulty in extrapolating results from the study population to the driving population at large, and the difficulty in extrapolating once again from the driving population at large to an individual litigant.[39]

B. *Collecting Data to Compare Driving Populations:*
Types of Data on Racial Profiling

For a given jurisdiction, three types of data must be collected in order to determine whether minority groups are being subjected to

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with the rates for the driving population at large. *See id.* In this scenario, an observed disparate impact may clearly exist, but it could be due to any number of factors other than racial profiling. For example, minority drivers may commit more traffic offenses or may live and drive in locales more heavily policed for nondiscriminatory reasons. *See id.*

[32] *See id.*

[33] *See id.*

[34] *See id.*

[35] *See* Barnes, *supra* note 29, at 196–208. Professor David Barnes asks, "[statistics] purport[] to summarize how the positions of people like the plaintiff are affected by acts like the defendant's but what turns that bare number into sufficiently convincing proof of causation?" *See id.* at 197.

[36] *See id.* at 208.

[37] *See id.*

[38] *See id.*

[39] *See id.* at 198–99.

racial profiling.[40] Traffic data is used to determine the race of all drivers on the highway, violator data is used to determine the race of drivers committing moving violations, and stop data is used to determine the race of drivers stopped and subsequently searched.[41]

First, traffic data includes the demographic makeup of all drivers using roadways within a particular jurisdiction.[42] In an attempt to demonstrate that minority motorists are being treated unequally, statistical data on the population of drivers is often offered to show that minority drivers are stopped in numbers disproportionate to their presence on the roadways.[43] One method for estimating the demographics of the driving population is to use census data.[44] Statisticians and courts alike argue that census data is unreliable to estimate the racial composition of the mobile, fluid driving population from which a plaintiff was stopped because census statistics only account for the resident population of the area.[45] In addition, one court has noted that "[i]t is widely acknowledged that the Census fails to count everyone, and that the undercount is greatest in certain subgroups of the population, particularly Hispanics and African-Americans."[46] In addi-

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[40] *See, e.g.*, Rand, Assessing Racial Profiling More Credibly (2004), http://www.rand.org/pubs/research_briefs/RB9070/RAND_RB9070.pdf; Racial Profiling Data Collection Res. Ctr. at Ne. Univ., Reporting and Analysis of Benchmarks, http://www.racialprofilinganalysis.neu.edu/reporting/benchmarks.php (last visited Oct. 22, 2007) [hereinafter Reporting and Analysis Benchmarks].

[41] *See* Jack Riley & Greg Ridgeway, *Measuring Racial Profiling by Police,* Law Enforcement News, June 2004, *available at* http://www.rand.org/commentary/070604LEF.html.

[42] *Id.*

[43] *See, e.g.*, Anderson v. Cornejo, 355 F.3d 1021, 1023 (7th Cir. 2004); Chavez v. Ill. State Police, 251 F.3d 612, 625–26 (7th Cir. 2001); United States v. Avery, 137 F.3d 343, 356 (6th Cir. 1997); *see also* Md. State Conference of NAACP Branches v. Md. State Police, 454 F. Supp. 2d 339, 343 (D. Md. 2006); White v. Williams, 179 F. Supp. 2d 405, 410–12 (D.N.J. 2002); United States v. Guzman, 894 F. Supp. 642, 646–47 (W.D.N.Y. 1995).

[44] *See* Michael R. Smith, *Depoliticizing Racial Profiling: Suggestions for the Limited Use and Management of Race in Police Decision-Making,* 15 Geo. Mason U. Civ. Rts. L.J. 219, 239 (2005).

[45] *See id.* at 237, 240. In addition, the U.S. Department of Justice has warned that using a city's total population data to determine whether a disproportionate number of minority drivers in the city are stopped is inherently unreliable because it assumes that members of each racial group violate laws at the same rates and that police officers patrol areas where the demographic mix of the city is the same as the driving population. *See* Joyce McMahon et al., How to Correctly Collect and Analyze Racial Profiling Data: Your Reputation Depends on It! 1–3 (2002), http://www.cops.usdoj.gov/mime/open.pdf?Item=770.

[46] *See Chavez,* 251 F.3d at 643. The court does go on to say that despite the obvious flaws of the census data, states use it to conduct redistricting and allot votes, and the U.S. Court of Appeals for the Seventh Circuit has cited it in past opinions; nevertheless, these uses involve static populations of residents and are not meant to reflect the driving popula-

tion, the number of minorities living in the United States has risen sharply in recent years, making census data increasingly less reliable over the course of its ten-year duration.[47]

As a result, some plaintiffs use observational studies in an attempt to establish "baseline" driving population demographics in the area in which they were stopped.[48] These studies, however, may be difficult for private parties to implement and may result in insufficient data when determining the population of drivers in general and drivers with the same violations as plaintiff in particular.[49]

The second type of data, violator data, is collected by determining the race of all drivers that commit moving vehicle violations.[50] For the most part, statistical evidence of all drivers who could have been stopped by the police is not readily available because these drivers' racial groups are not recorded in reports or documented in prosecution files, but rather these drivers are merely allowed to continue driving without interruption.[51] Thus, plaintiffs are faced with the burdensome task of financing their own observational studies to allege racial profiling, which requires researchers to design and implement protocol to monitor traffic and record the race of violators.[52]

In the event that observational studies are used to collect violator data, these datasets may also be incomplete because they lack data on other potential factors that contribute to decisions to stop and search vehicles.[53] Police may take a wide variety of other factors into consideration when stopping a vehicle, such as traffic patterns, the behavior of drivers or passengers, and the characteristics of the vehicle itself, thereby reducing the number of drivers "similarly situated" in terms of traffic violations.[54] Although these types of observational data are highly useful because they allow one to control for any disparate im-

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tion. *See id.* at 643 (citing Bradley v. Work, 154 F.3d 704, 706 (7th Cir. 1998); United States v. Barry, 71 F.3d 1269, 1272 n.2 (7th Cir. 1995)).

[47] *See id.* (noting that the 2000 Census estimated that the number of Hispanics living in the U.S. increased by 57.9% since the prior Census of 1990).

[48] *See, e.g.*, RAND, *supra* note 40; Reporting and Analysis Benchmarks, *supra* note 40.

[49] *See, e.g.*, RAND, *supra* note 40; Reporting and Analysis Benchmarks, *supra* note 40. For example, Professor Michael R. Smith notes numerous cases where observational studies had insufficient sample sizes in general, or did not include enough observations from the area where plaintiff was actually stopped, in particular. *See* Smith, *supra* note 44, at 239–41.

[50] *See* Smith, *supra* note 44, at 241.

[51] *Id.*

[52] *See id.*

[53] *See id.*

[54] *See id.* at 237.

pact due to unequal violation rates among different races, such data are also among the most difficult to collect.[55]

The last type of data, stop data, constitutes information on the race of drivers stopped and the subsequent police action taken.[56] Stop surveys generally refer to the citation and field reports completed by officers in the line of duty.[57] Criticisms of police officer stop data on drivers actually pulled over for alleged motor vehicle violations center on both the quality and quantity of data collected.[58] In the past, law enforcement agencies collected little, if any, information regarding the race of motorists stopped for traffic violations.[59] For example, in *Chavez v. Illinois,* a 2001 case in the U.S. Court of Appeals for the Seventh Circuit, the Illinois State Police were accused of racial profiling in traffic stops during the agency's operations as part of the War on Drugs and had failed to keep comprehensive records for all motorists stopped.[60] Between 1990 and 1994, the agency actually recorded less than five percent of all the incidents that gave rise to a citation or in-depth field report, and the majority of these forms did not list race.[61] The court concluded that the paucity of data remaining was unreliable because there was "no indication of the total number of stops . . . thus it is impossible to tell if this sample size is sufficiently large to be reliable."[62] In addition, the self-reporting, nonrandom nature of this sample of stops by the very police officers accused of racial profiling may lead to officer reporting biases and inaccuracies.[63]

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[55] *See* Smith, *supra* note 44, at 237. The U.S. Department of Justice acknowledges that it is "virtually impossible" to determine the racial make-up of the total violator population of an area. *See* Joyce McMahon et al., A Suggested Approach to Analyzing Racial Profiling: Sample Templates for Analyzing Car-Stop Data 3 (2005), http://www.cops.usdoj.gov/files/ric/Publications/e03180002.pdf.

[56] *See* Smith, *supra* note 44, at 239.

[57] *Id.*

[58] *See id.* For example, in *Chavez,* the Seventh Circuit concluded that there was insufficient evidence even to allege disparate impact, much less discriminatory intent, because of the inadequacy of the available statistical data. 251 F.3d at 645–46.

[59] *See Chavez,* 251 F.3d at 645–46.

[60] *See id.* at 642.

[61] *See id.*

[62] *See id.* at 643.

[63] *See id.*; *see also* Smith, *supra* note 44, at 237–38.

C. *Study Limitations and Uncertainty: Correlations Versus Cause and the Difficulty in Drawing Conclusions About Individual Litigants Using Population-Level Profiling Data and Statistics*

Demonstrating discriminatory intent in racial profiling cases amounts to proving that law enforcement racial bias "caused" the drivers' car to be stopped and searched.[64] It is difficult to draw an inference that statistical studies demonstrate intent or "cause" in legal cases because causation in science and causation in law differ in two respects—the purpose for examining events and the levels at which human behavior is examined.[65] Although these fields overlap when determining what role, if any, racial profiling plays in traffic stops and subsequent searches, the two fields have different uses for such information: prediction, explanation, and attribution of responsibility to individual actors.[66]

In general, statisticians are interested in analyzing data and examining associations/causation to predict or explain events on a societal level.[67] Prediction involves analyzing patterns of human behavior in order to predict what will happen in certain situations, assuming certain conditions are met.[68] Explanation involves determining what factors best explain the occurrence of a past outcome such as those associated with past vehicle stops and searches.[69] In contrast, law is not concerned with predicting future events because harm must have already occurred for individual civil rights litigants to bring their claims of racial profiling.[70]

Law has a distinct interest in causation that cannot be addressed solely by statistical methodology—that of attributing responsibility to individual law enforcement actors.[71] Policy justifications for responsi-

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[64] *See* Illinois v. Wardlow, 528 U.S. 119, 123–24 (2000); Whren v. United States, 517 U.S. 806, 813 (1996); United States v. Armstrong, 517 U.S. 456, 465–66, 468 (1996); United States v. Hare, 308 F. Supp. 2d 955, 967 (D. Neb. 2004); United States v. Lindsey, 288 F. Supp. 2d 1196, 1204 (D. Kan. 2003).

[65] *See* Theodore Eisenberg, *Empirical Methods and the Law,* 95 J. Am. Statistical Ass'n 665, 665–69 (2000); Stanford Encyclopedia of Philosophy, Causation in the Law (2005), http://plato.stanford.edu/entries/causation-law/ [hereinafter Causation in the Law].

[66] *See* Eisenberg, *supra* note 65, at 665.

[67] *See id.*

[68] *See* Causation in the Law, *supra* note 65, at 1.

[69] *See id.*

[70] *See id.* at 2.

[71] *See id.*

bility and discretion in law enforcement stops and searches contribute to this concept.[72]

Although they differ in their focus on prediction versus attribution of responsibility, statistics and law overlap in their mutual goal of explaining past behavior.[73] This overlap can be seen through the Adequate Cause Theory, an argument that "an agency is a cause only if it significantly increases the objective probability of the outcome that in fact ensues."[74] The Adequate Cause Theory stands for the proposition that sufficiently strong statistical associations may constitute adequate legal cause, thereby shifting the burden to the opponent to rebut that inference of causation.[75]

Nonetheless, there is one caveat to equating statistical explanations of past events to legal causation.[76] Although both fields aim to provide explanations of past events, there is a fundamental limitation in the use of social science data of racial profiling to explain individual litigants' cases: there is a "difference between establishing *statistical association* [in

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[72] *See id.*

[73] *See* Causation in the Law, *supra* note 65, at 3.

[74] *See id.* at 7. Legal scholars such as Second Circuit Judge Guido Calabresi have advocated the Adequate Cause Theory. *See id.* This theory has been used extensively in jury selection cases. *See, e.g.*, Casteneda v. Partida, 430 U.S. 482, 494 n.13 (1977). The Supreme Court has stated that "the degree of underrepresentation must be proved, by comparing the proportion of the group in the total population to the proportion called to serve as grand jurors, over a significant period of time." *Id.* at 494. This difference is basically a comparison of two probabilities: the probability of serving on a jury for minorities, and the probability of being selected for a jury among nonminority groups. *Id.* A large difference in these probabilities demonstrates substantial jury underrepresentation. *Id.* If a plaintiff can demonstrate such statistical disparity, he or she meets the prima facie burden of discriminatory purpose, and the burden then shifts to the state to rebut that inference. *Id.*; *see* Alexander v. Louisiana, 405 U.S. 625, 631–32 (1972); United States v. Esquivel, 88 F.3d 722, 725 (9th Cir. 1996); State v. George, 503 S.E.2d 168, 172 (S.C. 1998).

Although the Adequate Cause Theory, which states that sufficiently strong statistical associations may constitute adequate legal cause, has been adopted in many areas, there are still inherent tensions between statistical truths and legal causes:

> There is no reason to suppose that the law, when it engages in explanatory inquiries, adopts different criteria of causation from those employed outside the law in the physical and social sciences and in everyday life. However, even here, requirements of proof may lead to a divergence. . . . As regards attributive uses of cause, the fact that the law has to attend simultaneously both to the meaning of the terms importing causal criteria and to the purpose of legal rules and their moral status makes the theory of causation a terrain of debate which does not at present command general agreement and is likely to remain controversial . . . .

See Causation in the Law, *supra* note 65, at 7.

[75] *See Casteneda,* 430 U.S. at 494 n.13, 495.

[76] *See* Eisenberg, *supra* note 65, at 665.

populations] and establishing *actual causation* in an individual case fil-
tered through our adversary legal system."[77] The use of statistics in ra-
cial profiling requires two levels of extrapolation: the assumptions (1)
that the individual plaintiff's experience is sufficiently similar to that of
the study population and (2) that the study population is sufficiently
indicative of the driver/violator population at large.[78] The question
then becomes, when are statistical associations so striking as to allow
one to extrapolate to the events of a particular case and infer that the
stop/search was the result of intentional discrimination?[79]

   Modern courts have always presented the opportunity for statisti-
cal studies to rise to the level of allowing for an inference of discrimi-
natory intent in individual litigants' cases.[80] As the number of possible
other factors involved in law enforcement decision making increase,
however, it becomes more difficult to match an individual's experi-
ence with those of a study population that may differ in background
characteristics.[81] Nonetheless, the stronger the evidence of racial pro-
filing, the more likely any given member of the targeted minority

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[77] *Id.* (emphasis added).

[78] *See id.*

[79] *See id.* It is important to avoid one common fallacy when drawing analogies between
statistics and legal conclusions. *See* Barnes, *supra* note 29, at 191. It is a gross oversimplifica-
tion to state that courts will conclude that discrimination was the purpose of traffic
stops/searches if race was "more likely than not" the illegitimate cause for the stop. *See id.*
Such reasoning does not take policy concerns, social concerns, and other law enforcement
factors into consideration when evaluating vehicle stops. *See id.* at 201–04. It is similarly
inappropriate to claim that scientists have demonstrated a relationship between race and
vehicle stops/searches exists if the evidence is "statistically significant." *See id.* at 201. To
determine if a relationship exists, scientists examine not only statistical significance, but
also many other issues such as how sound the methods used to analyze data were, how
complete and accurate the data were, whether other possible influential factors were ade-
quately considered/adjusted for, and whether the sampled study population is sufficiently
similar to the driving population at large. *See id.* at 191.

[80] *See, e.g., Armstrong,* 517 U.S. at 465 (citing Yick Wo v. Hopkins, 118 U.S. 356, 360
(1886), for the proposition that stark statistical evidence of disparate impact can be used to
infer discriminatory intent); McCleskey v. Kemp, 481 U.S. 279, 294 (1987) (same); Wayte v.
United States, 470 U.S. 598, 610 (1985) (same); Regents of Univ. of Cal. v. Bakke, 438 U.S.
265, 289 (1978) (same).

[81] *See, e.g., McCleskey,* 481 U.S. at 294. Professor Theodore Eisenberg suggests that
strong statistical evidence was not sufficient in this particular litigant's case because it did
not account/adjust for the host of complex factors and multiple actors involved in capital
sentencing cases. *See* Eisenberg, *supra* note 65, at 666. He noted that the prevalence of
these unmeasured, unaccounted-for factors "increased the likelihood that other factors
were responsible for racial effects." *See id.* In recent years, however, the Supreme Court has
suggested that adopting an internal benchmarking approach and analyzing individual
prosecutors' decision making, rather than using statewide summary data for capital sen-
tences, could overcome the Court's concerns in *McCleskey. See id.* at 667.

group, including the plaintiff, will have been the victim of racial profiling.[82] Thus, the stronger the statistical association observed, the greater the justification for individual plaintiff's use of population data to support his or her actual case.[83]

II. The Statistics of Intent: Modern Approaches to the Analysis of Racial Profiling Data

A. *Modern Data Collection Initiatives*

In 1997, 1999, and 2001, U.S. Representative John Conyers introduced legislation to address racial profiling.[84] The goal of these bills was to end racial profiling by collecting data for monitoring and deterring racial profiling, withholding federal funds in the event of noncompliance with the proposed act, and implementing department training programs to recognize and combat racial profiling practices effectively.[85] Although all three attempts to pass federal legislation failed, states followed the lead and successfully passed legislation modeled after Conyers's proposals.[86]

Currently, over half of all states have some form of data collection methods in place to monitor racial profiling.[87] For example, in August of 2000, the Massachusetts legislature passed Chapter 228, which requires data collection on the characteristics of all drivers stopped for alleged traffic violations by the Massachusetts State Police.[88] The data recorded include the number of routine stops, the race and age of individual stopped, the alleged traffic infraction committed, whether a search was conducted, the rationale for a search, whether contraband was found, whether a warning or citation was issued as a result of the stop, and whether an arrest was made following the stop.[89] To date,

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[82] *See* Lamber et al., *supra* note 18, at 590, 591 n.147.

[83] *See id.* at 586.

[84] *See* End Racial Profiling Act of 2001, H.R. 2074, 107th Cong. (2001); Traffic Stops Statistics Act of 1999, H.R. 1443, 106th Cong. (1999); Traffic Stops Statistics Act of 1997, H.R. 118, 105th Cong. (1997).

[85] *See* H.R. 2074.

[86] *See* Suzanne Leone, *Massachusetts Addresses Racial Profiling Head On: The Advocacy of Chapter 228 of the Acts and Resolves of 2000,* 28 New England J. on Crim. & Civ. Confinement 335, 335–36 (2002).

[87] *Id.* For an excellent compilation of information on current data collection measures and ongoing legislation and litigation on the local, state, and federal levels, see Racial Profiling Data Collection Res. Ctr. at Ne. Univ., http://www.racialprofilinganalysis.neu.edu (last visited Oct. 23, 2007) [hereinafter Racial Profiling Data Collection].

[88] *See* Leone, *supra* note 86, at 335.

[89] *See id.* at 356.

many states have enacted legislation similar to that of Massachusetts.[90] Some states go even farther, however, by requiring data collection on all municipal law enforcement levels, not just the state police.[91]

The Civil Rights Division (the "Division") of the U.S. Department of Justice has also collected data on racial profiling through its ongoing work in assessing the conduct of law enforcement agencies.[92] The Division is charged with enforcing the police misconduct provision of the Violent Crime Control and Law Enforcement Act of 1994, which allows the Division to bring civil actions for declaratory relief against law enforcement agencies engaging in patterns of racial profiling.[93] Justice Department investigations have assembled stop, traffic, and in some cases, violator data, from police departments throughout the United States, including: the District of Columbia Metropolitan Police Department; the Los Angeles Police Department; the Columbus and Steubenville, Ohio, Police Departments; the New Jersey State Police; and the Pittsburgh Police Department.[94]

Recent racial profiling data analyses have utilized new information available through the data collection initiatives described in this Section and have addressed the limitations in drawing statistical inferences described in Part I.[95] Two leading methods for racial profiling

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[90] *See* Racial Profiling Data Collection, *supra* note 87.

[91] *See* Leone, *supra* note 86, at 335–36.

[92] *See* U.S. Dep't. of Justice, Civ. Rights Div., Special Litig. Section, Conduct of Law Enforcement Agencies (2007), http://www.usdoj.gov/crt/split/police.htm.

[93] *See* 42 U.S.C. § 14141 (2000). Section 14141 states:

> (a) Unlawful conduct
>
> It shall be unlawful for any governmental authority, or any agent thereof, or any person acting on behalf of a governmental authority, to engage in a pattern or practice of conduct by law enforcement officers . . . that deprives persons of rights, privileges, or immunities secured or protected by the Constitution or laws of the United States.
>
> (b) Civil action by Attorney General
>
> Whenever the Attorney General has reasonable cause to believe that a violation of paragraph (1) has occurred, the Attorney General, for or in the name of the United States, may in a civil action obtain appropriate equitable and declaratory relief to eliminate the pattern or practice.

Id.

[94] *See* U.S. Dep't. of Justice, Civ. Rights Div., Special Litig. Section, Documents and Publications (2007), http://www.usdoj.gov/crt/split/findsettle.htm#Law%20Enforcement%20Misconduct%20Findings%20Letters (listing links to findings and settlements based on data collected during law enforcement agency investigations in various jurisdictions).

[95] *See supra* notes 18–94 and accompanying text.

data analysis are the "internal benchmarking" method and the "hit rate" method.[96]

B. *New Methods Designed to Detect Racial Profiling*

1. The Internal Benchmarking Method to Detect Racial Profiling

The "internal benchmarking" method uses comparisons between officers within the same geographic area, time, and assignment as statistical evidence sufficient to demonstrate discriminatory intent.[97] The justification for use of such data is that by "matching" on factors such as geographic area patrolled, assignment given, and time of day on patrol, one can compare different officers' behavior toward the same baseline driving population and the same pool of violators, thereby determining whether a certain officer stops a disproportionate number of drivers from a particular racial group.[98] To analyze these data, one need only do a simple statistical test for differences between the mean number of stops of minority persons for each officer with similar assignments, geographic areas, and patrol times.[99] For areas with less data available, however, one may have to compare individual officers against the aggregate data of all other similar officers in order to be able to make statistically sound comparisons.[100]

One of the key limitations of statistics has been the extrapolation required to infer racial profiling in a particular litigant's situation from statistical studies on general discrimination in the area.[101] Internal benchmarking reduces the amount of extrapolation required because, even though including data only on persons similarly situated to the actual alleged victim of racial profiling instead of on the victim herself, the study does actually contain data about the particular law enforcement officer, allowing one to make inferences from his general habits and patterns of profiling from available data.[102]

Another benefit of this method is that it allows for "matching" on many of the other possible explanatory factors for a particular traffic stop, thereby eliminating any hidden, nondiscriminatory rationale for

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[96] *See infra* notes 97–126 and accompanying text.

[97] *See* Smith, *supra* note 44, at 248.

[98] *See id.*

[99] *See id.* at 252.

[100] *See id.*

[101] *See* Barnes, *supra* note 29, at 204.

[102] *See* Smith, *supra* note 44, at 241.

a traffic stop or search.[103] Rates of traffic stops and searches can differ according to different times of day, days of week, and geographical areas, such as more patrolling in high-crime neighborhoods.[104] When making comparisons between officers, matching on these factors rules them out as possible alternative explanations for any observed racial disparity in stops/searches.[105]

A final benefit of the internal benchmarking method is that these internal comparisons between officers are already being used as "agency early warning systems to identify and intervene with potential problem officers."[106] Thus, at least in theory, there are available data collection methods already in place.[107] In addition, this approach is easily implemented, because agencies need only collect stop data on driver race, time, and stop location, which is already implemented across many law enforcement agencies.[108] All comparisons among officers, concerning the proportion of their stops that involved members of a racial group, involve statistics that can be computed easily using spreadsheet software.[109]

There are, however, some crucial limitations in the ability of internal benchmarking to detect racial profiling.[110] If racial profiling discrimination is a department-wide problem, then this method will only pick up the exceptionally horrific offender because one will be comparing a bad apple to other bad apples.[111] Moreover, in small law enforcement offices, data may be too scarce to detect differences between officers and identify particular offenders.[112] In smaller departments, there simply may not be enough officers working in the same geographic area, time, and assignment for comparison.[113]

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[103] *See* Barnes, *supra* note 29, at 204.

[104] *See* Smith, *supra* note 44, at 241–50.

[105] *Id.*

[106] *Id.* at 250.

[107] *Id.*

[108] *See id.* at 255.

[109] *See* Smith, *supra* note 44, at 255.

[110] *See id.*

[111] *See id.*

[112] *See id.*

[113] *See id.* at 256.

2. The Hit Rate Theory of Racial Profiling

Several leading scholars have advocated the use of "hit rates" as a bright-line empirical test for detecting racial profiling.[114] The goal of this methodology is to "distinguish disparities reflecting discriminatory intent from those that are inevitably generated in the bona fide pursuit of crime."[115] A "hit" is defined as a vehicle search that uncovers illegal activity, most often drug possession.[116] Proponents of a hit rate analysis argue that one should not look at the number of vehicles stopped because the decision to stop may be based on countless factors that can lead to successful law enforcement and just happen to be associated with race as well.[117] In contrast, the number of factors involved when deciding to search a vehicle is far fewer, given that a law enforcement officer has already stopped a vehicle.[118]

Under this theory, if racial profiling exists, it will result in a bias in favor of searching minority vehicles at a rate that exceeds that which is advantageous to the goals of law enforcement.[119] Thus regardless of disproportionate rates of vehicles being stopped, racial profiling occurs when the "hit rates" of minority drivers' vehicle searches are lower than those of whites.[120] These lower hit rates would indicate more unfounded, unsuccessful searches against minorities, whereas if nontargeted groups' vehicles were searched, more illegal behavior would be detected.[121] This theory basically likens a police officer's decision to search to that of any rational economic actor, with irrational proportions of unsuccessful searches of minority vehicles indicating racial profiling.[122]

The main benefit of this method is that it reduces the number of other factors that must be considered and ruled out when determining whether racial profiling exists, at least from an economic perspec-

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[114] *See, e.g.*, Nicola Persico & David A. Castleman, *Detecting Bias: Using Statistical Evidence to Establish Intentional Discrimination in Racial Profiling Cases,* 2005 U. Chi. Legal F. 217, 218; David Rudovsky, *Law Enforcement by Stereotypes and Serendipity: Racial Profiling and Stops and Searches Without Cause,* 3 U. Pa. J. Const. L. 296, 363–66 (2001).

[115] *See* Persico & Castleman, *supra* note 114, at 223.

[116] *See id.* at 217.

[117] *See id.*

[118] *See id.*

[119] *See id.*

[120] *See* Persico & Castleman, *supra* note 114, at 218.

[121] *See id.*

[122] *See id.*

tive.[123] In addition, this model may be welcomed by law enforcement agencies because it could aid them in reviewing whether departments are searching vehicles efficiently.[124]

This method has been met with opposition by civil rights advocates, however, because it does not answer the question of whether police are engaging in racial profiling, but only whether the police department's racial profiling is "rational," i.e., leads to more successful searches.[125] Another limitation of this method is that harassment due to unwarranted stops and police questioning will not be detected by the hit rate method so long as the detaining officer does not eventually decide to search the vehicle.[126]

III. Individual Civil Actions in Response to Criminal Law Enforcement Abuses

A. *Avenue for Recovery: Equal Protection Claims*

Until relatively recently, individual litigants typically relied on the Fourth Amendment to bring claims of racial discrimination in traffic stops and subsequent searches and seizures.[127] In 1996, in *Whren v. United States,* the U.S. Supreme Court held that so long as there is an objectively reasonable basis for stopping a driver, the Fourth Amendment does not prohibit use of race or ethnicity as one of the totality of factors leading to a stop, search, or seizure.[128] The Court thus foreclosed relief under the Fourth Amendment for all but the rarest of cases where an officer admits that the traffic stop was motivated solely

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[123] *See* Katherine Y. Barnes, *Assessing the Counterfactual: The Efficacy of Drug Interdiction Absent Racial Profiling,* 54 Duke L.J. 1089, 1101 (2005); Bernard Harcourt, *Rethinking Racial Profiling: A Critique of the Economics, Civil Liberties, and Constitutional Literature, and of Criminal Profiling More Generally,* 71 U. Chi. L. Rev. 1275, 1280–95 (2004).

[124] *See* Barnes, *supra* note 123, at 1101.

[125] *See id.*

[126] *See* Harcourt, *supra* note 123, at 1280–95.

[127] Brandon Garrett, Note, *Standing While Black: Distinguishing* Lyons *in Racial Profiling Cases,* 100 Colum. L. Rev. 1815, 1829 (2000). It has been suggested that racial profiling claims were rarely based on equal protection grounds prior to *United States v. Whren* because intentional discrimination was considered prohibitively difficult to litigate successfully. *Id.* Since *Whren,* attention has shifted to equal protection claims, as the Fourth Amendment now seems to be the larger obstacle for alleged victims of racial profiling. *See id.*

[128] *See* 517 U.S. 806, 813–16 (1996) (holding that a Fourth Amendment challenge is not viable so long as there is at least another independent justification for the search in addition to race, and noting that few police officers would ever state that vehicle occupant's race was the sole basis).

by the vehicle occupant's race.[129] But the Court did state, in dicta, that selective enforcement of the law was prohibited under the Equal Protection Clause of the Fourteenth Amendment,[130] suggesting it as a more appropriate avenue for challenges of selective enforcement and racial profiling in traffic stops.[131]

In 1976, in *Washington v. Davis,* the Supreme Court set out the equal protection analysis for modern racial profiling claims.[132] The Court stated that "our cases have not embraced the proposition that a law or other official act, without regard to whether it reflects a racially discriminatory purpose, is unconstitutional *solely* because it has a racially disproportionate impact."[133] In establishing that an equal protection claim must allege both disparate impact and discriminatory intent, the Court held:

> Necessarily, an invidious discriminatory purpose may often be inferred from the totality of the relevant facts, including the fact, if it is true, that the law bears more heavily on one race than another. . . . Nevertheless, we have not held that a law,

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[129] *See id.*

[130] *Id.* at 813 ("We of course agree with petitioners that the Constitution prohibits selective enforcement of the law based on considerations such as race. But the constitutional basis for objecting to intentionally discriminatory application of laws is the Equal Protection Clause, not the Fourth Amendment.").

[131] *See id.* In addition to Equal Protection claims, individual claims for relief may be brought under Title VI of the Civil Rights Act of 1964. *See* 42 U.S.C. § 2000d (2000); Md. State Conference of NAACP Branches v. Md. Dep't of State Police, 72 F. Supp. 2d 560, 567 (D. Md. 1999) (stating that Title VI implied a private right of action for racial profiling victims, but noting that the requirements for successful Title VI actions are not as clearly settled by the courts as the requirements for equal protection claims are). The court held that because the plaintiffs had stated detailed allegations of intentional discrimination, their equal protection claim should not be defeated on a summary judgment motion. *Id.* Judge Blake, however, went on to state that "whether a private right of action exists under the Title VI regulation prohibiting disparate-impact discrimination is less well settled." *Id.* Thus, it is unclear whether the burden on plaintiff alleging racial profiling under Title VI is any different than that of the civil plaintiff in equal protection claims. *See id.* Indeed, only a year later, in *Rodriguez v. California Highway Patrol,* the U.S. District Court for the Northern District of California held that civil plaintiffs alleging a Title VI violation must prove intent to discriminate at trial. 89 F. Supp. 2d 1131, 1138–39 (N.D. Cal. 2000).

[132] *See* 426 U.S. 229, 239–42 (1976). In this case, two African-American police officers alleged that the policies of the Washington D.C. Metropolitan Police were racially discriminatory. *Id.* at 232. In particular, they alleged that department testing measures had the impact of excluding a disproportionately high number of African-American applicants, as compared with white applicants. *Id.* The plaintiff officers claimed that the test "bore no relationship to job performance and 'has a highly discriminatory impact in screening out black candidates.'" *Id.* at 235 (quoting Davis v. Washington, 348 F. Supp. 15, 16 (D.D.C. 1972)).

[133] *See id.* at 239.

neutral on its face and serving ends otherwise within the power of government to pursue, is invalid under the Equal Protection Clause simply because it may affect a greater proportion of one race than of another. Disproportionate impact is not irrelevant, but it is not the sole touchstone of an invidious racial discrimination forbidden by the Constitution.[134]

Post-*Davis* cases have further confirmed that to succeed on a claim of race discrimination under the Equal Protection Clause, a plaintiff must prove not only disparate impact but also discriminatory intent.[135]

B. *Applying Equal Protection Analysis to Claims Alleging Racial Profiling: The Virtual Roadblock of Proving Discriminatory Intent*

To succeed on a claim under the Equal Protection Clause in the context of selective enforcement due to racial profiling, plaintiffs must show not only that the law enforcement agency's and/or officer's stop practices have a disparate impact on plaintiff's racial group, but also that these practices constitute an *intentional* pattern of discrimination.[136] The nearly insurmountable discriminatory intent requirement has been criticized as essentially a complete bar, making equal protection claims due to racial profiling virtually illusory.[137]

First, to prove discriminatory impact, plaintiffs face the burden of showing that similarly situated persons of another race are not stopped by police in the same manner as plaintiff's racial group.[138] This may be difficult because of the unavailability of data on whom the particular officer or agency could have stopped but did not.[139] Instead, plaintiffs

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[134] *See id.* at 242. The Court did note some exceptions where discriminatory impact alone is sufficient for equal protection claims. *See id.* at 241. In particular, the Court stated that in jury selection cases, the "systematic exclusion of Negroes is itself such an 'unequal application of the law . . . as to show intentional discrimination.'" *Id.* (quoting Akins v. Texas, 325 U.S. 398, 404 (1945)).

[135] *See, e.g.,* United States v. Armstrong, 517 U.S. 456, 465 (1996). In *Armstrong,* defendants moved for discovery after being indicted for selling crack and using firearms for the purpose of drug trafficking. *See id.* at 458. The Supreme Court held that "to establish a discriminatory effect in a race case, the claimant must show that similarly situated individuals of a different race were not prosecuted," and the defendants must show that the actions taken by the state were motivated by a discriminatory purpose. *Id.*

[136] *See Davis,* 426 U.S. at 465; Smith, *supra* note 44, at 239.

[137] *See* Sarah Oliver, Atwater v. City of Lago Vista: *The Disappearing Fourth Amendment and Its Impact on Racial Profiling,* 23 Whittier L. Rev. 1099, 1113–14 (2002).

[138] *See* Smith, *supra* note 44, at 238.

[139] *See, e.g.,* Nat'l Cong. for P.R. Rights v. City of New York, 75 F. Supp. 2d 154, 158–59, 167 (S.D.N.Y. 1999). Plaintiffs alleged that the New York City Police Department's Street Crime Unit engaged in racial profiling during their practice of suspicionless stops and

are relegated to offering statistical evidence designed to show that members of their racial group were stopped disproportionately to their percentage in the population.[140] Courts typically allow such statistical evidence to demonstrate discriminatory *impact* but do not allow such evidence to demonstrate *intent*.[141]

In general, courts reject the use of aggregate population statistics to prove discriminatory intent towards a particular plaintiff.[142] Unless an officer openly admits that a suspect's race influenced his or her decision to stop or search plaintiff's vehicle, a plaintiff is left to argue that any circumstantial or statistical evidence of the discriminatory effect they suffered is so strong that it is tantamount to proof of intent.[143] Courts widely reject this argument in all but the most extreme cases.[144]

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frisks, thereby violating the Fourteenth Amendment. *Id.* at 158. The U.S. District Court for the Southern District of New York dismissed the plaintiffs' equal protection claim because they failed to provide evidence that similarly situated white pedestrians were not subjected to the stop and frisk measures. *See id.* at 167–68. The court articulated the disparate impact requirement quite strictly:

> Plaintiffs would not meet this requirement even if they alleged that only black and Hispanic residents were subjected to suspicionless stops. *See Armstrong*, 517 U.S. at 470 (statistical evidence showing that all defendants prosecuted during a certain year were black fails to satisfy similarly situated requirement—the study "failed to identify individuals who were not black and could have been prosecuted for the offense for which respondents were charged, but were not so prosecuted"). Without a showing of different treatment of similarly situated persons, either through statistical or other evidence, plaintiffs' Equal Protection claim is dismissed.

See id. at 167.

[140] *See* Smith, *supra* note 44, at 239.

[141] *See, e.g.*, United States v. Duque-Nava, 315 F. Supp. 2d 1144, 1153–63 (D. Kan. 2004) (finding that statistical evidence of officers stopping Hispanic and black drivers more frequently than white drivers who committed similar traffic violations was sufficient to allege discriminatory effect but not intent). In *Duque-Nava*, the defendant officer stopped far greater percentages of black and Hispanic drivers than other officers patrolling a nearby stretch of the same highway, thereby allowing the court to find that his actions created a disparate impact on black and Hispanic drivers, as compared with white drivers. *See id.* at 1157. In particular, other officers patrolling I-70 made traffic stops that were approximately 6.8% Hispanic motorists and 5.7% black motorists, whereas the officer accused of racial profiling patrolled the same highway approximately 100 miles away and made traffic stops that were 33.69% Hispanic motorists—far more than expected, even allowing for some variability between the number of Hispanic drivers from one stretch of the highway to the next. *Id.* Nonetheless, even in the presence of such a striking statistical disparity (6.8% versus 33.69%), the U.S. District Court for the District of Kansas was unwilling to allow the use of this evidence to infer discriminatory intent. *See id.* at 1160–62.

[142] *See* Smith, *supra* note 44, at 243.

[143] *See id.*

[144] *See, e.g.*, Yick Wo v. Hopkins, 118 U.S. 356, 360 (1886).

In 1987, the U.S. Supreme Court's ruling in *McCleskey v. Kemp* illustrated the high bar to using statistical evidence to infer intent.[145] There, the Court held that a statistically significant study of hundreds of homicide prosecutions over several years in Georgia was insufficient to demonstrate discriminatory intent in death penalty prosecutions.[146] Even though convicted murderers of white victims were several times more likely to be sentenced to death than convicted murderers of black victims, the Court reasoned that there were too many other nondiscriminatory factors involved when deciding whether to seek the death penalty, and thus courts must generally defer to prosecutorial discretion.[147]

C. *Early Cases and Exceptions to the Rule: Where Disparate Impact Is So Severe as to Support an Inference of Discriminatory Intent*

In a few earlier cases, courts have held that the statistical evidence of discriminatory impact was so striking that it allowed an inference of discriminatory intent.[148] In 1886, in *Yick Wo v. Hopkins,* the U.S. Supreme Court held that the statistical evidence of racial discrimination against Chinese business owners was so overwhelming that it allowed the Court to infer discriminatory intent.[149] The Court struck down a San Francisco ordinance requiring wooden-frame laundry business operators to obtain a permit allowing them to continue operating in the city.[150] Approximately 200 Chinese laundry owners were denied permits, whereas 80 other owners, all non-Chinese, obtained permits and were allowed to keep their businesses open.[151] The Court found that both Chinese and non-Chinese owners operated their businesses in similar manners under similar building conditions, eliminating nondiscriminatory reasons for the disparate impact of the ordinance on Chinese owners.[152] The Court concluded that this overwhelming evidence alone was sufficient to rule the ordinance unconstitutional under the Equal Protection Clause of the Fourteenth Amendment.[153]

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[145] *See generally* 481 U.S. 279 (1987).

[146] *See id.* at 293–97.

[147] *See id.*

[148] *See, e.g.,* Gomillion v. Lightfoot, 364 U.S. 339 (1960); *Yick Wo,* 118 U.S. at 360.

[149] *See* 118 U.S. at 360.

[150] *See id.* at 356.

[151] *See id.*

[152] *See id.*

[153] *See id.* at 360. Although modern courts often cite *Yick Wo,* there is little indication that they actually use the case to support the proposition that sufficiently strong statistical evidence of discriminatory impact implies discriminatory intent. *See* Oliver, *supra* note 137,

In 1960, in *Gomillion v. Lightfoot,* the Court once again found that overwhelming statistical evidence of disparate impact was sufficient to infer discriminatory intent.[154] The Court found that the Alabama legislature's redrawing of the Tuskegee city boundaries in a manner that excluded all but 4 or 5 of its 400 African-American voters without excluding any white voters or residents was an unconstitutional practice.[155] Justice Frankfurter concluded that:

> If these allegations upon a trial remained uncontradicted or unqualified, the conclusion would be irresistible, tantamount for all practical purposes to a mathematical demonstration, that the legislation is solely concerned with segregating white and colored voters by fencing Negro citizens out of town so as to deprive them of their pre-existing municipal vote.[156]

This overwhelming statistical evidence of voter exclusion led the Court to conclude that under the Fifteenth Amendment, or alternatively on Fourteenth Amendment grounds, such compelling statistical disparities were conclusive evidence of discriminatory intent.[157]

D. *Modern Uses of Statistical Evidence of Racial Profiling to Infer Discriminatory Intent*

A notable exception to the historical judicial view on the insufficiency of statistical evidence in establishing discriminatory intent is found in the 1996 New Jersey Superior Court decision, *State v. Soto.*[158] There, the court held that the unrebutted statistical evidence of racial profiling was sufficient to establish discriminatory intent as required

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at 1113–14. Some have argued that courts should reconsider and utilize the dormant dicta of *Yick Wo. See id.* at 1123–26.

[154] *See* 364 U.S. at 341.

[155] *See id.* Petitioners alleged both Fourteenth and Fifteenth Amendment violations, as the legislature's redefining Tuskegee city boundaries also excluded former residents from voting on municipal matters. *Id.* at 340. Justice Frankfurter, writing for the Court, found the legislature's actions unconstitutional under the Fifteenth Amendment, whereas Justice Whittaker's concurring opinion suggests that he found the Fourteenth Amendment to be the more appropriate avenue for recovery. *See id.* at 346; *id.* at 349 (Whittaker, J., concurring).

[156] *See id.* at 341 (majority opinion). Not all scholars applaud the media attention and subsequent data proliferation that followed. *See* Gandy, *supra* note 19, at 149–50. Professor Oscar Gandy argues that statisticians and data collectors have compromised their usual standards of accuracy and restraint to cater to the public interest and societal debate surrounding racial profiling. *See id.*

[157] *See Gomillion,* 364 U.S. at 341.

[158] *See* 734 A.2d 350, 360 (N.J. Super. Ct. Law Div. 1996).

for equal protection claims of selective enforcement.[159] The criminal defendant successfully moved to suppress evidence resulting from a traffic stop that was the result of racial discrimination.[160] The court stated that "while defendants have the burden of proving 'the existence of purposeful discrimination,' discriminatory intent may be inferred from statistical proof presenting a stark pattern or an even less extreme pattern in certain limited contexts."[161]

In contrast, in 2004, in *United States v. Duque-Nava,* the U.S. District Court for the District of Kansas found that the statistical evidence of racial profiling, although sufficient to show discriminatory impact, was not strong enough to support an inference of intent.[162] Nonetheless, in dicta, the court in *Duque-Nava* suggested another possible avenue for finding discriminatory intent using statistics.[163] The court stated: "[a]lthough statistics alone are generally viewed as insufficient evidence of intent, certainly a comparison of an officer's stops with similarly situated officers in his own police department might be evidence of an officer's particular pattern of discriminatory intent or motive."[164]

In 2004, in *Anderson v. Cornejo,* African-American women who were targeted for airport searches presented statistical evidence that searches done on African-American women were less successful—i.e., less likely to find contraband—than in other less-targeted groups, revealing racial profiling bias that did not aid law enforcement efforts.[165] The U.S. Court of Appeals for the Seventh Circuit stated that "[t]he implication is that Customs inspectors searched [African-American] women with less by way of suspicion than they required before they would search Hispanics or black men (though black women seem to have been treated similarly to both white men and white women)."[166] The court

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[159] *See id.* at 352.

[160] *See id.*

[161] *See id.* at 360. Some scholars have suggested that *Soto* can be distinguished from *McCleskey* in part because of the relatively fewer variables involved with the decision to order a vehicle to stop compared with those involved in determining whether to seek the death penalty. *See* Samuel R. Gross & Katherine Y. Barnes, *Road Work: Racial Profiling and Drug Interdiction on the Highway,* 101 MICH. L. REV. 651, 724–25 (2002). They argue that the fewer the number of variables affecting police decision making, the easier it is to detect the influence of race. *See id.* Other cases involving racial profiling in traffic stops and searches across the United States, however, have not echoed this argument, and thus, *Soto* remains an anomaly in many respects. *See id.* at 723–27.

[162] *See* 315 F. Supp. 2d at 1162–63.

[163] *See id.* at 1163.

[164] *See id.*

[165] *See* 355 F.3d 1021, 1023 (7th Cir. 2004).

[166] *See id.*

rejected the use of statistics in this particular case to infer discriminatory intent, but suggested that if better data had been available, the outcome would have been otherwise.[167] These data collection limitations made it difficult to argue that racial profiling, and not some other, nondiscriminatory factor, was the reason for the search.[168]

The *Soto, Duque-Nava,* and *Anderson* courts differed in the types of statistical data and analyses presented and in whether the courts ultimately allowed the use of statistics to infer intent.[169] Nonetheless, all three decisions demonstrate the courts' willingness to weigh the strength of statistical evidence carefully, on a case-by-case basis, instead of applying a categorical exclusion, when deciding whether statistics could be used to infer discriminatory intent.[170]

IV. Strong Statistical Associations from Well-Designed Studies Should Be Used by Courts to Infer Discriminatory Intent in Racial Profiling Claims

A. *Marked Improvements in Data Quantity and Quality Since the U.S. Supreme Court Last Considered Whether Statistics Can Be Used to Prove Discriminatory Intent*

Although aggregate statistical evidence of the past was insufficient to establish discriminatory intent in the vast majority of cases, there has been a recent, rapid increase in the collection and quality of data on racial profiling.[171] These practices are designed to monitor and provide early warning systems that avoid racial profiling.[172] Researchers have noted that only in the past few years have reliable data been collected and analyzed for the first time on racial profiling.[173]

To address past weakness in the quality and quantity of traffic, violator, and stop data available, federal, state, and local law enforcement agencies, as well as independent organizations, have enacted measures to collect and analyze data on traffic stops.[174] These prac-

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[167] *See id.*

[168] *See id.* at 1024; *see also Duque-Nava,* 315 F. Supp. 2d at 1163.

[169] *See Anderson,* 355 F.3d at 1023; *Duque-Nava,* 315 F. Supp. 2d at 1162–63; *Soto,* 734 A.2d at 360.

[170] *See Anderson,* 355 F.3d at 1023; *Duque-Nava,* 315 F. Supp. 2d at 1162–63; *Soto,* 734 A.2d at 360.

[171] *See* Eggen, *supra* note 7.

[172] *See* Rudovsky, *supra* note 114, at 363.

[173] *See id.*

[174] *See* Ramirez et al., *supra* note 2, at 3.

tices are designed to monitor and provide early warning systems that avoid racial profiling.[175]

Various organizations have developed their own statistical databases to study racial profiling, including university social scientists, independent researchers, the American Civil Liberties Union (the "ACLU"), and the National Association for the Advancement of Colored People (the "NAACP").[176] Both the ACLU and the NAACP have collected data by establishing hotlines for reporting incidents of racial profiling by individuals subjected to traffic stops.[177] More prominently, these groups have been successful in launching campaigns to pass legislation at the state and local level, pursuing cases, providing assistance for individuals to bring civil suits alleging racial profiling, and sponsoring independent researchers' attempts to collect data on racial profiling for future litigation.[178]

B. *Modern Courts Begin to Recognize that Statistical Studies of Racial Profiling Have Corrected for Past Weaknesses and Addressed Concerns of the Courts*

The last U.S. Supreme Court decision to expand substantially on the use of statistical evidence to infer intent was in 1960, in *Gomillion v. Lightfoot*.[179] Several lower courts, however, have recently expanded the line of cases in which statistics can infer intent.[180] This Section demonstrates that lower courts are implicitly adopting the modern statistical methods discussed in Part II.[181] It "reinterprets" the legal standards for the cases presented in Part III.D using the data analysis terminology from Part I to show that not only are these methods appropriate for use in litigation, but also that judges are capable of ac-

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[175] *See* Rudovsky, *supra* note 114, at 363.

[176] *See* Weatherspoon, *supra* note 5, at 757.

[177] *Id.*; *see* David A. Harris, *The Reality of Racial Disparity in Criminal Justice: The Significance of Data Collection,* 66 Law & Contemp. Probs. 71, 85 (2003). Among the work of universities and social scientists, the efforts of Dr. John Lamberth are perhaps most widely known because of his research work for civil rights complainants in the successful legal actions taken against both the New Jersey and Maryland state police departments. *See id.* Lamberth designed studies to collect both traffic and violator data, assembled teams to carry out the studies, and compared state police stop data to these background populations as an expert witness for alleged victims of racial profiling. *See id.* His efforts influenced the subsequent measures taken by the New Jersey and Maryland state police departments to combat their highly publicized problems of racial profiling. *See id.*

[178] *See* Weatherspoon, *supra* note 5, at 757.

[179] *See* 364 U.S. 339, 347–48 (1960).

[180] *See* United States v. Duque-Nava, 315 F. Supp. 2d 1144, 1162–63 (D. Kan. 2004).

[181] *See supra* notes 84–126 and accompanying text (discussing these cases).

curately assessing the quality of statistical evidence available.[182] Thus, a categorical exclusion of statistical evidence to demonstrate discriminatory intent is inappropriate.[183]

The lower court decisions discussed below demonstrate the ability of courts to recognize the types of studies capable of demonstrating discriminatory intent and to develop judicial guidelines and standards for when statistical evidence is sufficient to establish prima facie discriminatory intent.[184] These decisions have embraced the new analytical techniques discussed in Part II—improved data collection techniques, internal benchmarking, and the hit rate method—even though they do not expressly acknowledge the adoption of these methods in their analyses.[185] All that remains is for courts to acknowledge these new statistical tools formally so that coherent guidelines for their use by courts can be developed, and statistics can play a larger, yet accurate and responsible role in racial profiling litigation.[186] The adoption of these methods by the courts supports the argument that new statistical methods have coincided with an evolution in the way courts view the power of statistical evidence to prove discriminatory intent.[187]

1. *State v. Soto*: A Novel Judicial Analysis That Recognizes Improved Study Design and Traffic, Violator, and Stop Data Collection Techniques

In 1999, in *State v. Soto,* the New Jersey Superior Court established general guidelines for the type of statistical evidence sufficient to demonstrate intent.[188] In establishing these guidelines, the court implicitly held that adequate stop, traffic, and violator data collection and analyses can be used to infer discriminatory intent.[189] It stated:

> Statistics may be used to make out a case of targeting minorities for prosecution of traffic offenses provided the comparison is between the racial composition of the motorist population violating the traffic laws and the racial composition of

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[182] *See supra* notes 158–170 and accompanying text.

[183] *See supra* notes 158–170 and accompanying text.

[184] *See infra* notes 188–236 and accompanying text.

[185] *See supra* notes 84–126; *infra* notes 188–236 and accompanying text.

[186] *See supra* notes 84–126 and accompanying text.

[187] *See supra* notes 158–170 and accompanying text.

[188] *See* 734 A.2d 350, 360–61 (N.J. Super. Ct. Law Div. 1996).

[189] *See id.* at 360.

those arrested for traffic infractions on the relevant roadway
patrolled by the police agency.[190]

Thus, the court suggested that if reliable stop data is available and vio-
lator data can be obtained to establish a standard against which to
compare the stop data, this evidence may be sufficient to demonstrate
discriminatory intent.[191]

It is unclear whether traffic data is a sufficient standard with
which to compare stop data, as the New Jersey Superior Court never
directly addresses this issue, and all three types of data—traffic, viola-
tor, and stop data—were presented in *Soto*.[192] First, *Soto* examined the
stop data available.[193] Both plaintiff and defendant randomly selected
stop data and found that 1212 of the stops recorded motorist's race.[194]
Thus, adequacy of sample size and representativeness of the general
population were not of concern.[195] Second, traffic data and violator
data were collected in an independent study for the criminal defen-
dant alleging racial profiling.[196] The court described the methodology
for surveying drivers and recording data in detail, including how traf-
fic data were collected at various times of day along several portions of
the New Jersey Turnpike in the same geographical area as where the
defendant was stopped by police.[197] Violator data was calculated by
having researchers calibrate their speedometer, set cruise control at
the speed limit, and record the number of cars and the race of motor-
ists who were speeding past them.[198] Finally, in addition to outlining
the protocol for these data collection measures, expert witnesses testi-
fied to the validity of all the crucial issues of study design, data collec-
tion, and data analysis.[199]

Using these data, researchers found that 46.2% of all stops in-
volved black motorists, as calculated from stop data; 13.5% of all driv-
ers using the highway were black, as calculated from traffic data; and
15% of all speed limit violators were black, as calculated from violator
data.[200] Since the traffic baseline of 13.5% and the violator compari-

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[190] *Id.*

[191] *See id.* at 350.

[192] *See id.* at 360.

[193] *See* 734 A.2d at 352.

[194] *See id.*

[195] *See id.*

[196] *See id.*

[197] *See id.*

[198] *See Soto,* 734 A.2d at 352.

[199] *See id.* at 353.

[200] *See id.*

son group baseline of 15% were so similar, either could be used to determine whether the percentage of black motorists stopped was disproportionate to either the number of black motorists or the number of black speed limit violators.[201]

The court concluded that there was such stark evidence of discrimination—32.7% absolute difference in percentage of black motorists stopped versus percentage of those on the roadways, and 16.35 standard deviations above the expected value of the difference of 0% under the hypothesis that drivers were stopped in proportion to their presence on the roadways—that one could infer discriminatory intent.[202] This conclusion is actually an implicit adoption of the Adequate Cause Theory discussed in Part I, which stands for the proposition that sufficiently strong statistical associations may constitute adequate legal cause, thereby shifting the burden to the opponent to rebut that inference of causation.[203] Indeed, results are deemed statistically significant at two standard deviations, where the greater the standard deviation, the larger the statistical discrepancy between the treatment of the two observed driving populations, minority and nonminority drivers.[204]

2. *United States v. Duque-Nava*: A Judicial Opinion That Recognizes
   Improved Methodology of Internal Benchmarking May Be Used to
   Infer Discriminatory Intent

In 2004, the U.S. District Court for the District of Kansas, in *United States v. Duque-Nava,* held that the statistical evidence of racial profiling presented was not strong enough to support an inference of intent.[205] Nonetheless, the court implicitly suggested another possible avenue for finding discriminatory intent using statistics.[206] The court stated: "[a]lthough statistics alone are generally viewed as insufficient evidence of intent, certainly a comparison of an officer's stops with similarly situated officers in his own police department might be evidence of an officer's particular pattern of discriminatory intent or motive."[207]

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[201] *See id.*

[202] *See id.*

[203] *See Soto,* 734 A.2d at 353; *supra* notes 73–75 and accompanying text; *see also* Casteneda v. Partida, 430 U.S. 482, 495 (1977).

[204] *See Soto,* 734 A.2d at 360; *supra* note 30 and accompanying text (discussing statistical evidence). In *Soto,* the probability of observing an absolute difference of 32.7% or an even more extreme result, if black and white drivers really had been targeted equally, was less than 5%. 734 A.2d at 353.

[205] *See* 315 F. Supp. 2d at 1162–63.

[206] *See id.* at 1163.

[207] *See id.*

The technique hinted at in the above quotation is actually the internal benchmarking method explained in Part I of this Note.[208] Although the court in *Duque-Nava* never formally mentions, much less adopts, the internal benchmarking method, its description of sufficient statistical evidence corresponds to the same standards that quantitative researchers use.[209] The court implied that internal benchmarking may be a preferred method for showing intent because by "matching" on factors such as geographic area patrolled, assignment given, and time of day on patrol, one can compare different officers' behavior toward the same baseline driving population and the same pool of violators, thereby determining whether a certain officer stops a disproportionate number of drivers from a particular racial group.[210]

3. *Anderson v. Cornejo*: Considering the Hit Rate Theory to Detect Discriminatory Intent

Writing for the U.S. Court of Appeals for the Seventh Circuit in 2004, in *Anderson v. Cornejo,* Judge Easterbrook implicitly demonstrated that courts can successfully evaluate applications of the hit rate method to determine whether results are sufficient to infer intent.[211] Of African-American women subjected to searches at airports, 27.6% were found to have contraband, compared with 25.1% for Caucasian men and 19.5% for Caucasian women.[212] Using the language of econometrists and statisticians, these percentages are actually "hit rates" as discussed in Part II.[213] Although the hit rates are similar among the above groups, African-American women had hit rates substantially lower than lesser-targeted groups of African-American men and Hispanic men and women, with hit rates of 61.6%, 58.8%, and 45.7%, respectively.[214]

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[208] *See id.* at 1164.

[209] *See id.* at 1162–63.

[210] *See* Smith, *supra* note 44, at 248. To analyze internal benchmarking data, one need only do a simple statistical test for differences between the mean number of stops of minority persons for all officers with similar assignments, geographic areas, and patrol times. *Id.* But for smaller law enforcement agency offices or in cases alleging systematic, agency-wide abuse, this method will not work because one will simply be comparing one bad apple with others. *See id.* at 252.

Professor Michael Smith provides further support for "internal benchmarking" to determine discriminatory intent by noting that these internal comparisons between officers are already being used as agency early warning systems to identify and intervene with potential problem officers. *See id.* at 237–39.

[211] *See* 355 F.3d 1021, 1022 (7th Cir. 2004).

[212] *See id.*

[213] *See supra* notes 165–168 and accompanying text (discussing the facts of *Anderson*).

[214] *See supra* notes 165–168 and accompanying text.

Judge Easterbrook implicitly made a comparison of hit rates when he wrote that "[t]he implication is that Customs inspectors searched [African-American] women with less by way of suspicion than they required before they would search Hispanics or black men (though black women seem to have been treated similarly to both white men and women)."[215]

The court rejected the use of hit rate data to infer discriminatory intent in that case for four specific reasons, but it did not appear to strike down the hit rate method itself in the event that these other limitations involving data collection could be resolved.[216] First, the data reported were not sampled from the same year as when the alleged violations occurred, thus making it difficult to extrapolate from the study population results to the individual litigants.[217] This weakness, however, is likely to be corrected, given that data collection is now a permanent, ongoing effort, so that plaintiffs will not have to commission data collection studies post-harm in order to litigate.[218]

Second, the data were national estimates of stops and searches, not those based solely on Chicago O'Hare International Airport, where plaintiffs were subject to search.[219] This presents the same problems mentioned in Part I of this Note, discussing the difficulty of drawing conclusions about a population using data taken from other sources.[220]

Third, data on potential factors leading to searches other than race were not collected, such as purchasing tickets in cash, arriving from some specific destinations, lengths of stay, and other past criminal conduct of travelers.[221] This is the problem discussed in Part I concerning the need to eliminate other nondiscriminatory characteristics that could explain the observed discrepancy in hit rates.

Finally, the data did not include observations taken on the actual defendants in this case, making it more difficult to extrapolate from

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[215] *Anderson,* 355 F.3d. at 1024.

[216] *See id.* Scholarly debate continues over what this decision actually meant for the hit-rate theory debate. *Compare* Persico & Castleman, *supra* note 114, at 218 (advocating the use of "hit rates" as a bright-line empirical test for detecting racial profiling), *and* Harcourt, *supra* note 123, at 1303 (advocating the use of the hit rate method), *with* Jeff Dominitz, *How Do the Laws of Probability Constrain Legislative and Judicial Efforts to Stop Racial Profiling?*, 5 Am. L. & Econ. Rev. 412, 424–46 (2003) (noting the limitations of this theory in proving intent).

[217] *See Anderson,* 355 F.3d at 1023.

[218] *See supra* notes 87–91 and accompanying text (discussing current police data collection initiatives).

[219] *See Anderson,* 355 F.3d at 1023.

[220] *See supra* notes 64–83 and accompanying text (discussing the difficulties in drawing conclusions about individual litigants using population level statistics).

[221] *See Anderson,* 355 F.3d at 1024.

the study population to the original plaintiffs.[222] The above data collection limitations make it difficult to argue that racial profiling, and not some other, nondiscriminatory factor, was the reason for the search.[223] The hit rate method, however, has only recently been introduced in the courtroom, and further advancements in data collection will lead to stronger study reliability, making the argument for using statistics to infer discriminatory intent more persuasive.[224]

4. Analogizing to Capital Sentencing Cases: A New Willingness to Consider When Statistics Prove Discriminatory Intent

Capital sentencing cases are another area in which recent dicta suggests a willingness to reconsider the use of statistics to prove discriminatory intent in prosecuting and sentencing.[225] Whereas in 1987, in *McCleskey v. Kemp,* the Supreme Court was unwilling to accept statewide data on capital sentencing as evidence of discriminatory intent in an individual convict's case, in recent years, the Court has suggested that adopting an internal benchmarking approach and analyzing individual prosecutors' decision making, rather than using statewide summary data for capital sentences, could overcome the Court's concerns in *McCleskey.*[226] Nonetheless, this dicta has yet to be acted upon, as courts failed to sustain a single-race based challenge to the death penalty in the thirteen years following *McCleskey.*[227]

Recent examples like *Soto* demonstrate the ability of courts to take a sophisticated approach to determining when statistics show intent.[228] Courts cannot avoid grappling with the reliability of statistical methodology when determining whether statistics should play a role in any Fourteenth Amendment claims of racial profiling.[229] Courts are already required to determine what type of statistical evidence is sufficient to demonstrate disparate impact, and new data and methods mean that they should now determine what types of evidence meet

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[222] *See id.*

[223] *See id.*; *supra* notes 31–39 and accompanying text.

[224] *See* Persico & Castleman, *supra* note 114, at 218.

[225] *See* Eisenberg, *supra* note 65, at 667. It is also interesting to note that Justice Powell, who wrote for the majority in *McCleskey v. Kemp,* later changed his mind on the use of statistics and capital sentencing. *See* David Von Drehle, *Retired Justice Changes Stand on Death Penalty,* Wash. Post, June 10, 1994, at A1.

[226] *See* Eisenberg, *supra* note 65, at 667; *see also* McCleskey v. Kemp, 481 U.S. 279, 293–97 (1987).

[227] *See* Eisenberg, *supra* note 65, at 667.

[228] *See generally* 734 A.2d 350.

[229] *See id.*

the prima facie hurdle of discriminatory intent as well.[230] As with relevancy and expert statistical evidence decisions already confronting the courts, they must address the soundness of statistical methodology and the reliability of statistical estimates of racial profiling.[231]

No single method should be adopted—rather the new data collection methods, internal benchmarking, and hit rate theories can all be utilized to infer discriminatory intent.[232] This flexibility is essential given that the nature of a particular civil litigant's claims will differ based on the amount and types of data available.[233]

Courts have shown an ability to take a sophisticated and thorough approach to examining the adequacy of statistical evidence.[234] With the improved statistical approaches to detecting racial profiling, courts should now assume a gate-keeping role for deciding which statistical studies can be used to meet the prima facie burden of proving discriminatory intent.[235] A categorical exclusion of statistical evidence to prove discriminatory intent would undermine the spirit of early cases, such as *Yick Wo v. Hopkins* and *Gomillion v. Lightfoot,* and would shortchange recent developments in legal scholarship that recognize the power of statistics to prove discriminatory intent.[236]

C. *Coherency in the Law: The Role Statistics Already Plays in Other Discrimination Contexts*

In both voting and employment discrimination cases, courts allow the use of statistical methods to shift the burden to the defendant to prove some nondiscriminatory motive.[237] In cases involving Title VII claims and disproportionate exclusion of minority citizens from jury venires, courts have already recognized that the strong disparate impact in the treatment of minorities alone is sufficient to demonstrate intentional discrimination.[238] For disparate treatment employment cases, statistical analyses may be used to demonstrate discriminatory intent if the analysis is based on a sufficiently large sample size,

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[230] *See supra* notes 138–147 and accompanying text.

[231] *See, e.g., supra* notes 84–126 and accompanying text.

[232] *See supra* notes 171–187 and accompanying text.

[233] *See supra* notes 171–187 and accompanying text.

[234] *See* Barnes, *supra* note 29, at 206.

[235] *See id.*

[236] *See* Yick Wo v. Hopkins, 118 U.S. 356, 360 (1886); *Duque-Nava,* 315 F. Supp. 2d at 1162–63; *Soto,* 734 A.2d at 360–61.

[237] Eisenberg, *supra* note 65, at 667; *see* Bazemore v. Friday, 478 U.S. 385, 398–403 (1986); Batson v. Kentucky, 476 U.S. 79, 94–96 (1986).

[238] *See Batson,* 476 U.S. at 94–96.

the dataset characteristics are sufficiently similar to the plaintiff's work characteristics, and the resulting estimate of deviation from the nondiscriminatory workplace norm is statistically significant.[239] Thus, the use of data of sufficient quality and quantity when conducting statistical analyses warrants the inference of discriminatory intent in employment cases.[240]

Similarly, courts have relied heavily on statistical evidence in jury selection discrimination cases over the past several decades.[241] For example, the analysis of the validity of a defendant's claims that he or she was indicted by an unconstitutionally selected grand jury often centers on statistical evidence.[242] In addition, statistics play an increasingly significant role in other courtroom contexts, such as jury consulting, change of forum due to public bias, and as prima facie evidence of causation in tort cases.[243]

D. *Solid Statistical Methodology and Sound Social Policy*

Statistics can be used to demonstrate far more than just the stark levels of racial profiling by law enforcement officials across the United States—they also reveal the large social costs of such practices.[244] Statistical and legal analyses alike have detected that "each encounter that an 'innocent' or non-offending [racial minority] has with the police increases their sense of alienation, resentment, and disregard for the police and for the criminal justice system."[245] In a 2000 national survey, the Bureau of Justice Statistics found that fifty-seven percent of Caucasians stated they "had a great deal or quite a lot of confidence in the police," but only thirty-eight percent of African-Americans had similar levels of confidence in law enforcement.[246]

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[239] *See* 6 Employment Coordinator § 57:37 (2007).

[240] *See id.*

[241] *See supra* note 74 (discussing jury selection cases and the use of statistical evidence to meet the prima facie burden of discriminatory intent and shift the burden to rebut to defendant).

[242] *See* McCormick on Evidence, *supra* note 20, at 799.

[243] *See* Eisenberg, *supra* note 65, at 667.

[244] Harcourt, *supra* note 123, at 1303. In addition to the negative social effects of discrimination against minorities, Professor Bernard Harcourt argues that racial profiling will lead to higher crime rates because the nonminority group will be more likely to transport drugs due to the fact that such drivers have become aware that their chances of being stopped and searched are lower than others. *Id.*

[245] Gandy, *supra* note 19, at 154.

[246] *See* Patrick A. Langan et al., Contacts Between Police and the Public 28 (2001), http://www.ojp.usdoj.gov/bjs/pub/pdf/cpp99.pdf.

In addition to the social costs of disenfranchisement and disillusionment with law enforcement, there is a chilling effect on racial profiling victims seeking redress because the state and local agencies accused of racial profiling are the very ones possessing information regarding discriminatory motives.[247] These agencies have the greatest access to data collected by officers in the field, citations recorded, and complaints alleged against individual officers.[248] Such agencies should not be allowed to secure immunity from litigation over civil rights abuses simply because they can hide behind the hurdle of proving discriminatory intent.[249] Greater public access to data on traffic stops and searches would shed light on the activities of law enforcement agencies, allowing for public "enforcement" and oversight to ensure nondiscriminatory practices.[250]

Furthermore, strong statistical associations should support an inference of discriminatory intent.[251] This would compensate for the fact that proving intent directly in an area with such broad police discretion and such little evidence as to an individual's subjective mental state makes proving that racial profiling caused the traffic stop nearly impossible.[252] Scholars have noted that the standard set for the burden of proof is often determinative "because disproving causation is statistically straightforward, given the necessary data, while proving it is almost impossible."[253]

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[247] *See* Harcourt *supra* note 123, at 1303.

[248] *See* Barnes, *supra* note 29, at 210.

[249] *See id.*

[250] *See id.*

[251] *See id.*

[252] *See id.* This relative disparity between the information and power of government actors compared with alleged victims of profiling has led several scholars to propose a burden-shifting approach. *See id.*; *see also* Smith, *supra* note 44, at 247. For example, Professor Michael Smith notes that police officers, law enforcement agencies, and the government in general are better equipped to explain particular officer and department practices than a racial profiling complainant who must speculate as to the motives of these state actors. *See* Smith, *supra* note 44, at 247. Police officers are accustomed to serving as witnesses and justifying decisions in a courtroom. *See id.* In addition, the government has control of access to information on traffic stop patterns and agency records, so it is in a much better position to explain a particular officer's stop practices and state of mind than a racial profiling complainant who must speculate as to true intent. *See id.* Smith contends that, because arguments regarding the state of mind of others are necessarily inferential in nature, statistical evidence should raise enough of a presumption of intent to allow plaintiffs to meet the prima facie burden of alleging discriminatory intent. *See id.* Given the above advantages government actors have, Smith believes that the burden of explaining apparent disparities and producing such evidence should be placed on the government as the party with superior access to information. *See id.*

[253] *See* Lamber et al., *supra* note 18, at 584.

Traditionally, civil rights claims have been crucial tools in bringing about systematic reform because such unconstitutional practices can affect a large class of people and draw substantial media attention.[254] To avoid large judgments and negative attention, law enforcement agencies have been willing to negotiate settlements with changes in department practices and policies regarding vehicle stops and searches.[255] Civil litigation in particular is needed to address racial profiling because "even when the criminal case is disposed of favorably to the defendant, if contraband can still be fairly attributed to him, juries are unlikely to provide compensation, even for clear constitutional violations."[256]

State and federal measures have not been sufficient to stop the use of racial profiling by police departments.[257] The practice of racial profiling continues even after the majority of states have passed anti-profiling legislation.[258] In the post-September 11th world, the fervor of protecting our nation from attack has shifted the focus away from individual rights.[259] The increased availability of civil relief from using striking statistical disparities as sufficient prima facie evidence of intent may help correct this imbalance.[260]

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[254] *See id.*

[255] *See supra* note 94 and accompanying text.

[256] *See* Rudovsky, *supra* note 114, at 354.

[257] *See id.* For an interesting argument on why such measures cannot eradicate racial profiling, see Silas J. Wasserstrom & Louis Michael Seidman, *The Fourth Amendment as Constitutional Theory,* 77 Geo. L.J. 19, 92–103 (1998) (arguing that "[w]hen there is prejudice toward a discrete and insular minority, the legislature is likely to ignore or undervalue the interests of that minority, and the resulting legislation may not reflect an accurate aggregation of everyone's individual interests").

[258] *See* Weatherspoon, *supra* note 5, at 738 (noting that the vast majority of racial profiling legislation has been directed exclusively at state police). Professor Floyd Weatherspoon advocates more inclusive legislation, broad enough to cover local officers in addition to highway patrol. *Id.* Although the pervasiveness of racial profiling affects all levels of police enforcement, only a few states have racial profiling legislation that covers all police officers, as contrasted with state troopers. *See id.* at 738 n.98. Connecticut and Oklahoma are examples of two states that take such additional measures. *Id.* All proposed federal legislation to specifically target racial profiling in traffic stops and searches has been defeated, with the last real attempts launched prior to September 11, 2001. *See* Leone, *supra* note 86, at 335–36. Although the Civil Division of the Justice Department does have the power to bring claims against law enforcement organizations, its efforts have been limited in recent years. *See* Weatherspoon, *supra* note 5, at 734.

[259] *See* Weatherspoon, *supra* note 5, at 738.

[260] *See id.*

Conclusion

Given the recent proliferation of databases and the development of sound statistical methodologies to detect racial profiling, courts should reconsider their stance on the use of statistical evidence to prove discriminatory intent. Strong statistical associations between drivers' race and frequency of stops/searches from well-planned statistical studies support an inference of discriminatory intent.

Many of the flaws of past studies that unsuccessfully attempted to use statistical data to prove discriminatory intent have been corrected. Some courts have already recognized the increased power of statistics to demonstrate discriminatory intent. The approaches taken by courts that allow the use of statistics to demonstrate intent have paved the way for other jurisdictions to accurately assess the merits of the emerging body of statistical research on racial profiling. The courts can allow more civil rights claims of racial profiling to proceed to trial by recognizing the increased quality and quantity of data available on racial profiling to infer discriminatory intent.

In addition, the current political climate and the continued prevalence of racial profiling despite media attention to the dilemma suggest that independent equal protection actions are needed to correct continued abuses. Courts have an increased responsibility to allow minorities viable avenues to seek redress for grievances in eras such as the War on Terror where the majority is less attentive to the wrongs of racial profiling.

Melissa Whitney