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Targeting the Majority: Redesigning Racial Profiling

Yoram Margalioth† and Tomer Blumkin‡

INTRODUCTION

Imagine that you are a police officer stopping cars for a drug search and that you have reliable statistical information that African Americans are more likely to engage in drug trafficking.¹ Most people believe that in such a case it would be efficient to search more African Americans compared to the rest of the population. Some object to targeting African Americans because of equity considerations, but they are likely to think that it is efficient, albeit not socially desirable. As we explain, this is not necessarily true. Minimizing ordinary crime such as drug trafficking is achieved, by and large, through deterrence.

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1. For the seminal work on racial profiling employed in drug searches, see John Knowles et al., Racial Bias in Motor Vehicle Searches: Theory and Evidence, 109 J. POL. ECON. 203 (2001) (analyzing data showing that sixty-three percent of the persons stopped and searched by the state police along I-95 were African American and twenty-nine percent were white, whereas the assumed proportion of African-American drivers on the road was roughly eighteen percent; and finding that the above disproportionate stops and searches could be explained by police use of accurate statistical information in an effort to maximize search success rates). Although widely condemned, the practice has actually expanded since September 11, 2001, probably because the use of ethnic profiling in the war on terrorism seems more legitimate. See AMNESTY INTERNATIONAL USA, THREAT AND HUMILIATION: RACIAL PROFILING, DOMESTIC SECURITY, AND HUMAN RIGHTS IN THE UNITED STATES (2004), available at http://www.amnestyusa.org/racial_profiling/report/rp_report.pdf.

This is consistent with predictions and analyses carried out by leading scholars in the field. See, e.g., R. Richard Banks, Beyond Profiling: Race, Policing, and the Drug War, 56 STAN. L. REV. 571, 575-76 (2003) ("Nearly all of the stop-search studies document the disproportionate investigation of blacks and Latinos, even in jurisdictions that have prohibited racial profiling." (internal citations omitted)); Bernard E. 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, 1290-91 (2004) (commenting that data showing disproportionate stops and searches of minorities are consistent, and that it is realistic to assume that the police are using racial profiling); William J. Stuntz, Local Policing After the Terror, 111 YALE L.J. 2137, 2142 (2002) ("In terms of how we police the police, profiling is the great issue of our time.").
Deterrence should concentrate on those individuals who are equally likely to commit a crime or to abide by the law ("marginal offenders"). Being a member of the marginal offenders group is not the same as being a member of a group that, on average, commits more crimes.

It may well be the case that even if African Americans have a greater propensity to commit a certain crime, say, drug trafficking, an efficient racial profiling policy would target non-African Americans, as being more susceptible to deterrence—that is, as being overrepresented in the marginal offenders group. The option of targeting the group with the lower offending rate has never before been considered.

To exemplify our argument, assume that when randomly (that is, not relying on race as a signal) stopping cars and searching them for drugs, ten percent of the African-American drivers searched are found to possess drugs, whereas only five percent of the non-African-American drivers searched are found to possess drugs.

Plausibly assuming that the police budget is constrained—that is, the number of searches is fixed\(^2\)—deviating from a random search rule toward searching a higher percentage of African-American drivers would improve the chances of finding drugs (maximizing "hit rate"). In fact, plausibly assuming that all other relevant signals, such as driving in a car with tinted windows, are equally distributed across racial groups, searching only African Americans would seem to maximize the hit rate.

To see this, imagine having a budget constraint of ten searches. Starting from a random search rule, consider searching one more targeted group member at the expense of searching one fewer non-targeted group member. As you will quickly realize, each time you consider whom to search, you will be better off searching a targeted group member. The end result is that all ten searches will be of targeted group members.

This, however, is not necessarily correct, as targeting one group’s members for inspection is likely to reduce that targeted group’s members’ criminal activity, whereas the rest of the population is likely to increase its criminal activity.\(^3\) Hence, searching the targeted group members would not necessarily maximize hit rate, nor would it be efficient, defining efficiency as that allocation of police resources which minimizes crime (by enhanced deterrence).

By introducing a concept of "marginal offenders" (those individuals who are equally likely to commit a crime or to abide by the law), we show that

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2. Having roadblocks on the highways searching all, or a large number of, drivers is prohibitively costly.

3. This is based on an assumption that the relevant population perceives the differential police enforcement efforts. This assumption may not be perfectly realistic, but is nevertheless the cornerstone of the economic analysis of racial profiling. See Knowles et al., supra note 1, at 206 ("Our model assumes that motorists take into account the probability of being searched in deciding whether to carry contraband.").
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racial profiling—that is, an informed deviation from a random search rule—would always be efficient. If the reduction in targeted group criminal activity outweighs the increase in the criminal activity of the rest of the population, there will be an efficiency gain. Otherwise, targeting the rest of the population would result in an efficiency gain. A random search (no profiling) rule would be efficient only in the knife-edge case where both effects exactly offset each other. The vast literature on racial profiling has so far failed to acknowledge this point.

Our novel economic framework further allows us to make an important distinction, overlooked by the literature, between racial profiling employed in the context of terrorism and that employed in the context of ordinary crime. As we explain in Section I.C. below, the outcome of efficient policing in the context of terror is prevention, that is, incapacitation, not deterrence. A terrorist, willing to sacrifice her life, cannot be deterred by criminal sanctions. Hence there is an identity between marginal and infra-marginal terrorists, and racial profiling should always target the group bearing the higher propensity to commit an act of terror.

In addition to efficiency, an optimal screening rule should take into account equity considerations. As is well known, racial profiling entails significant equity costs. These costs are positively correlated with the extent to which the group targeted suffers from underlying discrimination, as in the case of minorities and women.

Drawing attention to the counterintuitive option we raise in this paper, of efficiently targeting the majority group members even when the majority group has a lower offending rate than the minority group, we discuss the possibility that such a racial profiling rule may advance both equity and efficiency.

Addressing the case in which racial minorities are targeted, we argue that there should be some sacrifice of efficiency to reduce equity costs, and we examine two alternative policies. The first is providing monetary compensation

4. Drug searches and post-September 11 airport security checks are the two most prominent examples of racial profiling. It is sometimes posited that profiling in the context of terror entails lower equity costs, because passengers can be prepared for the inconvenience, and are assumed to be more sympathetic to the policy objective of preventing plane hijacking and/or crashing. See, e.g., Mathias Risse & Richard Zeckhauser, Racial Profiling, 32 PHIL. & PUB. AFF. 131, 162 (2004). The literature does not distinguish, however, between terror and ordinary crimes when discussing efficiency aspects of racial profiling.

5. For a discussion of the different functions of sanctions, see STEVEN SHAVELL, FOUNDATION OF ECONOMIC ANALYSIS OF LAW 473-568 (2004). The functions include rehabilitation and retribution, in addition to deterrence and incapacitation. The latter two rationales for criminal justice are beyond the scope of our analysis as we focus on deterrence (for ordinary criminals) and incapacitation (for terrorists).

6. When the targeted group is not subject to discrimination on other grounds, profiling does not entail significant stigma. See, e.g., Albert W. Alschuler, Racial Profiling and the Constitution, 2002 U. CHI. LEGAL F. 163, 212 ("[A]lthough gender profiling does declare men more crime prone than women, no one believes that it expresses contempt for men or marks them as the less worthy gender.").
raised and distributed via the tax and transfer system to compensate for equity costs entailed by an efficient profiling rule. The second is to modify the efficient profiling rule by reducing the extent of profiling (shifting police resources toward the non-targeted group). We argue that racial profiling may be a rare example of a case in which compensation should be awarded on an ex ante basis for efficiency reasons. Finally, we explain why the option of compensation may be banned on social grounds.

We then prove, by employing a marginal analysis technique, that the optimal profiling rule, even when monetary compensation is a viable policy option, should not be set at its most efficient point. In doing so, we provide an example contrary to conventional wisdom in the law and economics literature that advocates setting the legal rule at its most efficient point and using the tax and transfer system to compensate for inequities, proving that such a rule may not be optimal. The general structure of this Article is as follows: In Part I we examine the efficiency determinants of racial profiling and discuss the optimal extent of profiling when efficiency is the only concern. This Part is particularly important, because much of the confusion in the existing literature stems from a failure to account properly for the efficiency aspects of racial profiling. In Part II we examine the equity costs entailed by racial profiling, distinguishing between costs that are the outcome of any profiling rule and those that are due to the rule’s racial component. In Part III we analyze the efficiency-equity tradeoff problem raised by racial profiling.

I. EFFICIENCY

On February 27, 2001, in an address to Congress, President Bush announced that racial profiling is "wrong" and promised to "end it in America." And indeed, to date, more than twenty states have enacted legislation that prohibits racial profiling and/or requires jurisdictions within the state to collect data on law enforcement stops and searches in order to eliminate the practice. Nevertheless, the practice has actually expanded.

7. Laying down the micro-foundation is necessary for an accurate explanation of how profiling works. See Robert Cooter, Market Affirmative Action, 31 SAN DIEGO L. REV. 133, 134 (1994) ("Most political disagreements are buttressed by false beliefs about how policies impinge upon values. By correcting such errors, science improves the quality of policy debate or even imposes a framework upon it.").

8. Criminal profiling is the law enforcement practice of taking certain traits into account in deciding whether to initiate the stop, search, or investigation of a suspect. We define the term "racial profiling" as referring to criminal profiling that uses "sensitive" traits such as ethnicity, national origin or race, namely, traits that relate to groups who may suffer from discrimination.


10. For a list of states and legislation, see http://www.racialprofilinganalysis.neu.edu/legislation/ (last visited Apr. 22, 2006).

11. See supra note 1.
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The persistence of the phenomenon calls into question the reasons for legal law enforcement agencies' continuing to engage in a practice that is widely condemned and often explicitly prohibited. There are two possible explanations. One is the existence of widespread racial animus among police officers. The other is that law enforcement agencies find racial profiling to be efficient.

Most of the vast literature on racial profiling engages in choosing between the two explanations above. Others have discussed the constitutionality of racial profiling. We are interested in the normative as opposed to the positive question. A normative analysis views racial profiling from the policymaker's point of view. The policymaker could be the police, the legislator, or the courts using their interpretive power.

What matters to us is not the motivation of police officers or how they view racial profiling. Instead, the question becomes one of balancing efficiency and equity considerations, using a welfare economics framework that allows for systematic analysis and choosing the optimal rule.

We therefore assume that law enforcement agents are not racist, or that racist officers can be identified and laid off, and we examine efficiency as well as equity aspects of racial profiling in an attempt to define the socially optimal screening rule. Our result should then be adapted to reality, in the event that law enforcement agents are indeed racists who cannot be identified and removed.

Following the seminal work of Nobel laureate Gary Becker on the determinants of crime, we assume that individuals act rationally when they decide whether to engage in criminal activity, by taking into account the

12. See, e.g., Knowles et al., supra note 1. Although the data the authors analyze show that police used racial profiling, their motivation was not racial animus, as evinced by the fact that the percentage of searched drivers who were found to be carrying drugs (the "hit rate") was similar across populations. Racist police officers, they claim, would stop and search more African Americans, due to their taste for discrimination, and this would increase deterrence among African Americans while reducing deterrence among whites. Under such a scenario, hit rates would be higher for whites. The fact that hit rates are equal across racial groups is claimed to be proof that disproportionate searches do not reflect racial prejudice. But see David A. Harris, Profiles in Injustice: Why Racial Profiling Cannot Work 13 (2002) (ignoring the issue of responsiveness to enforcement and viewing the data on the equal hit rates as running "contrary to long-held 'commonsense' beliefs about the effectiveness of racial profiling" because it proves that African Americans and whites have similar offending rates); Samuel R. Gross & Katherine Y. Barnes, Road Work: Racial Profiling and Drug Interdiction on the Highway, 101 Mich. L. Rev. 651, 660-61 (2002) (stating the the equal hit rates "can be explained by aspects of the process that are hidden from our view: selective reporting of stops and searches, aggressive use of investigative procedures that do not count as 'searches,' and racial discrimination in the use of these subsearch investigations").

13. See, e.g., Harcourt, supra note 1, at 1354 ("In sum, the use of race in policing may be a constitutionally acceptable—though not necessarily socially desirable—practice under the three narrow conditions just discussed.").

14. See Joseph E. Stiglitz, Economics of the Public Sector 93 (3d ed. 2000) (stating that a central objective of welfare economics is to provide a framework within which efficiency and equity evaluations can be performed systematically).
expected benefits and costs associated with crime.\textsuperscript{15}

Individuals differ, both within and across groups, in the benefits/costs they derive/incur when committing a crime. For simplicity of presentation, we assume that the benefits are uniform; thus, the only variation across individuals comes from the cost side. Differences in costs are equivalent to differences in benefits, as what matters from the point of view of the prospective criminal and varies across individuals is the net gain. In the absence of profiling, the cost and the detection probability are assumed to be uniform across all individuals.

The cost entailed by committing a crime may be either psychic/moral or pecuniary. The latter may include the opportunity cost of forgoing a legal job. Suppose that the prevailing enforcement policy rules out profiling, so that individuals are randomly selected regardless of affiliation with population group. It is further assumed that the police are faced with a limited budget, so that the number of searches is bounded well below the aggregate population. Lastly, we assume that the natural offending rate (offending rate under a random search rule) of one group (group $A$) exceeds that of the rest of the population (group $W$).

The question that arises, under such circumstances, is whether the police can gain from using profiling; namely, whether allowing the search policy to vary across population groups, rather than treating all individuals as coming from a single homogenous population group, can reduce crime, given police budget constraints.

To understand the economic rationale for using racial profiling, consider first a hypothetical ideal world (first-best in the terminology of welfare economics) where personal attributes— that is, the costs incurred by individuals

\textsuperscript{15} See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 169 J. POL. ECON. (1968). We model crime from the individual's perspective as a discrete choice, a decision whether or not to commit a single crime. This defines the individual demand for crime. Crime level is defined by the aggregate demand. Our choice of a discrete model is made for presentation convenience purposes. The insights gained extend to a model where demand for crime at the individual level is given by some continuously downward sloping curve. In particular, rather than referring to the marginal offenders— namely those individuals indifferent between committing a crime and abiding by the law—and aiming to target population groups that are overrepresented in the population of marginal offenders, police should focus their enforcement efforts on population groups whose contribution to marginal crime is the largest.

Marginal crime is defined by the effect a small change in the level of enforcement (say, searches conducted) bears on the aggregate level of crime. Group marginal crime is defined in a similar way with respect to the group crime level. Employing calculus terminology, the marginal crime would be defined by the derivative of the aggregate demand for crime with respect to the level of enforcement. Notably, marginal crime can be readily related to average crime level. As is well known in economics, the elasticity is defined by the ratio of marginal and average (in our context the elasticity of the demand for crime with respect to the level of enforcement, measuring the percentage reduction in crime per a one percent increase in enforcement is given by the ratio of marginal crime and average crime). It immediately follows that marginal crime is given by the product of average crime and elasticity. Hence, comparing two distinct population groups implies that it may well be the case that the targeted group, the one with higher marginal crime level, is the one with lower average crime level but with much higher elasticity. This is analogous to the discrete case where the sheer fact that a population has a higher average crime level may be attributed to its much higher fraction of infra-marginal offenders who are irrelevant for deterrence purposes.
committing crimes—are costless to observe. In this first-best world, police would first target those individuals most susceptible to deterrence, namely, those incurring the highest marginal costs when committing a crime, and proceed in descending order. This would provide optimal deterrence; that is, it would minimize crime subject to resource constraints.

In a second-best world, like the one we live in, where the police cannot observe such costs (that is, they face a screening problem), racial profiling utilizes the variation across population groups to partially compensate for the inability to observe individual costs.

Prima facie, one would predict that more intensive targeting of the population group with the higher natural offending rate would reduce crime. This conclusion, however, may be wrong. Reduction in crime is primarily a byproduct of enhanced deterrence. This means enhanced targeting of the marginal offenders, namely, those individuals who are (nearly) equally likely to commit a crime or to abide by the law.

As we cannot directly observe the marginal offenders in the general population, profiling may be useful for targeting the racial group whose members are overrepresented in the marginal offenders group, relative to its share in the general population. This would enhance deterrence—that is, reduce crime—by focusing police enforcement efforts on individuals who are more likely to be marginal offenders.

Our assumption that group A has a higher offending rate, or, in other words, is more prone to engaging in criminal activity, does not necessarily imply that members of group A are overrepresented in the group of marginal offenders, relative to their share in the general population.

The term "offending rate" reflects the group's average crime rate. The average crime rate in group A could be higher than the average crime rate in group W, due to a relatively larger number of infra-marginal offenders: individuals whose costs in committing crime are so low that they are relatively unaffected by police enforcement efforts. More precisely, being infra-marginal

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16. See, e.g., Richard B. Freeman, Why Do So Many Young American Men Commit Crimes and What Might We Do About It?, 10 J. ECON. PERSP. 25 (1996) (arguing, based on analysis of the supply dynamics of crime, that incarcerated criminals are probably quickly replaced, and therefore that the prevention effects of enforcement are quite low, and deterrent effects dominate); Daniel Kessler & Stephen D. Levitt, Using Sentence Enhancements To Distinguish Between Deterrence and Incapacitation, 42 J.L. & ECON. 343 (1999) (finding significant deterrent effect, but also a potentially important role for incapacitation); Steven D. Levitt, Why Do Increased Arrest Rates Appear To Reduce Crime: Deterrence, Incapacitation, or Measurement Error?, 36 ECON. INQUIRY 353 (1998) (arguing that the total crime reduction observed from policing and the reduction predicted by prevention effects alone are similar, and therefore prevention probably dominates). We could not find empirical evidence regarding specific types of crime. Such empirical studies would be important for an application of our thesis. Because both effects, deterrence and incapacitation, contribute to crime reduction, there is a need to analyze enforcement policy regarding each type of crime. In this Article we argue that deterrence is relatively much more important in the context of drug trafficking than in the context of suicide terrorism; therefore, the current practice of hit rate maximization is justified in the terror context but may not be justified in the drug trafficking context.
implies that the decision to commit a crime will not be affected by a slight increase in police enforcement efforts.

To sum, targeting group $A$ members would be efficient only if they were overrepresented in the marginal offenders group relative to their share in the general population. This cannot be derived from an assumption that their group-wise offending rate is higher.

Racial profiling would be efficient in any case where there is a non-zero correlation between being a marginal offender and belonging to a certain racial population group. Only in a knife-edge case would the racial composition of the group of marginal offenders exactly mirror the racial distribution in society. Indeed, in such a case, there would be no gain from profiling.\(^\text{17}\)

The policy implication would be to shift police enforcement efforts, at the margin, towards the racial group that is overrepresented in the marginal offenders group, relative to its share in the general population, up to the point at which the marginal offenders group reflects the racial composition of society. This is the point where the crime level is minimized, given the police resource constraint.

A. Group Size Does Not Matter

Difference in population size has no effect on the efficiency of profiling. Suppose that the police consider whether to slightly increase the extent to which they target a certain population group at the expense of searching the other group.

Intuitively, one may posit that the efficiency gain (or loss) from such a policy change will depend on the relative size of the two population groups. Searching an additional member of the targeted group (which is assumed to be the smaller group, namely group $A$, the minority) comes at the cost of searching one fewer member of the other group (group $W$, the majority). This results in two offsetting effects.

On the one hand, searching one fewer group $W$ member will decrease the deterrence of a relatively large number of individuals, while searching one more group $A$ member will increase deterrence of only a relatively small number of individuals. Prima facie, this seems to lead us to conclude that overall deterrence is reduced, and crime level increases.\(^\text{18}\)

On the other hand, searching one more, or one fewer, individual has a relatively greater effect (in absolute values) on minority group members than on majority group members, because one minority individual represents a

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17. See Appendix, infra, for a graphic illustration.
18. See Harcourt, supra note 1, app. at 1296-98 (finding racial profiling unlikely to be efficient when a minority group is targeted, as targeting the minority group will lower the offending rate of a relatively small group of people while increasing the offending rate of a large group of people).
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higher percentage of the minority population.

The two effects work in opposite directions and exactly offset each other. Therefore, group size does not matter.

B. Equalizing Hit Rate

Data on police stops and searches, as documented in numerous articles, indicate a policy whereby police search disproportionately across racial population groups, but the search success rates are similar. The evidence has been interpreted to indicate a search policy where police aim to maximize the hit rate.

Maximizing the hit rate does not minimize crime because it focuses on the group-wise offending rate, reflecting the average propensity to commit a crime, rather than focusing on marginal offenders.

To illustrate, suppose that the majority of the members of group $A$ incur a relatively low cost when committing a certain crime. This makes group-$A$ members highly prone to engaging in the specific criminal activity, or in other words, group $A$ has a relatively high offending rate. Suppose further, that the majority of the members of group $W$ incur higher costs in committing the same type of crime, thus leading to a lower offending rate.

Group-$A$ members are more likely to commit the crime; thus, under a random search rule, searches of group-$A$ members will reveal a higher percentage of criminals compared to the percentage of criminals found in searches of group-$W$ members. Targeting more searches at group-$A$ members will further increase the success rate, up to the point at which offending rates will be equalized across population groups. This will eventually happen because group-$A$ members will reduce their criminal activity in response to the enhanced enforcement efforts directed at them, while group-$W$ members will correspondingly increase their criminal activity.

This, however, is not efficient because, as we explained above, the police could do better by targeting their searches at the group with the higher proportion of marginal offenders, who are more sensitive to deterrence, possibly group $W$ (the population group with the lower offending rate). Such a policy would reduce the level of crime in society compared to the prevailing racial profiling policy of maximizing the hit rate.

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20. See Harcourt, supra note 1, at 1295-1303, 1322 (making a similar argument that hit rate policy does not minimize crime and criticizing the vast literature on racial profiling which failed to understand it—the only exception being Persico, supra note 19, at 1480). Harcourt, however, ignores the possibility that efficient racial profiling policy would call for targeting the group with the lower offending rate, as
C. The War on Terror

In the context of terrorism it seems plausible to assume that the deterrence effect of using racial profiling as a law enforcement tool would be much less pronounced than in the drug interdiction case.\(^{21}\) As noted by Pape, "[a]fter September 11, Americans know that we must expect that future al-Qaeda or other anti-American terrorists may be equally willing to die, and so not deterred by fear of punishment or of anything else."\(^{22}\)

There are various explanations as to why people become suicide terrorists, but all of them are consistent with our assumption that the individual terrorist, once determined to commit an act of terror, cannot be deterred.

Following Emile Durkheim’s study of suicide in nineteenth century Europe,\(^{23}\) which has been routinely confirmed in contemporary studies of suicide,\(^{24}\) individuals’ motives are defined as egoistic, anomic, altruistic, or fatalistic. Egoistic and anomic suicides occur when individuals experience great disappointments or personal traumas and find the future to offer no hope for improvement.\(^{25}\) Altruistic suicide takes place when an individual identifies with the collective good of her society to such an extent that she sees it as her duty to sacrifice her life to further society’s goals.\(^{26}\) Fatalistic suicides take place in situations of excessive regulation, such as that of persons with futures blocked, aspirations choked by oppressive discipline, and persons living under physical or moral despotism.\(^{27}\) These can occur, for example, in cults where isolated groups of people living in a highly regulated environment follow their leader in...
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committing mass suicide.\(^{28}\)

Early literature on suicide terrorism viewed it as driven by egoistic or anomic motivation—in other words, carried out by people who wished to die for personal reasons.\(^{29}\) Recent literature views it mostly as an altruistic act, similar in essence to that of soldiers who are willing to take upon themselves suicide missions, such as the kamikaze pilots in World War II.\(^{30}\)

Whether driven by egoistic or altruistic motivation, monetary or non-monetary sanctions are clearly irrelevant in the eyes of a person who is willing to sacrifice his or her life. The suicide terrorist has already accepted the maximum cost.

To be consistent with the framework presented above, the cost attribute may be interpreted as capturing the degree of moral inhibition that individuals have when they consider whether to commit an act of terror.\(^{31}\)

Without being excessively unrealistic, we assume that the population can be divided into two subgroups: those who have no such inhibitions and will commit an act of terror regardless of the extent of enforcement (prospective terrorists); and the rest of the population whose inhibitions are so great that they will never commit an act of terror irrespective of enforcement level. Thus, there will be no marginal offenders and hence no deterrence effect. In the absence of a deterrence effect, racial profiling could serve to promote the goal of minimizing crime only as a means of enhancing the actual prevention of terrorist acts—that is, incapacitation.

Unlike the case of drug trafficking, where targeting marginal offenders reduced crime via enhanced deterrence, crime minimization in the context of suicide terror is tantamount to hit rate maximization. That is, as cost attributes cannot be directly observed, assuming that the offending rate differs across population groups, law enforcement agents should, in the optimum, target only the group with the higher offending rate.

This corner solution derives from the fact that there is no behavioral response to policing, and as the cost attribute is assumed to be identically and independently distributed within each population group, the probability that an individual member of a certain group is a terrorist is constant, regardless of enforcement. Thus, minimizing terror implies that, at the margin, police will

\(^{28}\) Consider, for example, the famous Waco standoff, where in April 1993 over seventy people of the Branch Davidian sect followed their leader, David Koresh, to death by flames. See DAVID THIBODEAU & LEON WHITESON, A PLACE CALLED WACO: A SURVIVOR'S STORY (1999).

\(^{29}\) E.g., Ariel Merari, The Readiness To Kill and Die: Suicidal Terrorism in the Middle East, in ORIGINS OF TERRORISM 192 (Walter Reich ed., 1990).

\(^{30}\) PAPE, supra note 22, at 171-98.

\(^{31}\) As mentioned above, differences in costs are equivalent to differences in benefits, as what matters from the point of view of the prospective criminal (terrorist) and varies across individuals, is the net gain. The cost and the detection probability in the absence of profiling are assumed to be uniform across all individuals.
always search the individual who is more likely to be a terrorist, who is a member of the population group for which the offending rate is (constantly) higher.  

Two important application points are in order. First, due to cognitive biases, law enforcement agents may rely too much on race and ethnicity in their assessment of risks compared to other relevant traits, such as nervousness. In cases in which these biases are significant, ordering security personnel to ignore race and ethnicity may actually increase profiling efficiency. Second, notwithstanding the previous point, ethnic profiling is likely to be important in identifying potential terrorists. Contrary to popular belief, relying on characteristics such as traveling alone on a one-way ticket with no suitcases (carry-on only), purchasing tickets at the last minute using cash, and checking in late, are not helpful in identifying terrorists.

All these characteristics make sense. For example, there is no reason to buy a round-trip ticket if you are planning to crash the plane. Moreover, in order to allow law enforcement authorities as little time as possible to investigate your identity, you are better off purchasing the ticket at the last minute and paying cash.

The problem, however, is that terrorists know that these characteristics are considered suspicious. The currently employed Computer-Assisted Passenger Prescreening System (CAPPS), which was put in service following recommendations of the White House Commission on Aviation Safety and Security, chaired by Vice President Al Gore in 1997, uses this set of criteria. This system failed to detect the nineteen terrorists who boarded four planes on September 11. The reason it failed, and is likely to fail again, is that it uses characteristics that are within the terrorist’s control.

The terrorist can travel in company (there seems to be no shortage of suicide terrorists), buy a round-trip ticket far ahead of time, use a credit card, give a frequent flier number, arrive early at the airport, and check in one or two suitcases.

Ethnic origin, on the other hand, is not within the terrorist’s control. The threat faced by the United States is not from Tamil terrorists but mainly from al-Qaeda and some other Arab or Muslim terror organizations. All nineteen terrorists who committed the September 11 attacks were Muslim Arabs of

32. Even when the behavioral response (deterrence effect) is present, it is likely to be small enough that the offending rate for one group will exceed that of the other. Crime minimization would still call for a corner solution, where members of only one group would be searched.
33. We are grateful to Rafi Ron for pointing them out to us. Rafi Ron was in charge of security at Israel’s main airport. Following the September 11 attacks, he was invited to Logan Airport in Boston to redesign its security system.
34. See FREDERICK SCHAUER, PROFILES, PROBABILITIES, AND STEREOTYPES 186-87 (2003).
35. See, e.g., id.
36. Id. at 182-83.
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Middle Eastern ethnicity. This is not a coincidence. The data show that the majority of al-Qaeda suicide terrorists come from Saudi Arabia and other Persian Gulf states, and it is assumed that the organization will collapse without these states’ core support. It therefore seems that, except for looking nervous, the only visible characteristic that is positively correlated with being a terrorist and which is beyond the terrorist’s control is his ethnicity.

Acknowledging the failure of CAPPS on September 11, a new system, named CAPPS II, was developed. This system was designed to focus on the type of characteristics that terrorists may find difficult to mask or change. It was designed to perform background checks on each passenger reserving a flight to determine the passenger’s “risk” to airline safety.

The system was supposed to rely on commercial companies that are in the business of compiling extensive dossiers about the lives of most Americans to assess their credit risk. This information was supposed to be added to a database containing the information available in all government databases. A special algorithm was then supposed to be used to derive every passenger’s flight safety score. This could result in either enhanced or reduced use of racial profiling, depending on how important ethnic origin would remain as a predictor of terrorism, when additional information that is beyond the terrorist’s control is available. Airport security personnel were supposed to search passengers according to their safety scores.

The development of the system was stopped because the system was viewed to pose an excessive threat to the freedom and privacy of the people. A new system, codenamed “Secure Flight,” is now under development. It is supposed to be a mild version of CAPPS II, but no official information is available at the time of writing this Article.

37. See PAPE, supra note 22, at 125.
II. EQUITY

The fact that racial profiling is efficient does not mean that it is socially desirable. As reflected in the revived debate on the merits and pitfalls of profiling, equity considerations must be taken into account.41

There are two categories of inequities entailed by racial profiling. The first category, which we will call “horizontal inequity,” includes inequities that are caused by any profiling rule.

The other category, which is the more significant one, has to do with racial profiling, and we will refer to it as the “stigma effect.”

The third Section below analyzes a major equity concern in the United States which is often associated with profiling and relates to the two categories mentioned above: the higher incarceration rate of African Americans.

A. Horizontal Inequity

Profiling is a form of decisionmaking by generalization.42 In fact, all rules rely to some extent on generalizations, as unequal cases that fall under the same legal rule are treated as if they were equal.43 But profiling makes this explicit.44 Instead of examining the individual, a profiling rule looks at the characteristics of the group to which that individual belongs. Relying on generalizations is clearly wrong when they are spurious.45 But even when generalizations have a sound statistical basis, they still may entail horizontal inequity.

Inequity is caused by any generalization that is not universal, that is, a generalization that does not apply equally to all cases, objects, or people. Universal generalizations are usually pointless, as is, for example, the following universal generalization: all bachelors are unmarried.46

The vast majority of generalizations are non-universal. For example, when we say that Volvos are reliable, we know that some Volvos are not. A

41. Our discussion of equity considerations is done from a policy perspective. We therefore assume no police abuse, and no disproportionate use of profiling; that is, we assume that the technique is applied to all communities and in all situations in which it is found to be efficient.
42. See SCHAUER, supra note 34, at 21.
43. A straightforward example would be the sixty-five mile per hour speed limit that is equally applied to drivers regardless of differences in weather conditions, driving skills or personal circumstances.
44. And is therefore considered to be wrong by all who cherish particularism. See SCHAUER, supra note 34, at 20 (quoting WILLIAM BLAKE, ANNOTATIONS TO SIR JOSHUA REYNOLDS’S DISCOURSES (1808) (“To generalize is to be an idiot. To particularize is the alone distinction of merit.”)).
45. And this is indeed one of the claims against the use of racial profiling. For racial profiling to be justified (on efficiency or equity grounds) it has to be based on a sound statistical basis. Whether African Americans have a higher propensity to traffic drugs is a hotly debated question. We argue that the relevant statistical basis may be different depending on the type of crime. Where deterrence is thought to be the dominant factor in crime reduction, the relevant statistic is their representation in the group of marginal offenders.
46. It is pointless, because it does not add anything to our concept of “bachelor”; it just clarifies the definition.
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generalization may be considered statistically sound even when it does not apply to the majority of the cases, objects, or people within its category. For example, saying that pit bulls are vicious and dangerous, when only a minority of pit bulls is vicious and dangerous, stands as a sound claim so long as the percentage of vicious and dangerous dogs of other breeds is (significantly) lower. The generalization tracks down the relevant information, which is comparative.\textsuperscript{47}

Therefore, although the majority of pit bulls are not dangerous, and although some dogs of any breed are dangerous, we may wish to regulate pit bulls, while not regulating other breeds, based on statistics such as those indicated by the Humane Society of the United States report, according to which twenty of the twenty-eight deaths from dog bites between 1983 and 1987 were attributed to pit bull bites when pit bulls accounted for only about one percent of all American dogs.\textsuperscript{48}

Profiling is therefore inequitable in its overinclusiveness. Many pit bulls, possibly most pit bulls, although not dangerous, are regulated.\textsuperscript{49} Such profiling may prove efficient if examining each individual is determined to be too costly.\textsuperscript{50} However, the individual pit bulls (and their owners) are paying a cost. This cost may be high, if for example, the regulation prohibits people from owning or breeding pit bulls. The generalizing rule would be efficient if the cost saved is greater than the cost incurred.

Specifically, the policymaker has to assess the cost of examining individual dogs at a level that would achieve the same reduction in dog bites as the reduction that would be achieved by a regulation that forbids people from owning pit bulls. This cost should then be compared with the cost incurred by pit bull lovers due to the regulation. In the case that individual examination is not an option, the cost that should be compared with the cost incurred by pit bull lovers is the cost entailed by the expected increase in dog bites.

Turning our attention from cars and dogs to people, we can see that individuals who are stopped and searched (and possibly fined or incarcerated if found guilty) more often than others who are identical to them in all respects other than race bear a disproportionate share of the cost that society pays for law enforcement.

This is an example of a non-universal generalization, similar to the ones discussed above. According to our marginal analysis, which we developed in Part I above, the comparison is more complicated, because unlike cars and

\textsuperscript{47} See SCHAUER, supra note 34, at 11.


\textsuperscript{49} Profiling is also underinclusive, as some dangerous dogs are not pit bulls and are therefore not regulated. This must be taken into account when assessing the rule's efficiency.

\textsuperscript{50} "High cost" includes the case of impossibility to measure, which would be defined as infinite cost.
dogs, people may respond to the profiling rule and change their behavior.
Therefore, unlike targeting pit bulls as being more dangerous, it is possible that
the efficient profiling rule, when people are the object, would target the group
with the lower offending rate (Labradors), but with higher representation in the
marginal offenders group.

Nevertheless, the horizontal inequity caused by the profiling rule is the
same in all cases. The individual members of the targeted group are paying the
cost of providing a public good, security, to all society members. The rest of
society benefits from the savings derived from not conducting an individual
examination of each pit bull, or every person, while not sharing in the burden.\(^{51}\)
The cost of regulation, or search, is borne by the targeted group members alone.

This applies to the innocent and to criminals alike.\(^{52}\) The innocent members
of the targeted group are subject to more frequent searches, with the entailed
inconvenience, humiliation, and loss of time, compared to the rest of society;
the criminals face all of the above as well as a higher probability of getting
cought compared to criminals who are not members of the targeted group.

We think that equity considerations require that criminals should face the
same probability of getting caught regardless of their race or ethnicity.
Enforcing criminal law to a greater extent with respect to targeted-group
individuals is similar to sentencing targeted-group individuals more severely
than the rest of the population.\(^{53}\) Acknowledging equity costs only with respect
to innocent targeted-group individuals who were directly touched by police
enforcement on different levels (searched, interrogated, incarcerated) is
insufficient. Equity costs should account for the higher probability of being
searched, interrogated, or incarcerated, faced by all members of the targeted
group, relative to the rest of the population. This applies to the innocent and to
criminals alike.

It may be important to note that from an ex post perspective, any penal rule
would be horizontally inequitable, since enforcement is incomplete. Under a
random search rule some people are searched while others are not, and some
criminals get caught while others remain free. Ex ante, however, is the relevant
perspective for a normative analysis. A random search rule treats all individuals
equally from an ex ante perspective, whereas a profiling rule inequitably
distributes the expected costs of search and punishment.\(^{54}\)

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51. When individual examination is impossible, the social benefit is reduction in crime level or in
terror.
52. The literature, in general, does not account for the inequity costs incurred by targeted group
criminals. The discussion of inequity is focused on the innocent alone. See, e.g., Gross & Barnes, supra
note 12, at 744 ("No one denies that racial profiling imposes costs on minorities: more innocent blacks
and Hispanics than whites are stopped, detained, questioned and searched.").
53. See Alschuler, supra note 6, at 234.
54. Applying an ex ante perspective, which by definition measures equity costs borne by innocent
as well as criminal minority group individuals, is consistent with the criminal behavior model that was
used in Part I to measure efficiency, which assumed that agents were expected-payoff maximizers.
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A profiling rule could be justified in a society that does all it can to equally distribute the overall burden in the production of public goods, so that those who bear a relatively greater burden in the production of security would be relatively less burdened in the production of some other public goods. Society today does not seem to fit this description; therefore, profiling entails an equity cost.\textsuperscript{55}

B. Stigma

Racial profiling involves an additional type of harm, which is its stigmatizing effect on targeted group members. Members of the stigmatized group are likely to feel resentment, hurt, and loss of trust in the police.\textsuperscript{56} The stigmatizing effect of profiling is what makes racial profiling very close to discrimination in the type of effects it has on minorities, even though racial profiling is not rooted in personal prejudice.

The harm caused by profiling is largely due to underlying racism and not to the profiling rule itself. The harm is therefore mostly expressive in nature; it primarily relates to the fact that the targeted group has already been discriminated against, and less to the profiling per se that causes only horizontal inequity as described above.\textsuperscript{57} Thus, for example, profiling drivers by age (rather than by race) because young drivers are more prone to be involved in car accidents does not seem to raise similar equity concerns. Being young is generally considered to be an advantage. On the other hand, profiling minorities or women results in significant equity costs, as it reminds the targeted group members of their being discriminated against.\textsuperscript{58}

The stigma effect is by far the more significant equity cost. This makes it plausible to assume that if the majority, and not the minority, would be targeted—an option that is raised in this Article as a possible outcome of an accurate efficiency analysis even if African Americans have higher offending

\textsuperscript{55} See Randall Kennedy, Race, Crime, and the Law 159 (1997) (viewing minorities as being made to pay a “racial tax” that whites are not required to pay). But cf. Banks, supra note 1, at 594 (“Drug enforcement efforts that burden some racial minorities may also disproportionately benefit those racial minorities whose neighborhoods are most plagued by drug dealing and its associated problems.”); Risse & Zeckhauser, supra note 4, at 162-69 (noting that it is possible that African Americans are also the main beneficiaries of a racial profiling rule, because crimes committed by African Americans against African Americans are reduced, and thus the increased security costs borne by African Americans are offset by their increased benefits from law enforcement).

\textsuperscript{56} See Kennedy, supra note 55, at 25-27.


\textsuperscript{58} See Risse & Zeckhauser, supra note 4, at 147 (“Suppose a person is seeking credit in a poorly organized department store. It takes forty-five minutes to process an application. While a white person is likely to see incompetence, an African American, sensitive to disparate treatment, may conclude that the slow response was due to her race. Racism elsewhere makes the forty-five-minute wait, unrelated to race, an expressive harm.”).
rates than the general population—racial profiling may come at minor costs to society.

In fact, it may well be the case that profiling the majority population (the “whites”) could be both efficient and equity enhancing. Profiling the majority population will not entail significant equity costs because these costs suggest some underlying discrimination, while African Americans will benefit from the “negative” profiling.

If we take into account the horizontal equity costs (entailed by the whites) it is an open question whether the benefit derived by the African Americans from the “negative” profiling is greater than the equity cost borne by whites due to their profiling.

We do know that the gains derived by African Americans from “negative” racial profiling are likely to be smaller than the (great) costs borne by them when they are the ones being profiled, due to the general psychological phenomenon known as loss aversion.  

But it may still be the case that their gains are greater than the (small) costs borne by the whites, when the whites are targeted. When whites are being targeted they bear only the horizontal inequity costs. When African Americans are being targeted they bear both horizontal inequity and stigma costs. The stigma costs are much greater than the horizontal inequity costs. Therefore, it is plausible to assume that when the whites are being targeted, the gains derived by African Americans from “negative” profiling are greater than the losses incurred by the whites.

C. Higher Incarceration Rates

A major equity concern regarding profiling minorities is the alleged impact it has on overrepresentation of targeted (profiled) group members in the incarcerated population. This entails both horizontal inequity (a higher probability of being incarcerated) and a stigma effect, whereby from observing the incarcerated population one might conclude that targeted population group members were more inclined to criminal activity.

Empirical findings suggest disproportional incarceration rates of African American men.

59. See Daniel Kahneman & Amos Tversky, Prospect Theory: An Analysis of Decision Under Risk, 47 ECONOMETRICA 263, 279 (1979) ("[L]osses loom larger than gains.").

60. Another equity concern is the phenomenon of the higher recidivism rate among the targeted population. This could be a result of (non-racial) profiling based on the presumption that individuals who had been convicted in the past are more likely to engage in crime. This amplifies the effects of the differences in incarceration rates in the first place.

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Americans, who comprise about twelve percent of the general population but account for fifty-four percent of prison admissions. The literature often attributes this phenomenon to the application of criminal profiling rules.

The overrepresentation of African Americans in the incarcerated population may be driven by two factors: a higher offending rate relative to the average offending rate of the population, and a higher search rate due to a profiling rule which targets them.

The existence of significantly higher incarceration rates amongst targeted population groups does not in itself prove that their higher incarceration rates are the result of an efficient profiling rule. First, racial profiling, to the extent it is currently employed, may be inefficient, as it does not necessarily target the marginal offenders. Second, an efficient profiling rule is likely to lower the offending rate of the targeted population, while increasing that of the rest of the population, relative to a random search rule. This could possibly result in equal offending rates, or even in a lower rate for the targeted group.

It is possible, however, that efficient racial profiling would result in significantly higher incarceration rates amongst targeted population groups, and racial profiling may indeed be a reason for the overrepresentation of African Americans in the incarcerated population. To see this, consider the following simple example.

There is a medium-sized metropolitan area with a population of one million. The population is divided into two groups, minority group (twenty percent of the population) and majority group. According to police data, each year ten percent of the population is searched for drug trafficking by the local police authority vice squad.

Police officers are not allowed to employ profiling rules, and therefore search at random (indeed police data show that roughly twenty percent of the individuals that have been stopped and searched are of minority origin). According to police data, the offending rate of the minority population group is ten percent and that of the majority group is five percent. In the past year, the number of minority drug-convicted prisoners was 2000, and that of the majority group was 4000.


63. See Bernard E. Harcourt, From the Ne'er-Do-Well to the Criminal History Category: The Refinement of the Actuarial Model in Criminal Law, 66 LAW & CONTEMP. PROBS. 99, 135-49 (2003) (implicitly assuming zero elasticity); Harcourt, supra note 1, at 1329-35 (taking elasticity into account but positing that African Americans are likely to have both higher offending rate and lower elasticity compared to whites); Bernard E. Harcourt, The Shaping of Chance: Actuarial Models and Criminal Profiling at the Turn of the Twenty-First Century, 70 U. CHI. L. REV. 105, 117-28 (2003) (same). But see Banks, supra note 1, at 580-81 (implicitly assuming elasticity and noting that “[i]f officers allocate investigative resources based not on the number of prior arrests among each group but instead based on the groups’ relative hit rates, racial profiling is more likely to be self-correcting than self-fulfilling”).

64. By assuming that the population is large, one can apply the law of large numbers and approximate actual values by their expectations.
The statistics reflect the sharp differences in offending rates across groups. Although minority and majority groups face the same search probability (ten percent), because the offending rate of the minority group (ten percent) exceeds that of the majority group (five percent), the incarceration rate of the minority population, given by the product of the search rate and its offending rate, is one percent (hence 2000 out of a population of 200,000 are imprisoned), whereas the incarceration rate of the majority population group is 0.5% (4000 out of a population of 800,000).

To conclude, while the minority forms twenty percent of the population, the proportion of minority individuals in the incarcerated population is thirty-three percent (2000 of the 6000 prisoners).

Imagine that you are nominated as the new police commissioner and you are concerned about the high drug-related crime level in the city. In the past year, there were 60,000 cases of drug crimes. Due to the recent federal budget cuts, you cannot expect increased resources in the future, so you consider the use of a racial profiling rule to enhance police deterrence, thereby reducing the crime level.

A recent expert report of a special committee that you appointed to examine the issue suggested that forty percent of the searches should be conducted on minority individuals (40,000 of the 100,000 searches).

The committee expects the offending rate of the minority group to drop to 7.5%, while the corresponding offending rate of the majority group would rise to 5.5%. The expected crime rate would thus be $0.075 \times 200,000 + 0.055 \times 800,000 = 59,000$: a reduction of 1000 drug related crimes relative to current year statistics.

While profiling seems to be efficient in light of the expected reduction in the crime level in the city, you are concerned that the profiling rule would raise the proportion of minority individuals in the incarcerated population.

On one hand, in light of the reduction in the offending rate of the minority population (and the corresponding rise in that of the majority group) one could expect no such problem. On the other hand, the rise in search intensity of the minority population may more than offset the reduction in the offending rate. So you do the following calculation.

The incarceration rate of the minority population group, after the proposed profiling rule is implemented, would be given by the product of the search rate ($0.2 = 40,000 / 200,000$) and the offending rate ($0.075$), hence, 1.5%.

The corresponding incarceration rate of the majority population group would be given by the product of the search rate ($0.075 = 60,000 / 800,000$)

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65. Crime level for each group is simply the product of the group offending rate and its population size. Summed over the population, the aggregate crime level is $0.1 \times 200,000 + 0.05 \times 800,000 = 60,000$.  

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and the offending rate 0.055, hence 0.4125%.

Multiplying incarceration rates by the respective population size yields the expectation of 3000 drug-related convicted minority individuals, and 3300 convicted majority individuals.

As you find out, profiling would raise the proportion of minority prisoners to almost fifty percent (although they represent only twenty percent of the general population) from thirty-three percent under a random search rule.

As mentioned above, the existence of significantly higher incarceration rates amongst targeted population groups does not in itself prove that their higher incarceration rates are the result of racial profiling.

In general, it is possible that, contrary to the above example, the effect of a racial profiling rule, which works in the direction of increasing the difference in incarceration rates, will be more than offset by the induced change in offending rates, which works in the opposite direction. This could result in reduced differences in incarceration rates, relative to the random search benchmark.

Due to the missing data regarding the composition of the marginal offenders' population and racial group relative elasticities, information that is not being gathered under current (as opposed to our proposed) racial profiling rule, we are unable to predict the effect that an efficient racial profiling rule, like the one we discuss, will have on incarceration rates.

III. EQUITY-EFFICIENCY TRADEOFF

The policymaker has to conduct a cost-benefit analysis to determine the socially desirable extent of racial profiling, striking a balance between equity and efficiency considerations. Ideally, the policymaker seeks to fully eliminate all inequities while maintaining the efficiency of resource allocation. In our context, however, attaining efficiency generally implies using racial profiling rules, as explained in Part I above. In such a case, equity concerns arise, as discussed in Part II.

Thus, when racial minorities are being targeted, in order to eliminate (or mitigate) inequity, the policymaker is inevitably bound to compromise on efficiency, namely by shifting the policy toward a random search rule. This is based on the assumption that the extent of profiling is the only control variable at the policymaker's disposal, as we have assumed so far. 66

There is, however, another possibility, which is to use the tax and transfer system to compensate members of the targeted group for the disutility they suffer. Awarding compensation is mentioned in the racial profiling literature,

66. Note that even when the policymaker has a wider set of policy tools at her disposal, such as extending legal job opportunities or providing high quality education, as long as some profiling were part of the efficient resource allocation, the tradeoff between equity and efficiency would remain unscathed.
but only as regards innocent targeted group members. In the next Section, we will argue that it should be awarded to all targeted group members, innocent and criminal alike, and on an ex ante basis.

A. Awarding Compensation

Racial profiling puts targeted group members at greater risk of being searched, interrogated or incarcerated. This affects their lives, even before a search takes place, and even if no search ever takes place.

For example, an innocent group-A individual who plans to drive on a highway needs to consider longer expected commuting time; a group-A criminal weighing the cost and benefits of committing a crime should consider the higher probability of getting caught and punished. This calls for compensation.

Compensating innocent targeted group individuals on an ex post basis, namely, awarding compensation to each innocent member of the targeted group who was searched, as suggested in racial profiling literature, is inefficient.

Awarding compensation on an ex post basis would induce behavioral effects and therefore is likely to entail distortions. Innocent targeted group members who value the compensation more than the costs of being searched (i.e., waste of time, risk of being charged with an offence with which they did not expect to be charged, etc.) will have an incentive to be searched.

This may seem far-fetched, but as the following example will show, it is quite realistic, even today when no “official” compensation is being paid to innocent searched passengers. One of the authors of this article was “randomly selected” for an extensive search at London Heathrow airport. He was asked to leave the check-in line and was searched in a separate room. After he was cleared, his suitcase was boarded on the plane without the author having to go through the check-in counter. It occurred to the author that a passenger with an overweight luggage could avoid paying overweight charges by acting suspiciously.

The courtesy of not requiring the innocent searched passenger to return to the check-in counter is a form of (non-monetary) compensation. As the example shows, ex post compensation entails distortions as it may induce certain passengers to behave suspiciously to invite a search.

As for targeted (group-A) criminals, the literature does not suggest that they be offered compensation. As argued above, equity considerations call for compensating them as well, for being discriminated against in comparison to group-W criminals. Awarding group-A criminals ex post compensation, namely, awarding compensation to targeted group members who were searched

67. See, e.g., Risse & Zeckhauser, supra note 4, at 160 (proposing to compensate innocent targeted group members).
even if found guilty, may reduce deterrence, while awarding compensation ex ante would have no such effect.

We therefore conclude that equity concerns should be compensated for on an ex ante basis. Awarding compensation on an ex ante basis is not the prevailing norm. However, in the context of racial profiling, ex ante compensation would address equity concerns while creating less distortion than awarding compensation on an ex post basis.

However, public hostility towards transfers (pecuniary or in kind) as an appropriate means of addressing racial issues may preclude the use of the tax system to compensate the targeted group. People care about the symbolic value of laws and suffer disutility because of their distaste for what they see as allowing discriminators to purchase rights to discriminate. This may be true even though racial profiling does not involve racial animus, but is merely expressive.

Consider a case where an efficient profiling rule calls for extensive targeting of a group, say, African Americans, that suffers from underlying discrimination. People may find it objectionable if police were to search almost exclusively African Americans, and in turn, give all African Americans a monetary (or in kind) transfer or a tax credit to compensate them for the inequity caused by the profiling rule.

68. Tort law does not impose liability for the creation of risk; a tort liability must rest on the existence of actual damage. See Ariel Porat & Alex Stein, Tort Liability Under Uncertainty 101-29 (2001) (discussing the option of imposing a tort liability for the creation of bare risk, but assuming that the victim of the tort will be paid according to the actual damage and rejecting a risk-based system of liability for, inter alia, being too difficult to enforce). But cf. Robert Cooter & Stephen D. Sugarman, A Regulated Market in Unmatured Tort Claims: Tort Reform by Contract, in New Directions in Liability Law 174-85 (Walter Olson ed., 1988) (suggesting the creation of a market for unmatured tort claims, where potential victims would be able to sell their tort rights).

69. The advantage of awarding compensation on an ex post basis derives from the ability to distinguish between criminals and the innocent. On one hand, it seems that criminals are less deserving from a moral point of view. On the other hand, targeted group criminals are exposed to two different layers of discrimination, when compared to criminals in the non-targeted population group, whereas their innocent counterparts are subject to one layer only. The former face both a higher probability of being searched and incarcerated, whereas the latter face only a higher search probability. As the two effects work in opposite directions, assuming that they offset each other warrants uniform compensation. Hence, ex ante compensation would be desirable.

70. See, e.g., Derrick Bell, Faces at the Bottom of the Well: The Permanence of Racism 47-64 (1992) (defending antidiscrimination laws by discussing the problems with a hypothetical Racial Preference Licensing Act that would enable people with a preference for discrimination to purchase a license to do that); John J. Donohue III, Discrimination in Employment, in 1 The New Palgrave Dictionary of Economics and the Law 615, 619-20 (Peter Newman ed., 1998) (making, inter alia, the points that antidiscrimination laws have an educative role that the tax and transfer system could not efficiently replace, and that a clear prohibition on discrimination through legal rules does not provide opportunities for rent seeking activity, while setting payments and subsidies invites such pressures); Kim Forde-Mazrui, Taking Conservatives Seriously: A Moral Justification for Affirmative Action and Reparations, 92 Cal. L. Rev. 683, 751 (2004) ("The monetary compensation seems unlikely to redress the nature of societal discrimination's damage.").

71. See Cooter, supra note 7, at 144-49 (suggesting the use of tax subsidies and transferable rights in a case of gender discrimination to illustrate his argument that anti-discrimination laws should be replaced by a market-based approach, but acknowledging the fact that economic analysis has no theory
Even if compensation were a viable policy option and awarded to all targeted group members on an ex ante basis, racial profiling could serve as a good example of a case in which the policymaker should nevertheless deviate from the most efficient rule to accommodate equity concerns. This connects our discussion to a central debate in the law and economics literature: whether legal rules should be designed based on efficiency grounds only, or whether they should be equitably informed.\textsuperscript{72}

B. Profiling and the Tax Versus Legal Rules Debate

Starting from the most efficient level of profiling, seeking to mitigate the entailed equity costs, there are two alternatives to consider: (i) using the tax-and-transfer system to compensate the targeted population, or (ii) modifying the profiling rule towards a random search rule.\textsuperscript{73}

The prevailing norm seems to be that the design of legal rules should be guided by efficiency considerations only, relegating redistribution exclusively to the tax and transfer system.\textsuperscript{74} Applying this view to the racial profiling case could justify choosing the first alternative, namely, setting the screening rule at its most efficient point and compensating for the inequity through the tax and transfer system.

We posit that in the case of racial profiling the policymaker should nevertheless deviate from the most efficient rule to accommodate equity of the symbolic and educational function of law and admitting that the current attitude and values of American society do not conform to his market-based approach—thus viewing his proposal as meant for the future).\textsuperscript{75}


\textsuperscript{73} Due to the expressive nature of the equity cost entailed by the profiling rule, see Part II, supra, a third alternative, which is beyond the scope of this Article, would be an enhanced anti-discrimination policy in other areas of life such as in the labor market, which would reduce the underlying discrimination.

\textsuperscript{74} See Kaplow & Shavell, Efficiency in Redistribution, supra note 72, at 667.
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concerns.

We follow Sanchirico’s analogy in viewing the two alternatives, namely, modifying the profiling rule in the direction of the random search rule or awarding compensation, as two factors in the production of equity. Plausibly assuming rising marginal costs, both tools should be employed, and the extent of each should be set to the optimum where marginal costs are equalized.

We argue that some deviation from the efficient legal rule (designed to minimize crime) is socially desirable in the sense that it would result in a reduction in the measure of aggregate social costs. Aggregate social cost is given by a weighted average of the social costs associated with efficiency and equity.

On the efficiency side, the social cost of crime is assumed to be increasing with respect to the crime level, and it is further assumed that the marginal social cost of crime is increasing. The cost of taxation is associated with the tax revenues raised to finance the compensation awarded to the targeted population, and is assumed to be increasing with respect to tax revenues raised. It is further assumed that the marginal cost is increasing.

On the equity side, the equity cost entailed by profiling is naturally assumed to be increasing with respect to the level of profiling, decreasing with respect to the amount of the awarded compensation, and increasing with respect to the degree of underlying discrimination.

To see the argument, assume that profiling is set at its most efficient level (such that crime is minimized) by targeting minority group members who suffer from some underlying discrimination. Further assume that equity concerns are addressed by awarding compensation to the minority group members.

Consider the following deviation from the (constrained) social optimum described above. Suppose that the policymaker slightly decreases the number of minority group individuals being examined, while correspondingly increasing the number of majority group individuals investigated, maintaining a fixed number of searches.

Such marginal reform would entail no efficiency costs starting from the optimal allocation of policy resources, but would somewhat reduce the equity costs suffered by the targeted group (the minority group), as the equity cost is assumed to be increasing in the extent of profiling, and some profiling is

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75. See Sanchirico, New Efficiency, supra note 72, at 1021 (“The right question is not 'which is best?' but rather 'what is the best combination?'”).
76. Note that crime level depends on the search rule chosen by the police.
77. Note that the social cost of taxation depends only on the level of compensation, and is independent of the level of crime, as the compensation is awarded on an ex ante basis.
78. Constrained in the sense that equity concerns are addressed solely by the tax and transfer system.
assumed to be efficient. This will occur without the need for extending more generous transfers.

The conclusion is that leaving the equity-enhancing role exclusively to the tax-and-transfer system would be socially undesirable. That is, when equity concerns are present, the extent of profiling should be somewhat reduced relative to its efficient benchmark, and possibly discarded. This would be the case when equity costs are so large as to justify a corner solution where even a slight change from a random search rule entails equity costs large enough to outweigh the efficiency gains of profiling.

If there is no underlying discrimination, and hence inequity derives primarily from the violation of the principle of horizontal equity and is not due to the stigmatizing effect of profiling, it is plausible to assume that the marginal equity cost associated with a small shift away from a random search rule is rather low, and in such a case, some profiling would be warranted by virtue of a similar marginal analysis to the one used above. Moreover, racially profiling the majority group members may be warranted on redistributive grounds, as explained in Section II.B. supra, if minorities benefit from “negative profiling,” thus making racial profiling both efficient and equitable.

Note the crucial difference from the case where stigma is involved; in such a case, even a small deviation from a random search rule may entail significant equity costs, as it would build on an already existing layer of discrimination.79

CONCLUSION

This paper is a theoretical contribution to the intensive debate over the social desirability of using racial profiling in criminal law enforcement and in fighting terror. Using Becker’s model of crime, we demonstrate the fallacy of targeting racial population groups according to their (higher) group-wise offending rates—namely, their average propensity to engage in crime.80

We show that when the objective is minimizing crime by enhancing deterrence, racial profiling would prove efficient only if there is a correlation between race and being a marginal offender. Assuming that there is such a correlation, it would be desirable to target members of racial population groups who are overrepresented in the group of marginal offenders relative to their share in the general population.

We use our concept of “marginal offender” to make a novel distinction

79. Conducting comparative static of the social optimum, one can formally show (and such a formal presentation is on file with the authors) that the less legitimate the pecuniary transfers are perceived to be, and/or the less efficient the tax system is, the larger the optimal downward adjustment in the extent of profiling. One can also demonstrate that when the marginal equity costs associated with profiling increase with respect to the degree of underlying discrimination, the optimal extent of profiling naturally decreases with respect to the level of underlying discrimination.

80. Targeting racial populations according to their group-wise propensity to engage in crime is the prevailing norm, as reflected in data showing that police maximize the hit rate.
between ordinary crime (e.g., the war on drugs) and terror. Whereas in the context of ordinary crime, law enforcement focuses on deterrence (leading to our conclusion that racial profiling should target marginal offenders), in the context of terror, incapacitation prevails, justifying targeting the group with the higher offending rate—that is, "hit rate maximization."

We prove that barring knife-edge cases, profiling is always efficient, helping the police to mitigate the screening problem when criminal activity varies across racial groups. Notably, efficient racial profiling policy may counterintuitively call for targeting the group with the lower offending rates. Moreover, we show that contrary to conventional wisdom, group size does not matter.

Although desirable in a second-best world with asymmetries of information, using racial profiling may raise significant equity concerns as evinced by the intense scholarly and public debate. We draw attention to the possibility that racial profiling would promote both efficiency and equity in case efficiency calls for targeting the majority population group.

Discussing the more prevalent case in which racial minorities are being targeted, we argue that the appropriate benchmark for equity costs should be set at the point of the random search rule, and that costs should be evaluated from an ex ante perspective and include all targeted group members, innocent as well as criminal, whether touched by police enforcement or not.

Viewing the problem of setting the optimal profiling rule as a traditional welfare economics problem of striking the balance between efficiency and equity considerations, we challenge what seems to be the conventional wisdom of the law and economics literature and suggest that the optimal profiling rule should be modified away from its most efficient point to accommodate equity concerns, rather than leaving this exclusively to the tax and transfer system.

When awarding compensation to targeted group members is employed to mitigate equity costs entailed by profiling, we posit that, unlike in the case of tort law, compensation should be awarded on an ex ante basis for efficiency reasons.

To sum up, existing racial profiling policy comes at a very high cost to society while the prevailing practice of targeting the group with the higher propensity to commit crimes does not necessarily reduce crime. In fact, under the plausible assumption that police enforcement resources are constrained, it may even increase the number of criminals.

Having more data on the group of marginal offenders could help the policymaker to tailor a racial profiling policy that would minimize crime. At least in theory, such data could also affect the inherent equity-efficiency tradeoff in relation to certain crimes, as it could call for targeting majority group members instead of minorities. Awarding compensation could further mitigate the inequity costs and must be seriously considered.
Figure 1 depicts the probability distribution functions (PDF) of the cost of committing crime, $c$, for group $A$ (the dotted line) and for group $W$ (the solid line). When police employ a random search rule, individuals of both population groups face the same detection probability. Thus, the cost threshold above which individuals abide by the law is the same for both population groups, given in the figure by point $\hat{c}$.

The area under the PDF of each population group (to the left of cost threshold $\hat{c}$) represents its respective offending rate under a random search rule—namely, the proportion of individuals in the population group for which the cost of committing crime is small enough (lower than $\hat{c}$) to induce them to engage in criminal activity. As can be observed from the figure, consistent with our assumption, the offending rate of group $A$ exceeds that of the rest of the population (group $W$). The area under the dotted line and to the left of cost threshold $\hat{c}$ is greater than the same area under the solid line. Individuals whose costs are lower than cost threshold $\hat{c}$ will commit crime; therefore, group $A$ members are more prone to commit crimes than group $W$ members.

However, we also see that the proportion of marginal offenders in group $W$ exceeds that of group $A$. This is captured by the fact that at the threshold $\hat{c}$, the PDF of the cost of committing crime corresponding to group $W$ lies above the PDF that corresponds to group $A$. This is because the proportion of individuals
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who are equally likely to commit a crime or to abide by the law (incurring the cost \( \hat{c} \)) is higher amongst group \( W \). Thus, although on average a group-\( A \) member has a higher propensity to commit a crime, enhanced deterrence calls for targeting group-\( W \) members (the group with the higher proportion of “marginal offenders”).