

Criminal Justice and Behavior

<http://cjb.sagepub.com>

Explaining Police Bias: A Theory of Social Conditioning and Illusory Correlation

Michael R. Smith and Geoffrey P. Alpert
Criminal Justice and Behavior 2007; 34; 1262
DOI: 10.1177/0093854807304484

The online version of this article can be found at:
<http://cjb.sagepub.com/cgi/content/abstract/34/10/1262>

Published by:



<http://www.sagepublications.com>

On behalf of:

[International Association for Correctional and Forensic Psychology](#)

Additional services and information for *Criminal Justice and Behavior* can be found at:

Email Alerts: <http://cjb.sagepub.com/cgi/alerts>

Subscriptions: <http://cjb.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations <http://cjb.sagepub.com/cgi/content/refs/34/10/1262>

EXPLAINING POLICE BIAS

A Theory of Social Conditioning and Illusory Correlation

MICHAEL R. SMITH
GEOFFREY P. ALPERT
University of South Carolina

Although recent empirical research has shown that Blacks and Hispanics are consistently overrepresented among police stops, searches, and arrests, few criminologists have attempted to provide a theoretical explanation for the disparities reported in the research literature. This article proposes a theory of individual police behavior that is grounded in social-psychological research on stereotype formation and that assumes a nonmotivational but biased response to minority citizens by the police. Accordingly, stereotype formation and its consequences are largely unintentional and are driven by social conditioning and the illusory correlation phenomenon, which results in the overestimation of negative behaviors associated with minority group members. After specifying the theory, the article presents a research agenda for empirically testing and verifying its propositions.

Keywords: illusory correlation; social conditioning; racial profiling; discrimination; police; theory

In recent years, racial profiling or racially biased policing has been a locus of inquiry, both for the media and for scholars. The two terms are used interchangeably to refer to the conscious or unconscious use of race by police in discretionary decision making. Researchers and practitioners have addressed these issues and provided suggestions for the collection and analysis of police-stop and other relevant data. Many research projects have reported findings showing disparities in police treatment of Black and White citizens. Although the results of the research and many of the recommendations that accompany them are both useful and interesting, a significant gap remains in the research to date. Little research exists that addresses the causes of biased policing or provides a theoretical explanation for the discrepancies reported in the research literature (Engel, Calnon, & Bernard, 2002). The lack of a coherent theory of police behavior to help explain the disparate treatment of minority citizens is perhaps the most crucial gap in the current literature on racial profiling. The primary purpose of this article, therefore, is to construct a theory of individual police behavior that combines knowledge garnered from racial profiling research and social psychology to offer an explanation for why analyses of aggregate police-stop data consistently reveal patterns of harsher treatment by police of certain minority groups.

AUTHORS' NOTE: *Correspondence concerning this article should be addressed to Michael R. Smith, Department of Criminology and Criminal Justice, University of South Carolina, Columbia, SC 29208; e-mail: mrsmith@gwm.sc.edu.*

CRIMINAL JUSTICE AND BEHAVIOR, Vol. 34 No. 10, October 2007 1262-1283
DOI: 10.1177/0093854807304484
© 2007 American Association for Correctional and Forensic Psychology

POLICING, OFFENDING, AND RACE

Recent empirical research has shown that the police treat members of certain minority groups differently than Whites in discretionary encounters involving the invocation of police authority. Most studies have found that Blacks and Hispanics are overrepresented among stops when compared to the chosen benchmark population for those racial groups (Farrell, McDevitt, Bailey, Andresen, & Pierce, 2004; New York Attorney General's Office, 1999; W. R. Smith, Tomaskovic-Devey, Zingraff, Mason, Warren, & Wright, 2003). Although all benchmarks used in racial profiling research have limitations (Alpert, Smith, & Dunham, 2004; Lange, Johnson, & Voss, 2005), the overrepresentation of Blacks and Hispanics among persons stopped is consistent across methodologies and represents a typical finding in this field of research. Likewise, once stopped, Blacks and Hispanics are, on average, more likely than Whites to be searched or arrested and are sometimes more likely to receive harsher treatment or citations following a traffic stop (Alpert Group, 2004; Engel & Calnon, 2004; Farrell, McDevitt, Cronin, & Pierce, 2003; M. R. Smith & Petrocelli, 2001).

The research findings regarding the differential treatment of minorities by the police are remarkably consistent across the nation and are apparent in studies of law enforcement agencies of all different types and sizes. Studies of federal agencies, municipal police forces, county police and sheriff's departments, and highway patrol and state police agencies reflect, to varying degrees, similar disparities in the discretionary treatment of Black and Hispanic citizens. An often-cited explanation for these disparities, particularly on the part of law enforcement officials, is that higher overall offending rates among Blacks and Hispanics result in higher stop, search, and arrest rates among these groups. This argument makes intuitive sense: Blacks and Hispanics commit disproportionately more crime—or at least certain types of offenses that are routinely counted in national crime data—and they are, therefore, more likely to be stopped, searched, and arrested by the police.

Most of the studies to date, however, have focused on racial disparities in police *traffic-stop* practices, the vast majority of which are made for minor traffic infractions and not for suspected criminal activity (Alpert Group, 2004). The few studies that have controlled for the differential involvement of minorities in crime, or for race and crime at the neighborhood level, have found that stop, search, and arrest disparities for Blacks and Hispanics remain after crime rates are held constant, albeit at lower levels (Alpert Group, 2004; New York Attorney General's Office, 1999; Petrocelli, Piquero, & Smith, 2003). The New York Attorney General's Office (1999), for example, found that Black and Hispanic pedestrians in New York City were stopped more often than Whites, even after controlling for the greater involvement of minorities in crime at the precinct level. Similarly, an analysis of traffic-stop outcomes in Miami-Dade County (Alpert Group, 2004) indicated that Black drivers were more likely to be the targets of police suspicion despite holding constant the residential Black population and crime rates of the areas where stops occurred.

Consequently, we can conclude either that an acknowledged higher crime rate among Blacks and Hispanics is an irrelevant consideration, as in the case of most traffic stops made for minor infractions, or that it does not fully account for the differences in treatment received by members of these groups in comparison to White citizens. Although there are very few studies that take differences in group criminality into account when assessing police-stop outcomes, the available evidence suggests that harsher police treatment of some minority groups is not simply an expected byproduct of higher levels of minority-group

criminality, a conclusion that forces us to question whether or not stop outcomes are in any way connected to race.

If differences in offending rates do not explain the disparate treatment of Blacks and Hispanics by the police, then what might account for the largely consistent findings that the police treat these groups more harshly than Whites in discretionary stop encounters? Our theory, which is grounded in social–psychological research on stereotype formation, assumes a nonmotivational but biased response to minority citizens by the police. From this perspective, stereotype formation and its consequences are largely unintentional. We recognize, though, that the purposive use of race in police decision making likely plays some role in observed aggregate disparities. In some cases, the intentional consideration of citizen race by the police may be driven by racial animus, whereas in other cases, officers may use race volitionally but for strategic rather than hate-based purposes. Therefore, before specifying a theory of unconscious racial profiling, we review the evidence both for a racial-animus-based explanation for the disparate treatment of minorities by the police and for a strategic but affect-neutral use of race in discretionary police decision making.

RACIAL PROFILING AND RACIAL ANIMUS

In his classic treatise *The Nature of Prejudice*, Allport (1954) viewed attitudes, beliefs, and behaviors as separate but interrelated components of prejudice. In this section, we address whether, and to what extent, police officers who have negative feelings (Allport's attitudes) toward a racial group may use their discretionary authority to act on those feelings and knowingly treat members of the group in a punitive manner. We use the term *racial animus* to describe the negative feelings that may be associated with race and discuss whether observed disparities in stop outcomes may be a product of such racial hatred (see G. Wilson, Dunham, & Alpert, 2004).

In the past, overt racism among America's police was officially tolerated and, in some cases, encouraged. From southern slave patrols, to the use of violence against peaceful civil rights protesters, to the now infamous "gorillas in the mist" comment taken from Los Angeles Police Department computer-message transcripts surrounding the Rodney King incident, the history of police racism mirrors that of the larger society from which police officers are drawn. History attests to the fact that for much of their first 150 years, American police forces were home to racist attitudes and policies that disenfranchised Blacks while maintaining the White hegemony and all that it entailed—principally, a self-perpetuating economic and social superiority (Walker, 1977; Williams & Murphy, 1990). Indeed, what would be identified today as unconscionable racial profiling would have been an accepted and expected strategy of policing in many areas of the country, even as late as the 1960s.

The history of minority police officers in America provides further evidence of the officially sanctioned racism that existed in many police departments until the 1960s. Although Black police officers were hired in northern cities as early as the 1870s, they were assigned exclusively to Black neighborhoods, and many were not permitted to arrest Whites. In Philadelphia and many other American cities, large and small, Black officers were even segregated from their White counterparts (Williams & Murphy, 1990). After the passage of civil rights legislation, which eliminated many of the legal barriers to the hiring and advancement of minority officers, institutionalized policies and a dominant White hierarchy within many

law enforcement agencies continued to place minority officers at a disadvantage within organizational bureaucracies (Fogelson, 1977).

Notwithstanding the history of racism surrounding the law enforcement function in the United States, though, tolerance for racial discrimination within the police ranks has declined dramatically during the past 30 years. At least outwardly, contemporary police culture stresses egalitarian values and professes intolerance for prejudice and discrimination. Indeed, evidence is beginning to emerge that indicates that there has been a positive change in police beliefs about racism and the role of race in decision making. In 2001, for example, the Police Executive Research Forum (PERF) surveyed administrators from a stratified random sample of more than 1,000 U.S. law enforcement agencies about their perceptions and responses to the problem of racial profiling (Fridell, Lunney, Diamond, & Kubu, 2001). Although most administrators questioned (60%) believed that racial profiling was not a problem in their communities, more than half had engaged in activities indicating their sensitivity to, and awareness of, the issue. More than one third had held formal, internal discussions about racial profiling, and another third had modified or adopted administrative policies to prohibit racially biased policing. Seventeen percent had even initiated data collection to track the race of citizens stopped.

The PERF survey is now several years old, and in that time, public and police concern about racial profiling has continued unabated. In 2005, the Center for Public Safety at Northwestern University sponsored its fourth annual Symposium on Racial Profiling, a gathering that was attended by police officials from all sections of the country. This is one of many such symposia, conferences, and meetings devoted, either entirely or in part, to the issue of racial profiling. Law enforcement agencies of all sizes now routinely collect and analyze racial data on traffic stops to examine aggregate and individual patterns of biased policing. In a similar vein, at least 20 states have adopted statutes that prohibit racial profiling and require data collection by state and local law enforcement agencies. Similar legislation has been introduced several times in Congress, which, if adopted, would require data collection by all law enforcement agencies receiving federal financial assistance. In the courts, almost 50 opinions have been authored by federal judges adjudicating claims of racial profiling in criminal and civil cases (M. R. Smith, 2005). Hardly a week goes by that a newspaper, television station, or other mass media outlet does not report on some community or police effort to address a perceived problem of racial discrimination by the police.

An intuitive gauge of this ongoing and growing concern is the public's general awareness of the terminology used to describe racial profiling. Ten years ago, the term *racial profiling* was virtually invisible in the American lexicon. Today, it is part of an ongoing national conversation and is routinely discussed and debated in the public arena and in police circles. The rise of racial profiling as a social, legal, and mass media issue makes it increasingly unlikely that true racial animus by individual police officers will go undetected and unpunished for long. As the rise of profiling-related lawsuits against the police demonstrates (M. R. Smith, 2005), citizens are aware of their rights to equal treatment and are increasingly willing to seek legal redress when they perceive that those rights have been violated. Similarly, law enforcement agencies have become sensitized to the issue of racial profiling and are unlikely to tolerate openly racist attitudes or behaviors by their officers. Improved background investigations and the widespread use of polygraphs and psychological testing of police recruits has also made it more difficult for racist individuals to make it through the police hiring process. The sum of this considerable evidence suggests that racial animus probably plays a

role in the decision making of only a small percentage of officers and cannot fully account for the consistent racial disparities observed in traffic-stop outcomes across different types of law enforcement agencies.

Furthermore, this conclusion is not inconsistent with the view that historical and structural inequalities in American society create disadvantages for people of color or that police deployment and other strategic decisions can exacerbate minority disadvantage (Barlow & Barlow, 2000). Clearly, decisions by policy makers to concentrate police resources in minority neighborhoods or to use aggressive stop-and-frisk tactics against certain populations may contribute to disparities in traffic-stop outcomes and to perceptions of racial profiling among minority citizens (Weitzer & Tuch, 2002). However, ours is a theory to help explain the behavior of *individual* officers rather than the organizational or structural determinants of inequality. For the reasons outlined above, we find it unpersuasive that racial animus underlies the behavior of the thousands of officers whose traffic-stop data have been subjected to dozens of analyses with highly consistent results.

Finally, our conclusions about the relatively small role that conscious prejudice plays in the decisions of individual officers is further supported by the available evidence on the relationship between officer race and traffic-stop outcomes. Although the number of reported studies that have analyzed officer race as an independent variable in the racial profiling context are limited, each of them has reached the same conclusion: The race of the officer does not predict the race of the driver stopped, searched, or arrested (Alpert et al., 2006; Alpert Group, 2004; Lovrich, Gaffney, Mosher, Pickerill, & Smith, 2003; Novak, 2004; M. R. Smith & Petrocelli, 2001). If individual officers routinely make conscious decisions based on racial animus, then the minority officers in these studies must have rejected their racial and ethnic identities entirely and adopted the same racist attitudes toward minority citizens as their White counterparts. Of course, one mechanism that might help explain such a rejection of racial identity is the socialization process that officers undergo when they become part of the police subculture (Crank, 2004). However, in light of the available research on social identity and the importance of race to one's sense of self (see discussion below), we think that it is unlikely that minority officers routinely make decisions based on conscious prejudice.

THE STRATEGIC USE OF RACE IN POLICE DECISION MAKING

Even if explicit racism by the police is relatively rare today and has little to do with the racial disparities seen in stops made by the police, officers may still make discretionary decisions based on racial considerations that ultimately contribute to an overall pattern of racial disproportionality. In other words, the police could consciously, but without racial animus, take race into account when making stop-related decisions. From this perspective, the police may not dislike or hate minority groups, but they may nonetheless base their decisions on beliefs about group criminality and who is most likely to be involved in crime.

Harris (2002) adopted this viewpoint when arguing that police officers rely on faulty training and folk wisdom to profile criminal suspects. He contends that the police use race as a criminal "shorthand" that leads them to be more suspicious of racial minorities. The result, he maintains, is that the police stop and search minorities proportionately more often than Whites. Although Harris and most other legal commentators who have written about profiling believe that the police use race intentionally, they typically stop short of accusing

them of racial hatred (Alschuler, 2002; Fagan & Davies, 2000; Gross & Barnes, 2002; Gross & Livingston, 2002; Harris, 1999, 2002; Russell, 1999). Instead, they argue that the police are racial gamblers, albeit not very good ones, who mistakenly play the odds of group criminality to increase their chances of stopping and arresting those involved in crime.

An objective review of the available data on criminal propensity shows that Blacks commit more violent crime per capita than do Whites. Arrests for homicides, for example, are widely believed to closely approximate the pool of actual homicide offenders. This being the case, in 2003, Blacks composed 48.5% of those arrested for murder and nonnegligent manslaughter even though they composed only about 13% of the U.S. population (Federal Bureau of Investigation [FBI], 2003). Arrest figures for other violent offenses reveal similar racial disparities for Blacks. In almost every category of reported crime, Blacks are arrested at higher rates than Whites. However, because racial bias may influence arrest statistics, criminologists also rely on the National Crime Victimization Survey (NCVS) for information on crime, victims, and offenders in the United States. The NCVS uses a representative sample of more than 42,000 U.S. households. It reports, among other things, the race of offenders as perceived by victims of violent crime. In 2002, Blacks were the perceived offenders in approximately 23% of violent crimes, a figure that is almost twice their expected proportionate offending rate given the percentage of Blacks in the U.S. population (U.S. Bureau of Justice Statistics [BJS], 2002a, 2002b).

The police, of course, are aware of the general trends in street crime and form impressions of the relative likelihood that persons belonging to various racial groups will commit certain types of offenses. Sometimes the impressions held by the police are accurate, as in the case of violent crime; in other instances, however, police beliefs about the connection between race and crime are manifestly incorrect. For example, Harris (2002) and others (Tonry, 1995) fault the war on drugs that began in the late 1980s with an increased and erroneous focus by the police on minority involvement in drug crime. From this perspective, the widely held belief by the police that racial minorities are disproportionately involved in the drug trade leads to racial profiling, which has the effect of creating a cycle of profiling and arrests that is inevitably problematic.

Studies of stop patterns by police special-enforcement units are consistent with the argument that the police may, under certain conditions, intentionally target minority citizens for stops, searches, and arrests based on perceptions of criminal involvement. In one of the largest and most comprehensive studies of traffic stops by a highway patrol agency, researchers from North Carolina State University compared the search practices of North Carolina state troopers assigned to routine patrol duties to those assigned to a criminal enforcement team (CIT) that was tasked with interdicting drug trafficking on the interstate highways (W. R. Smith et al., 2003). Comparing the ratio of African Americans searched to Whites searched, W. R. Smith and colleagues (2003) found that African Americans were searched at higher rates across all eight state police districts. However, in 1997, the first year of the data analysis period, African American search disparities by the CIT were greater than for any of the regular highway patrol troops. In fact, CIT troopers searched more than 4 times as many African American drivers as White drivers. After the search practices of the CIT came under public scrutiny in 1997, search disparities of African Americans dropped dramatically in the next year—to about half the level of 1997—indicating that CIT troopers consciously altered their behavior in response to public scrutiny.

The 1999 report of the New York Attorney General on the stop-and-frisk practices of the New York Police Department (NYPD) likewise revealed significant differences in stops made by the NYPD's Street Crime Unit (SCU) and those made by officers assigned to routine patrol duties. The SCU is a specialized unit created by the NYPD to combat weapons offenses and violent street crime. Although it is a relatively small unit, its officers made more than 10% of the 174,919 stops catalogued and analyzed by the researchers who conducted the NYPD study. Even after controlling for precinct crime rates, the SCU stopped Blacks at a higher rate than their proportion in the population and also at a higher rate than patrol officers and other specialty units within the NYPD. In addition, the SCU stopped more Blacks and Hispanics than Whites for every arrest made—an indication of stops based on weak evidence—and, furthermore, this rate of disparity was greater than the city-wide average or the average at the precinct level.

Special police units tasked with controlling drug or violent crime, such as the North Carolina Highway Patrol CIT and the NYPD SCU, make large numbers of discretionary stops that disproportionately involve minority citizens. Officers from some of these units aggressively target minorities in ways that differ from regular patrol officers and in ways that reflect a perception on the part of these officers that minorities are more likely than Whites to be involved in drug offenses and violent crime. In some cases, and for certain offenses, those perceptions may be accurate; however, in other cases, those beliefs may be inaccurate and may reflect nothing more than racial stereotyping and faulty police "folk wisdom" (Harris, 2002). The examination of the stop practices of these types of units in particular, though, leaves little doubt that officers assigned to them use race as a mechanism (rightly or wrongly) to increase their chances of identifying and arresting law breakers.

In addition to studies of specialized street-crime units, other evidence also supports the proposition that some law enforcement agencies may refer to the race of a citizen deliberately in an attempt to ferret out crime. In *State v. Soto* (1996), a New Jersey Superior Court held that the Moorestown barracks of the New Jersey State Police maintained a de facto policy of targeting Black motorists for investigation and arrest based in part on significant disparities in Black stop-and-arrest data. Specifically, an observation study and statistical analysis of drivers and traffic violators in the Moorestown area found that although Blacks composed only 13.5% of drivers, they constituted more than 46% of the stops made between Exits 1 and 3 on the New Jersey Turnpike, resulting in a comparative disparity of 242%. Following the *Soto* decision, the New Jersey Attorney General ordered an investigation into the stop practices of the state police. Examining the stops that occurred from April 1997 through February 1999, and including most of 1996 and a few months from 1994, the Attorney General's team found that of the 627 searches recorded in the database, 77.2% involved Black or Hispanic motorists. Yet, during the same time period, only 33.9% of the total traffic stops made in the two districts were of Blacks and Hispanics (New Jersey Attorney General's Office, 1999). The Attorney General's report clearly showed that Black and Hispanic motorists were subjected to significantly higher search rates than were Whites.

Similar search disparities were found by Lamberth (1997) in his study of the stop-and-search practices of the Maryland State Police (MSP). In a visual survey of traffic violators along the I-95 corridor through Maryland, Lamberth found that 17.5% of the speeding violators were Black, whereas 74.7% of the violators were White. However, of the 823 motorists searched along I-95 from January 1995 through September 1996, 600 (or 72.9%) were Black. In other words, Blacks were stopped and searched far more frequently than the

rate at which they were observed speeding along the interstate and at rates far in excess of Whites. At the same time, contraband was recovered as the result of searches at almost identical rates for Blacks and Whites, suggesting that the disproportionate stop-and-search rates for Blacks were not justified by higher drug-possession rates among Blacks who were searched. Interestingly, the extraordinarily high search rates of minorities by the MSP were largely driven by the activities of only a handful of state troopers. Only 13 troopers conducted 10 or more searches, and of those, all searched more minorities than Whites. Together these 13 troopers (out of more than 100) accounted for 700 of the 823 searches recorded on I-95 north of Baltimore.

This point is underscored by a subsequent analysis of a broader sample of MSP stop data. Analyzing MSP data from January 1995 to June 2000, Gross and Barnes (2002) found that although "hit rates"¹ were lower for minorities than for Whites, significant differences existed in the amounts of drugs seized from minority drivers. Blacks, and especially Hispanics, were far more likely than Whites to be found in possession of large amounts of drugs, indicating a significantly increased probability that minorities were acting as wholesalers or dealers. According to Gross and Barnes, the best explanation for the troopers' behavior was that "they searched innocent Hispanic drivers 7 times as often as Whites—and more than twice as often as Blacks—in an attempt to find a few major Hispanic drug traffickers" (p. 709).

Although some existing studies of racial profiling strongly suggest the existence of a strategic selection bias by police based on race, others show little or no disparities in stops or stop outcomes and provide little indication that police intentionally use race as a decision-making criterion based on assumptions of group criminality. Researchers in Washington, for example, found no evidence of disproportionate stops of minority drivers by the Washington State Patrol (WSP) after analyzing more than 1 million WSP traffic-stop records during a 2-year period (Lovrich et al., 2003). Although some racial disparities were initially found in WSP citations and searches, these were either eliminated or greatly reduced once the seriousness and the number of violations were controlled through multivariate analysis.

Although we agree that some law enforcement agencies and their officers engage in racial odds making by choosing drivers and pedestrians for increased scrutiny based on generalized perceptions of group criminality, we do not believe that all or even most racial disparities in stops can be explained by this rationale. Such an approach ignores the overwhelming experimental evidence from social psychologists, which points to a nonvolitional explanation for the disparate treatment of minority groups by the police. In the following sections, we review this evidence and propose an unconscious, stereotype-based theory of decision making to further advance our understanding of why police tend to treat minorities more harshly than Whites.

UNCONSCIOUS RACIAL STEREOTYPING

Social psychologists have long sought to measure how and why people respond to others in different ways according to their perceived group membership. As a result, an extensive body of literature has developed that examines the formation of stereotypes and attempts to link the existence of stereotypes to prejudiced attitudes and discriminatory behaviors. Stereotypes are cognitive structures contained within the mind of the perceiver, and they are made up of the perceiver's knowledge, beliefs, and expectations regarding an identifiable social group

(Mackie, Hamilton, Susskind, & Rosselli, 1996). As such, stereotypes are formed as the result of both social and individual cognitive processes (Allport, 1954; Aronson, 1992; Mackie et al., 1996). In the discussion that follows, we first examine the collective basis for stereotypes before turning to a discussion of how the cognitive processing of individual experiences underlies the formation of racial stereotypes among police officers.

SOCIAL AND CULTURAL FOUNDATIONS OF STEREOTYPES

American police officers are typically native-born citizens who have been exposed since infancy to the American social and cultural milieu. In fact, most were born and raised within the small towns and cities that make up the bulk of the America that they police. The structure of policing in the United States is unique among other nations of the world; the United States contains more than 17,000 law enforcement agencies, more than half of which have 10 or fewer officers, making policing in America largely a local, small-town affair (Reaves & Hickman, 2002).

According to the cultural perspective on stereotype formation, stereotypes represent a society's collective knowledge and beliefs about the social groups of which it is constructed. Thus, the society that produces America's small-town police officers also contains within it shared stereotypes about minority groups, ingrained perceptions, and beliefs that have been passed down by parents, teachers, political and social leaders, and the mass media (Stangor & Schaller, 1996). By 5 years of age, children have begun to exhibit clearly identifiable racial attitudes, which tend to resemble those of their parents and friends (Goodman, 1952; Patchen, Davidson, Hofmann, & Brown, 1977). In fact, Hirschfeld (1995) believed that children learn verbal labels and stereotypes associated with groups before they learn to recognize the groups to whom the labels apply. This is consistent with the evidence that language provides the primary mechanism through which social groups are categorized and by which stereotypes are transmitted to others (Allport, 1954; Fishman, 1956).

In contemporary society, the mass media serves as an important transmitter of racial stereotypes and labels. Television shows, newspapers, magazines, films, and popular songs all play a role in the creation and perpetuation of stereotypes. Many studies have documented the existence and manifestations of stereotypes through content analysis of various forms of mass media (Bell, 1992; Stinton, 1980; C. C. Wilson & Gutierrez, 1985). These widespread and socially transmitted stereotypes reflect commonly accepted social norms. Moreover, adherence to such social norms plays a role in the perpetuation of stereotypes. Pettigrew (1958), for example, found that those who showed the greatest conformity to social norms also demonstrated the highest levels of prejudice against outsiders.

Social identity theory offers another powerful explanation for the social foundations of stereotypes. Social identity theory maintains that group membership serves to bolster self-esteem, and thus, individuals have an incentive to favor the in-group (their own) over out-groups (Tajfel & Turner, 1979). Preference for the in-group is prevalent and has been demonstrated by a variety of experimental studies involving the random assignment of subjects to groups and their resulting evaluations of positive group qualities (Brewer, 1979; Hinton, 1993). In essence, people create positive social identities that are linked to group membership. As a result of these identities, people tend to view their own social groups more positively than other groups. When social identities center around race and ethnicity, the result can be negative racial stereotypes that are reinforced by group beliefs and interactions.

Social-structural and economic competition also can foster and perpetuate the existence of stereotypes. For example, negative stereotypes may increase when competition for jobs and economic resources pits social groups against one another. In his anthropological study of a small town in the South, Dollard (1987) documented how native Whites, who initially showed no prejudice toward newly arrived German immigrants, later became aggressive and expressed scornful and derogatory opinions of the Germans after competition increased between the groups for scarce jobs at local woodworking plants. Similarly, changes in economic conditions contributed to vastly different opinions of Chinese immigrants in the 19th century, with opinions running favorably toward the Chinese when their labor was needed on the railroads but against them when they were competing with Whites for gold in California (Aronson, 1992).

As representatives of the cultures and communities from which they come, police officers no doubt arrive on the job with the full panoply of stereotypes and biases that exist in contemporary American society. Although overtly racist attitudes among police recruits may be uncovered during the hiring process, police applicants who labor under the influence of more subtle, socially driven racial stereotypes are unlikely to be screened out of hiring on the grounds that they are prejudiced and thus unfit for the law enforcement profession. As a result, police officers largely reflect the society from which they are drawn, and as is the case with society as a whole, many will adhere to a worldview that includes racial stereotyping. In addition to the social and cultural biases that new police officers may bring with them to the job, however, we contend that the nature of police work itself creates an environment wherein experientially based but unconscious racial stereotyping exists. We now turn to a discussion of two likely mechanisms for the formation of experientially based racial stereotypes among police officers.

POLICE WORK AND EXPERIENTIALLY BASED STEREOTYPE FORMATION

In many ways, law enforcement officers are uniquely situated within society. They carry with them the authority of the state to intervene in the lives of private citizens, to curtail freedoms, and to use force in nonnegotiable and often coercive ways (Bittner, 1970). The nature of their business brings them into routine contact with criminals, substance abusers, the mentally ill, and persons in crisis. As a result, police officers, like other front-line responders and social service workers, must frequently interact with poor, minority, and socially disadvantaged groups that are disproportionately afflicted with the very social problems that the police are expected to handle (Maynard-Moody & Musheno, 2003; Skolnick, 1994). Indeed, the emotional and psychological toll of dealing with danger and intractable social problems on a day-to-day basis is an occupational hazard among U.S. police officers that produces high rates of stress (Crank & Caldero, 1991; He, Zhao, & Archbold, 2002), divorce, alcoholism, and according to many researchers, suicide (Arrigo & Garsky, 2001).² In addition, psychological research on the development of stereotypes indicates that police officers may develop stereotypes based on repeated exposure to negative social stimuli involving minority groups. This is especially true for officers who work in high-crime minority neighborhoods or who, by virtue of their job assignment, repeatedly come into contact with minority groups involved in crime or violence.

Cognitive theorists recognize that learning involves the acquisition or reorganization of information or observations and that the relative power of learning varies according to the degree of familiarity with the subject and the number of repeated associations with that

subject to which one is exposed (Good & Brophy, 1990). From this perspective, scripts, or cognitive schema, develop as shorthand for categorizing events in memory. They often start as simple and loosely organized networks but can evolve into systematic and complex relationships. Research findings provide evidence that these schemas form a mental model that plays a key role in predicting a person's responses to other individuals, places, and things in future encounters or events (Bower, Black, & Turner, 1979; Brehm, Kassin, & Fein, 2002; Read, 1987). Once formed, persons, places, or things that have familiar characteristics or properties activate these cognitive schemas. For example, it is likely that these schemas or biases will be triggered when judging the behavior of a person that accords with one's pre-existing mental image for the group to which the person belongs, especially when the observed behavior is ambiguous (Darley & Gross, 1983; Sagar & Schofield, 1980). An individual may, therefore, respond in a learned way to another individual who is a member of a particular group with which he or she has experiences or a history. Once a person has identified another individual or a group by an assumed role, future behavioral patterns will be predicted on the previously developed schema. In other words, otherwise-unbiased police officers can "learn" to be biased and acquire and accumulate prejudicial attitudes and beliefs.

The role of stored information in decision making, including cognitive schemas, has been the subject of a great deal of research on social cognition. The accessibility of information, or the ease with which it can be recalled, is a strong predictor of how people make judgments about people and events and ultimately how they behave (Sherman, Judd, & Park, 1989). Furthermore, accessibility is directly related to the number of specific instances that can be brought to mind (Tversky & Kahneman, 1973). In the realm of attitudes and their influence on behavior, attitudes are most accessible when they are based on direct experience with the object of the attitude in question (Fazio, Chen, McDonel, & Sherman, 1982; Fazio, Zanna, & Cooper, 1978), and they influence behavior in proportion to the amount of attitude-specific information that can be retrieved from memory (Kallgren & Wood, 1986).

Taken together, this body of literature suggests that attitudes, beliefs, and stereotypes are most likely to develop when police have repetitive contacts of a similar type with persons from the same group. Furthermore, stereotypes act as organizational scripts for social memory and thus guide perceptions of future encounters (Noseworthy & Lott, 1984). Once triggered, stereotypes result in an ecological fallacy (Robinson, 1950) as perceived group generalizations are applied to individuals regardless of their individual characteristics (Grant & Holmes, 1981). Thus, if the police repeatedly encounter Whites and minorities under differential conditions of criminality, they likely will begin to develop cognitive scripts that associate criminality and violence with minorities. This, in turn, makes it more likely that the police will process new situations through the filter of existing schemas, which are easier to recall because of the larger number of crime- and violence-related contacts with minorities among officers who are assigned to high-crime minority neighborhoods. The result of these multiple contacts is likely to be biased or incorrect assumptions about members of the minority group.

A recent study of gender influences on police suspicion in the traffic-stop context lends at least indirect support for the proposition that police behavior may be driven by differential exposure to group criminality that leads to the development of stereotypes. M. R. Smith, Makarios, and Alpert (2006) examined more than 66,000 traffic stops in Miami-Dade County, Florida, and found that police were more suspicious of men than of women and that suspicion played a significant role in the decision to arrest. Although race was not the focus of their analysis, they also found that suspicion had an even greater influence on the decision

to arrest Black drivers than it did female drivers. They concluded that their theory of differential suspicion based on exposure over time to higher levels of crime and violence by men required modification in the race context. Most Miami–Dade officers worked in areas that were not heavily populated by Blacks, and thus, the increased probability of arrest for Blacks could not be explained *solely* on the basis of differential exposure to higher rates of crime among Blacks, even if such higher rates existed. They suggested that other cognitive mechanisms might also help explain the disparate treatment of minorities by police, including the phenomenon of illusory correlation.

THE ILLUSORY CORRELATION PHENOMENON

In addition to cognitive schemas that may develop among officers who have disproportionate contact with minority offenders, another cognitive process may explain the existence of racial stereotypes among a broader group of police officers. Among social psychologists, the concept of illusory correlation refers to a purported correlation between two classes of events that are either not correlated or are correlated to a lesser degree than reported (Chapman, 1967). Hamilton and Gifford (1976) were among the first to document the existence of an illusory correlation between distinctive behaviors and minority group membership. In their experiment, they examined the ability of research subjects to accurately recall the frequency of occurrence of desirable and undesirable behaviors attributed to two arbitrarily created groups. One of the groups was a designated “majority” group and contained 26 different, hypothetical, stimulus persons engaged in 26 unique behaviors (e.g., visiting a sick friend in a hospital). The “minority” group contained a smaller number of hypothetical, stimulus persons (13) engaged in 13 different behaviors. Despite the differences in group size, desirable and undesirable behaviors were described within both groups according to the same 9:4 ratio.

When asked to recall how many statements had described undesirable behaviors within each group, the 36 student research subjects overestimated the occurrence of the undesirable behaviors among the minority group. Likewise, when asked to subjectively rate the groups on social and intellectual desirability, the research subjects rated the minority group significantly lower than the majority group, despite the fact that members of both groups had engaged in desirable and undesirable behaviors at exactly the same rates. Hamilton and Gifford (1976) repeated the experiment by reversing the ratio of good to bad behaviors (i.e., more bad behaviors than good) and produced similar results: Research subjects overattributed the desirable behaviors to the minority group in the second experiment, which led to higher trait ratings for the smaller group. Thus, the research subjects in both experiments developed an illusory correlation by overestimating less frequently occurring behaviors among minority group members. Hamilton and Gifford suggested that this individual, cognitive basis for the formation of group stereotypes may reinforce existing socially learned or culturally transmitted stereotypes.

Hamilton and Gifford’s (1976) findings with respect to illusory correlation and stereotype formation have been reproduced in a variety of experimental settings. For example, Hamilton, Dugan, and Trolie (1985) replicated Hamilton and Gifford’s original findings among a different group of research subjects ($N = 24$) using a substantially similar methodology. To further test whether illusory correlations formed as the result of lowered evaluations of the minority group, or elevated evaluations of the majority group, the researchers used a free recall exercise and found that the subjects recalled a higher proportion of negative behavior

sentences associated with the minority group than for any other behavior and/or group combination. This suggests that illusory correlation formation indeed results from the differential retention of negative behaviors that co-occur with minority groups.

At this point, the existence of the illusory correlation phenomenon is a robust and well-documented finding that can contribute to the formation of group stereotypes (McConnell, Sherman, & Hamilton, 1994). It comes as no surprise, therefore, that in their meta-analysis of 17 illusory correlation experiments, Mullen and Johnson (1990) found the illusory correlation effects to be both moderately strong³ and highly significant. Overall, and because of an unconscious anomaly in the processing and encoding of information, experimental subjects will routinely overestimate the occurrence of negative behaviors among minority group members and will subsequently evaluate those groups on likeability and trait indices more negatively than majority groups. In the racial profiling context, this research suggests that when they are exposed to negative behaviors by minority citizens, police officers will overestimate the prevalence of such behaviors, which will reinforce preexisting racial stereotypes, at the very least, and may even cause the development of such stereotypes when they did not previously exist.

Taken together, the research findings on cognitive schemas and illusory correlations have significant implications for the development of a cognitive-based theory of racial profiling. Conventional views on racial profiling focus on discriminatory intent. In fact, proof of purposeful discrimination is a necessary component of an Equal Protection-based claim of racial profiling (*United States v. Armstrong*, 1996). However, the available social-psychological research suggests that if racial profiling is occurring, it is most likely the result of subconscious attitudes resulting either from differential exposure to group criminality or by the illusory correlation phenomenon, which causes police officers to overestimate the prevalence of negative behaviors among minority group members. Still missing from the puzzle, though, is a link between stereotype formation and profiling behavior. Assuming for a moment that police officers are predisposed to develop negative stereotypes about minority groups through subconscious psychological mechanisms, will they act on those stereotypes? Does the existence of racial stereotypes among the police translate into an increased probability that they will stop, ticket, search, or arrest minority citizens disproportionately to Whites? We now turn to these questions and review what we know about the connection between stereotypical attitudes and discriminatory behavior.

CONNECTIONS BETWEEN STEREOTYPES AND BEHAVIOR

Despite the significant volume of literature on the formation of racial stereotypes, surprisingly little is known about the relationship between stereotypes and actual discriminatory behavior. When examining this relationship, it is important to remember that police officers operate in a highly discretionary environment (Brown, 1981; Davis, 1975; Muir, 1977). On the street, where decisions are typically made, police officers possess significant discretionary authority that is largely unchecked by immediate supervisory oversight; it is rare, for example, for a supervisor to be present at the scene of a traffic or pedestrian stop. In such settings, officers may choose to stop a citizen or allow him or her to pass without intervention. If the officer chooses to make a stop, then he or she is presented with a range of possible actions that will determine the outcome of the stop: If a violation was observed, the officer can issue a

citation and, in doing so, can often decide on a greater or lesser charge—speeding as opposed to reckless driving, for example. In some cases, the officer can decide between issuing a citation and making a custodial arrest. Alternatively, the officer could allow the citizen to proceed with a written or verbal warning. Similar choices may exist with respect to conducting searches, running computer-record checks, or towing a vehicle (Alpert Group, 2004), all of which reveal the level of discretion that lies with the officer.

Research that has attempted to examine the relationship between police officer attitudes and behavior is rare and generally produces null findings (Worden, 1989). For example, Worden's (1989) analysis of Police Services Study observational data failed to find a clear connection between officer attitudes (as measured by a questionnaire) and observed behaviors (stops, arrests, or other dispositions). Importantly, however, his attitudinal indices did not include measures of racial stereotyping or prejudice, and so questions remain about the role that such stereotypes may play in police decision making or whether they may have a more powerful influence on behavior than officer attitudes about role orientation, legal restrictions, citizen respect, discretion, or the like.

In fact, at each of the traffic-stop decision points that show evidence of racial disparities, the possibility remains that unconsciously held racial stereotypes could influence the choices that police officers make and, in the aggregate, produce measurable disparities among White and minority drivers. However, research that has examined the linkage between stereotypes and discriminatory behavior is likewise rare and inconsistent (Dovidio, Brigham, Johnson, & Gaertner, 1996). For example, in a simulated performance-evaluation exercise, Feldman and Hilterman (1977) found no relationship between Whites' stereotypes of Blacks and their evaluations of Black workers. Brigham (1971), however, found a correlation (albeit a weak one) between cognitive stereotypes and the evaluation by Whites of hypothetical Black juvenile offenders.

In a similar and more recent experiment, Graham and Lowery (2004) employed subliminal racial priming to test the effect of unconscious racial stereotypes held by police and juvenile probation officers on their evaluations of hypothetical adolescent offenders. A sample of 105 police officers and 91 juvenile probation officers was primed with words related either to the racial category of Black or to a race-neutral condition. The priming took place through words flashed on a computer screen that appeared too quickly to register in conscious awareness. Once primed, the research subjects were presented with two vignettes involving crimes committed by hypothetical juvenile offenders whose race was deliberately left ambiguous. In the first experiment, the police officer subjects were asked to rate the delinquents according to personality traits, perceived culpability, and expected recidivism. They were also asked to indicate how they would handle the situation if called to the scenes represented in each vignette: Let the suspect off with a warning, arrest the suspect on misdemeanor charges, or arrest the suspect on felony charges. In the second experiment, the juvenile probation officers were asked to rate the delinquents in the same manner but were given the following choices as potential hypothetical responses: Let the suspect off with a warning, place the suspect on informal probation, cite the suspect to juvenile traffic court, or refer the suspect to a district attorney.

In both experiments, the police officers and juvenile probation officers who had been racially primed rated the hypothetical delinquents as more mature and gave them higher negative-trait ratings related to violence and bad character. They also judged them to be more culpable and deserving of harsher treatment. Structural equation modeling showed that the

racial priming affected judgments about culpability both directly and indirectly through trait inferences. The researchers concluded that unconscious racial stereotypes can be activated in actual criminal justice decision makers and that, once activated, those stereotypes can influence judgments and behavioral intentions.

Traditionally, racial stereotypes, prejudice, and discrimination have been considered closely related phenomena (Dovidio et al., 1996). Dovidio and colleagues' (1996) meta-analysis of the existing research on the linkages among these concepts reveals some support for this supposition. Across studies, these researchers found a moderate relationship between racial attitudes and discrimination ($r = .32$) but note that their conclusions must be viewed with caution because of the limited number of studies that have directly explored the connections between racial attitudes and discriminatory behavior. Graham and Lowery's (2004) more recent work on subliminal racial priming—which was not reviewed by Dovidio et al.—provides additional evidence that unconscious racial stereotypes may indeed influence decision making by criminal justice actors. The work of these researchers helps point toward a general theory of racial profiling that includes a hypothesized connection between stereotypical beliefs about racial groups and subconscious disparate treatment of minority citizens by the police.

SPECIFYING A THEORY OF RACIAL PROFILING

Our theoretic approach begins with the axiom that police officers view themselves first and foremost as crime fighters—soldiers in a “war” on crime with battle lines drawn between us (the police) and them (criminals; see Betz, 1988; Crank, 2004; Kraska, 2001; Kraska & Kappeler, 1997). From this perspective, officers quickly learn to become suspicious of anyone who does not wear a police uniform. Suspicion, however, is not uniformly applied. Van Maanen (1996, p. 163) noted the differences in how police treat those whom they suspect of having committed a crime (suspicious persons) compared to those who do not accept the police definition of a situation (“assholes”) or those who fall into neither of the other two categories (“know-nothings”). Furthermore, police beliefs about which citizens are likely to be involved in crime are based on a variety of individual, behavioral, and situational cues, including race and gender (Bittner, 1970; Rubinstein, 1973; Skolnick, 1994).

As a result, police in some communities have a long and ill-famed reputation for racial discrimination and increased suspiciousness of minorities (D. Smith, Visser, & Davidson, 1984; Walker, Spohn, & DeLone, 2004; Williams & Murphy, 1990). In the area of pedestrian stops or traffic enforcement, these views may result in the differential treatment of minority, powerless, or disrespectful citizens (Lundman, 1979). By the same token, police are not immune to the unpleasant reality that crime is unevenly distributed in American society (M. R. Smith & Petrocelli, 2001). African Americans, for example, commit more violent street crime on a per-capita basis than do Whites and Asians (FBI, 2003; U.S. BJS, 2002b). Similarly, poverty (Block, 1979; Taylor & Covington, 1988), age (Hirschi & Gottfredson, 1989), and gender (FBI, 2003; U.S. BJS, 2002a) are strong and consistent predictors of criminality.

Overlaid with the predisposition of the police toward suspiciousness and the skewed distribution of crime in society is a cognitive perspective on stereotyping that suggests that repeated contacts with groups that demonstrate disproportionate levels of crime or antisocial behavior may result in the development of scripts that can influence how police perceive

members of such groups in street-level encounters (Bower et al., 1979; Brehm et al., 2002; Read, 1987). Once these cognitive schema are formed, they are easily recalled and likely will influence future attitudes and behavior. Such scripts are most likely to develop among officers assigned to high-crime minority neighborhoods or who otherwise serve in positions that bring them into repeated contact with mostly minority offenders.

Likewise, the well-documented cognitive phenomenon of illusory correlation suggests that even police officers who do not routinely come into contact with minority offenders will likely overestimate the prevalence of negative behaviors among minorities, which in turn, can lead to the formation of race-based stereotypes. These stereotypes serve to reinforce socially learned and culturally transmitted beliefs about race that police officers frequently bring with them to the job. Indeed, more than 100 studies have demonstrated that Whites in American society hold automatic negative associations with Blacks and other minority groups (Blair, 2002).

However, police work provides a fertile environment for the creation of negative racial stereotypes beyond those that the society at large produces. Because of their unique role in maintaining social control, police officers must routinely contact and intervene in the affairs of those who violate the law and other social norms. Either through learned cognitive schemas or the mechanism of illusory correlation, police officers are at high risk for developing racial stereotypes about the people with whom they interact in the course of their duties. Although the traditional view of racial profiling holds that police officers intentionally target minority citizens for disparate treatment during traffic or pedestrian stops (Harris, 2002), a growing and persuasive body of literature suggests that such stereotypes can be activated and used outside of conscious awareness (Graham & Lowery, 2004; Greenwald & Banaji, 1995).

We propose that such *unconscious* racial profiling is the most plausible explanation for the widespread empirical findings of disparities in traffic- and pedestrian-stop outcomes. This aversive form of racism (Gaertner & Dovidio, 2000) operates predominately through nonpurposive discriminatory decision making that manifests itself in the ambiguous and discretionary-laden world of street-level police work. As Gaertner and Dovidio (2000) have suggested, bias is most likely to occur within the aversive paradigm when norms governing appropriate behavior are ambiguous. Police stops of citizens are highly discretionary, largely unsupervised, and governed by only minimal evidentiary requirements (*Delaware v. Prouse*, 1979). As a result, traffic and pedestrian stops provide a perfect environment for unconscious racial bias to occur. It is no surprise, then, that a large and growing body of empirical literature documents disparities in the treatment of White and minority citizens who are stopped by the police.

Recognizing that racial profiling, where it exists, is largely nonvolitional does not diminish the fact that, in some cases, police treat minorities differently from Whites either out of racial animus or as part of an intentional strategy to attack crime or disorder. Thus, we do not reject the arguments of those who believe that police do profile minorities on purpose in some cases. Instead, we have attempted to demonstrate that unconscious racial stereotyping and its influence on decision making is the most likely explanation for the racial disparities observable in the stop patterns of most law enforcement agencies that have been the subjects of empirical studies. Neither racial hatred on the part of the police nor their strategic use of race as a decision-making criterion is a convincing explanation for the patterns evident in the available data.

A RESEARCH AGENDA

Our theory of unconscious racial stereotyping is based on our review of the available empirical literature on racial profiling and on the results of related social–psychological research. At this point, the theory needs empirical verification, which is especially challenging given the inherent difficulties in distinguishing conscious from unconscious attitudes and behaviors. Thus, this final section proposes two distinct but related strands of research: The first uses stop data to examine the relationship between racial demography and officer behavior, and the second uses laboratory methods from social psychology to disentangle officers' motives.

As to the first strand of the proposed research agenda, the current literature on racial profiling gives comparatively little attention to the relationship between officer characteristics and the race of citizens stopped. Those studies that have examined the influence of officer characteristics on stop outcomes have focused primarily on officer race or job assignment (drug interdiction or street crimes unit) as predictor variables of interest (Engel & Calnon, 2004; New York Attorney General's Office, 1999; M. R. Smith & Petrocelli, 2001; W. R. Smith et al., 2003). However, our theory suggests the importance of examining *where* an officer works and how the demographic characteristics of those with whom the officer interacts on a repeated basis may influence the officer's discretionary choices.

Specifically, research is needed to determine whether officers who are differentially exposed to minority criminality—by, for example, working in high-crime minority neighborhoods—treat minority citizens differently from officers who work in mostly White neighborhoods. The conditioning component of our theory suggests that differential exposure of officers to high levels of minority criminal involvement may result in more punitive treatment of minority citizens. To examine this issue, researchers could employ a quasi-experimental design to compare the stop activities of officers who work in high-crime minority neighborhoods to officers who work in lower crime White areas. The results from this study would provide indirect (but critical) evidence that social conditioning may be occurring at differential rates in these different areas.

To test the illusory correlation component of our theory, another study could be designed to compare the stop activities of officers who work in mostly minority cities to those who work in majority White cities. According to our theory, officers who work in cities with clear majority and minority populations would be expected to overestimate the prevalence of crime among the minority population and may treat that group more punitively than the majority population. Because the theory of illusory correlation is “color-blind,” officers in majority–minority cities (e.g., Detroit) would be expected to treat Whites more harshly than the dominant minority group, whereas officers who work in mostly White cities (e.g., Spokane, Washington) would demonstrate an opposite pattern of behavior.

Once research findings have established (or rejected) these patterns, a second strand of research is needed to identify whether the differential treatment of citizens is the result of conscious or unconscious processes. In other words, even if actual stop patterns are consistent with our theoretical predictions, those patterns may not mean that officers are acting unconsciously. Officers could still be acting out of conscious bias; thus, the second strand of research would use various social–psychological research strategies in experimental settings to see whether officers' responses differ based on whether they work in minority or White neighborhoods or minority or White cities.

Along these lines, we first suggest using the Implicit Association Test (IAT, or similar instrument), which examines subjects' automatic associations between given attitude objects and attributes. The IAT, administered by paper and pencil or electronically, measures how closely associated a given object such as lightness or darkness is with an evaluative attribute (e.g., good or bad). The more closely related the objects are to the evaluative attributes, then the stronger is the implicit attitude. Implicit attitudes control people's repeated or automatic reactions to objects and people and help to shape their subsequent interactions (see Olson & Fazio, 2003).

An example from prior research illustrates the utility of this test. Olson and Fazio (2003) examined White students' attitudes toward race by providing pictures of faces of Blacks and Whites and having the subjects maintain a mental image of the pictures' attributes before assigning pleasant and unpleasant adjectives to them. Subjects demonstrated prejudice against Blacks, leading to the conclusion that they are construed more negatively as a group and, consequently, perceived more negatively on an individual level even in instances when no individual interaction occurred on which to base a judgment.

In addition to the IAT or similar instrument, researchers could use subliminal priming to examine unconscious attitudes and behaviors among officers who work in neighborhoods or cities with different dominant populations. Building on the work of Graham and Lowery (2004), for example, researchers could employ subliminal priming to test the differences in how officers make discretionary decisions when they are differentially exposed to various racial groups based on the neighborhood or city characteristics of where they work. If differential treatment can be identified based on racial exposure in the first strand of research, then this second line of inquiry can help pinpoint whether the cause of such treatment is conscious decision making or unconscious stereotyping. Not only would this second line of research serve as a direct test of our theory, but it also could lead to a significant change in how racial profiling is perceived. More important, it could lead to planned interventions that in turn could help reduce or eliminate the unconscious influence of race on police decision making.

CONCLUSION

We have developed a general theory of police behavior that explains why police officers treat minority group members more harshly than they treat White citizens. Although officers who treat minorities differently from Whites could be acting out of racial animus, it is far more likely that they possess unconscious biases toward minority citizens that are created through either differential exposure to groups involved in deviant or criminal behavior (social conditioning; Kowalski, 2003; Laviolette & Silvert, 1951) or through illusory correlation mechanisms (Hamilton & Gifford, 1976). As we have argued, stereotypes most likely develop through repeated contacts with a minority group and subsequently guide perceptions in future encounters. The result is that future contacts with members of these groups will be driven by existing or yet-to-be formed schemas. Beyond these cognitive schemas, the phenomenon of illusory correlation offers an important and as-yet-unconfirmed explanation for the harsher treatment of minority group members by the police in comparison to their treatment of White citizens.

Once our theory has been subjected to empirical testing and validation, future researchers and policy makers can address how best to minimize the influence of unconscious racial

stereotypes on police behavior. Because our theory explains that biased policing is based on unconscious stereotypes, policies that focus on breaking down the cognitive scripts on which stereotypes are based can be key to changing officer attitudes and behavior. For example, officers assigned to predominantly minority, high-crime areas for an extended period of time may develop scripts that make them suspicious of minorities in general. Regularly changing officers' beat assignments based on crime characteristics and neighborhood demographic factors could help to prevent the development of those scripts. Similarly, officers who work in specialty units (e.g., gang or juvenile) that bring them into disproportionate contact with young, male, minority offenders may also develop these scripts. Rotating officers out of these units at regular intervals may help to reduce the development of racial stereotypes. Before any such policy changes are implemented, however, our theory must first be subjected to empirical study and validation.

NOTES

1. Hit rates typically refer to the proportion of searches that actually produce contraband. Lower hit rates for minorities are often viewed as evidence of racial bias, as they suggest that minorities are searched under lower evidentiary standards than Whites, which produces greater numbers of "false positives" (Ayres, 2001).

2. Loo (2003) conducted a meta-analysis of reported police-suicide studies and found lower rates of suicide among police in the Americas (which included Canada) when compared to national or regional suicide rates. Loo argues that suicide researchers should pay closer attention to a host of methodological issues when reporting results.

3. The r^2 for combined group estimation tasks was .211 when the distinctive behaviors of the minority group were negative.

REFERENCES

- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Alpert, G. P., Becker, E., Gustafson, M. A., Meister, A. P., Smith, M. R., & Strombom, B. A. (2006, July). *Pedestrian and motor vehicle post-stop data analysis report*. Los Angeles: Analysis Group. Retrieved February 22, 2007, from http://www.analysisgroup.com/AnalysisGroup/uploadedFiles/Publishing/Articles/LAPD_Data_Analysis_Report_07-5-06.pdf
- Alpert, G. P., Smith, M. R., & Dunham, R. (2004). Towards a better benchmark: Assessing the utility of not-at-fault traffic crash data in racial profiling research. *Justice Research and Policy*, 6, 44-69.
- Alpert Group. (2004). *Miami-Dade Racial Profiling Study*. Columbia, SC: Author.
- Alschuler, A. W. (2002). Racial profiling and the constitution. *University of Chicago Legal Forum*, 2002, 163-269.
- Aronson, E. (1992). *The social animal* (6th ed.). New York: Freeman.
- Arrigo, B., & Garsky, K. (2001). Police suicide: A glimpse behind the badge. In R. G. Dunham & G. P. Alpert (Eds.), *Critical issues in policing* (4th ed., pp. 664-680). Prospect Heights, IL: Waveland.
- Ayres, I. (2001). *Pervasive prejudice? Unconventional evidence of race and gender discrimination*. Chicago: University of Chicago Press.
- Barlow, D. E., & Barlow, M. H. (2000). *Police in a multicultural society: An American story*. Prospect Heights, IL: Waveland.
- Bell, J. (1992). In search of a discourse on aging: The elderly on television. *The Gerontologist*, 32, 305-311.
- Betz, J. (1988). Police violence. In F. A. Elliston & M. Feldberg (Eds.), *Moral issues in police work* (pp. 177-196). Totowa, NJ: Rowman and Allanheld.
- Bittner, E. (1970). *The functions of the police in a modern society*. Chevy Chase, MD: National Institute of Mental Health.
- Blair, I. V. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review*, 6, 242-261.
- Block, R. (1979). Community, environment, and violent crime. *Criminology*, 17, 46-57.
- Bower, G., Black, J., & Turner, T. (1979). Scripts in text comprehension and memory. *Cognitive Psychology*, 11, 177-220.
- Brehm, S., Kassin, S., & Fein, S. (2002). *Social psychology* (5th ed.). Boston: Houghton-Mifflin.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin*, 86, 307-324.
- Brigham, J. C. (1971). Racial stereotypes, attitudes, and evaluations of and behavioral intentions toward Negroes and Whites. *Sociometry*, 34, 360-380.

- Brown, M. (1981). *Working the street: Police discretion and the limits of reform*. New York: Russell Sage.
- Chapman, L. J. (1967). Illusory correlation in observational report. *Journal of Verbal Learning and Verbal Behavior*, 6, 151-155.
- Crank, J. P. (2004). *Understanding police culture* (2nd ed.). Conklin, NY: Anderson.
- Crank, J. P., & Caldero, M. (1991). The production of occupational stress in medium-sized police agencies: A survey of line officers in municipal departments. *Journal of Criminal Justice*, 19, 339-349.
- Darley, J. M., & Gross, P. G. (1983). A hypothesis-confirming bias in labeling effects. *Journal of Personality and Social Psychology*, 44, 20-33.
- Davis, K. (1975). *Police discretion*. St. Paul, MN: West.
- Delaware v. Prouse, 440 U.S. 648 (1979).
- Dollard, J. (1987). *Class and caste in a southern town*. New Haven, CT: Yale University Press.
- Dovidio, J. F., Brigham, J. C., Johnson, B. T., & Gaertner, S. L. (1996). Stereotyping, prejudice, and discrimination: Another look. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 276-319). New York: Guilford.
- Engel, R., & Calnon, J. (2004). Examining the influence of driver's characteristics during traffic stops with police: Results from a national survey. *Justice Quarterly*, 21, 702-742.
- Engel, R. S., Calnon, J. M., & Bernard, T. J. (2002). Theory and racial profiling: Shortcomings and future directions in research. *Justice Quarterly*, 19, 249-273.
- Fagan, J., & Davies, G. (2000). Street stops and broken windows: Terry, race and disorder in New York City. *Fordham Urban Law Journal*, 28, 457-504.
- Farrell, A., McDevitt, J., Bailey, L., Andresen, C., & Pierce, E. (2004). *Massachusetts Racial and Gender Profiling Study*. Boston: Northeastern University Institute on Race and Justice. Retrieved February 22, 2007, from http://www.boston.com/globe/metro/packages/tickets/profiling_finalreport.pdf
- Farrell, A., McDevitt, J., Cronin, S., & Pierce, E. (2003). *Rhode Island Traffic Stop Statistics Act final report*. Boston: Northeastern University Institute on Race and Justice. Retrieved February 22, 2007, from http://www.racialprofilinganalysis.neu.edu/IRJ_docs/RIFinalReport.pdf
- Fazio, R. H., Chen, J., McDonel, E. C., & Sherman, S. J. (1982). Attitude accessibility, attitude-behavior consistency, and the strength of object-evaluation association. *Journal of Experimental Social Psychology*, 18, 339-357.
- Fazio, R. H., Zanna, M. P., & Cooper, J. (1978). Direct experience and attitude-behavior consistency: An information processing analysis. *Personality and Social Psychology Bulletin*, 40, 48-51.
- Federal Bureau of Investigation (FBI). (2003). *Crime in the United States*. Washington, DC: Author.
- Feldman, J. M., & Hilterman, R. J. (1977). Sources of bias in performance evaluation: Two experiments. *International Journal of Intercultural Relations*, 1, 35-57.
- Fishman, J. A. (1956). An examination of the process and function of social stereotyping. *Journal of Social Psychology*, 43, 27-64.
- Fogelson, R. M. (1977). *Big city police*. Cambridge, MA: Harvard University Press.
- Fridell, L., Lunney, R., Diamond, D., & Kubu, B. (2001). *Racially biased policing: A principled response*. Washington, DC: Police Executive Research Forum. Retrieved February 22, 2007, from http://www.policeforum.org/upload/RaciallyBiasedPolicingfull%5B1%5D_715866088_12302005114449.pdf
- Gaertner, S. L., & Dovidio, J. F. (2000). The aversive form of racism. In C. Stangor (Ed.), *Stereotypes and prejudice: Essential readings* (pp. 289-304). Philadelphia: Taylor & Francis.
- Good, T., & Brophy, J. (1990). *Educational psychology: A realistic approach*. White Plains, NY: Longman.
- Goodman, M. (1952). *Race awareness in young children*. Cambridge, MA: Addison-Wesley.
- Graham, S., & Lowery, B. S. (2004). Priming unconscious racial stereotypes about adolescent offenders. *Law and Human Behavior*, 28, 483-504.
- Grant, P. R., & Holmes, J. G. (1981). The integration of implicit personality theory schemas and stereotype images. *Social Psychology Quarterly*, 44, 107-115.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27.
- Gross, S. R., & Barnes, K. Y. (2002). Road work: Racial profiling and drug interdiction on the highway. *Michigan Law Review*, 101, 651-754.
- Gross, S. R., & Livingston, D. (2002). Racial profiling under attack. *Columbia Law Review*, 102, 1413-1438.
- Hamilton, D. L., Dugan, P. M., & Trolie, T. K. (1985). The formation of stereotypic beliefs: Further evidence for distinctiveness-based illusory correlations. *Journal of Personality and Social Psychology*, 48, 5-17.
- Hamilton, D. L., & Gifford, R. K. (1976). Illusory correlation in interpersonal perception: A cognitive basis of stereotypic judgments. *Journal of Experimental Social Psychology*, 12, 392-407.
- Harris, D. A. (1999). The stories, the statistics, and the law: Why "driving while Black" matters. *Minnesota Law Review*, 84, 265-326.
- Harris, D. A. (2002). *Profiles in injustice*. New York: New Press.
- He, N., Zhao, J., & Archbold, C. (2002). Gender and police stress: The convergent and divergent impact of work environment, work-family conflict, and stress coping mechanisms of female and male police officers. *Policing: An International Journal of Police Strategies & Management*, 25, 687-708.

- Hinton, P. R. (1993). *The psychology of interpersonal perception*. New York: Routledge.
- Hirschfeld, L. A. (1995). Do children have a theory of race? *Cognition*, *54*, 209-252.
- Hirschi, T., & Gottfredson, M. R. (1989). Age and explanation of crime. *American Journal of Sociology*, *89*, 553-584.
- Kallgren, C. A., & Wood, W. (1986). Access to attitude-relevant information in memory as a determinant of attitude-behavior consistency. *Journal of Experimental Social Psychology*, *22*, 328-338.
- Kowalski, K. (2003). The emergence of ethnic and racial attitudes in preschool-aged children. *Journal of Social Psychology*, *143*, 677-690.
- Kraska, P. B. (2001). Crime control as warfare: Language matters. In P. Kraska (Ed.), *Militarizing the American criminal justice system* (pp. 14-28). Boston: Northeastern University Press.
- Kraska, P. B., & Kappeler, V. E. (1997). Militarizing American police: The rise and normalization of paramilitary units. *Social Problems*, *44*, 101-117.
- Lamberth, J. D. (1997). *Report of John Lamberth, Ph.D.* Unpublished report, American Civil Liberties Union, Washington, DC.
- Lange, J., Johnson, M., & Voss, R. (2005). Testing the racial profiling hypothesis for seemingly disparate traffic stops on the New Jersey turnpike. *Justice Quarterly*, *22*, 193-223.
- Laviolette, F., & Silvert, K. H. (1951). A theory of stereotypes. *Social Forces*, *29*, 257-262.
- Loo, R. (2003). A meta-analysis of police suicide rates: Findings and issues. *Suicide and Life-Threatening Behavior*, *33*, 313-325.
- Lovrich, N., Gaffney, M., Mosher, C., Pickerill, M., & Smith, M. R. (2003). *WSP traffic stop data analysis project*. Pullman: Washington State University. Retrieved February 22, 2007, from <http://www.wsp.wa.gov/reports/wsps Traff.pdf>
- Lundman, R. J. (1979). Organizational norms and police discretion. *Criminology*, *17*, 159-171.
- Mackie, D. M., Hamilton, D. L., Susskind, J., & Rosselli, F. (1996). Social psychological foundations of stereotype formation. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 41-78). New York: Guilford.
- Maynard-Moody, S., & Musheno, M. (2003). *Cops, teachers, counselors: Stories from the front lines of public service*. Ann Arbor: University of Michigan Press.
- McConnell, A. R., Sherman, S. J., & Hamilton, D. L. (1994). Illusory correlation in the perception of groups: An extension of the distinctiveness-based account. *Journal of Personality and Social Psychology*, *67*, 414-429.
- Muir, W. K. (1977). *Police: Street-corner politicians*. Chicago: University of Chicago Press.
- Mullen, B., & Johnson, C. (1990). Distinctiveness-based illusory correlations and stereotyping: A meta-analytic integration. *British Journal of Social Psychology*, *29*, 11-28.
- New Jersey Attorney General's Office. (1999). *Interim report of the state police review team regarding allegations of racial profiling*. Trenton, NJ: Author.
- New York Attorney General's Office. (1999). *The New York City Police Department's "stop & frisk" practices*. New York: Author.
- Noseworthy, C. M., & Lott, A. J. (1984). The cognitive organization of gender-stereotypic categories. *Personality and Social Psychology Bulletin*, *10*, 474-481.
- Novak, K. J. (2004). Disparity and racial profiling in traffic enforcement. *Police Quarterly*, *7*, 65-96.
- Olson, M., & Fazio, R. (2003). Relations between implicit measures of prejudice: What are we measuring? *Psychological Science*, *14*, 636-639.
- Patchen, M., Davidson, J. D., Hofmann, G., & Brown, W. R. (1977). Determinants of students' interracial behavior and opinion change. *Sociology of Education*, *50*, 5-75.
- Petrocelli, M., Piquero, A., & Smith, M. R. (2003). Conflict theory and racial profiling: An empirical analysis of police traffic stop data. *Journal of Criminal Justice*, *31*, 1-11.
- Pettigrew, T. F. (1958). Personality and sociocultural factors in intergroup attitudes: A cross-national comparison. *Journal of Conflict Resolution*, *2*, 29-42.
- Read, S. (1987). Constructing causal scenarios: A knowledge structure approach to causal reasoning. *Journal of Personality and Social Psychology*, *52*, 288-302.
- Reaves, B. A., & Hickman, M. J. (2002). *Census of state and local law enforcement agencies, 2000*. Washington, DC: Bureau of Justice Statistics.
- Robinson, W. S. (1950). Ecological correlations and the behavior of individuals. *American Sociological Review*, *15*, 351-357.
- Rubinstein, J. (1973). *Big city police*. New York: Farrar, Straus, & Giroux.
- Russell, K. K. (1999). "Driving while Black": Corollary phenomena and collateral consequences. *Boston College Law Review*, *40*, 717-731.
- Sagar, H. A., & Schofield, H. W. (1980). Racial and behavioral cues in Black and White children's perceptions of ambiguously aggressive acts. *Journal of Personality and Social Psychology*, *39*, 590-598.
- Sherman, S., Judd, C. M., & Park, B. (1989). Social cognition. *Annual Review of Psychology*, *40*, 281-326.
- Skolnick, J. H. (1994). *Justice without trial: Law enforcement in a democratic society*. New York: Macmillan.
- Smith, D., Visher, C., & Davidson, L. (1984). Equity and discretionary justice: The influence of race on police arrest decisions. *Journal of Criminal Law and Criminology*, *75*, 234-249.
- Smith, M. R. (2005). De-politicizing racial profiling: Suggestions for the limited use and management of race in police decision-making. *George Mason Civil Rights Law Journal*, *15*, 219-260.

- Smith, M. R., Makarios, M., & Alpert, G. P. (2006). Differential suspicion: Theory specification and gender effects in the traffic stop context. *Justice Quarterly*, 23, 271-295.
- Smith, M. R., & Petrocelli, M. (2001). Racial profiling? A multivariate analysis of police traffic stop data. *Police Quarterly*, 4, 4-27.
- Smith, W. R., Tomascovic-Devey, D., Zingraff, M. T., Mason, H. M., Warren, P. Y., & Wright, C. P. (2003). *The North Carolina Highway Traffic Study*. Raleigh: North Carolina State University. Retrieved February 22, 2007, from http://www.chass.ncsu.edu/justice/reports/hwy_traffic_study_03.htm
- Stangor, C., & Schaller, M. (1996). Stereotypes as individual and collective representation. In C. N. Macrae, C. Stangor, & M. Hewstone (Eds.), *Stereotypes and stereotyping* (pp. 3-37). New York: Guilford.
- State v. Soto, 734 A.2d. 350 (N.J. Super. Ct. Law Div. 1996).
- Stinton, J. (1980). *Racism and sexism in children's books*. London: Writers & Readers.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.
- Taylor, R., & Covington, J. (1988). Neighborhood changes in ecology and violence. *Criminology*, 26, 553-590.
- Tony, M. (1995). *Malign neglect: Race, crime, and punishment in America*. New York: Oxford University Press.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5, 207-232.
- U.S. Bureau of Justice Statistics (BJS). (2002a). *Criminal victimization in the United States—Statistical tables* (Table No. 38). Retrieved February 22, 2007, from http://www.ojp.usdoj.gov/bjs/abstract/cvus/single_offender_victimizations298.htm
- U.S. Bureau of Justice Statistics (BJS). (2002b). *Criminal victimization in the United States—Statistical tables* (Table No. 40). Retrieved February 22, 2007, from http://www.ojp.usdoj.gov/bjs/abstract/cvus/single_offender_victimizations298.htm
- United States v. Armstrong, 517 U.S. 456 (1996).
- Van Maanen, J. (1996). The asshole. In S. G. Brandl & D. E. Barlow (Eds.), *Classics in policing* (pp. 161-180). Cincinnati, OH: Anderson.
- Walker, S. (1977). *A critical history of police reform: The emergence of professionalism*. Lexington, MA: Lexington Books.
- Walker, S., Spohn, C., & DeLone, M. (2004). *The color of justice* (3rd ed.). Belmont, CA: Thomson-Wadsworth.
- Weitzer, R., & Tuch, S. A. (2002). Perception of racial profiling: Race, class, and personal experience. *Criminology*, 40, 435-456.
- Williams, H., & Murphy, P. V. (1990, January). *The evolving strategy of police: A minority view* (13th paper in the "Perspectives on Policing" series). Washington, DC: National Institute of Justice.
- Wilson, C. C., & Gutierrez, F. (1985). *Minorities in the media*. Beverly Hills, CA: Sage.
- Wilson, G., Dunham, R., & Alpert, G. P. (2004). Prejudice in police profiling: Assessing an overlooked aspect in prior research. *American Behavioral Scientist*, 47, 896-909.
- Worden, R. E. (1989). Situational and attitudinal explanations of police behavior: A theoretical reappraisal and empirical assessment. *Law & Society Review*, 23, 667-711.