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## Diversity in municipal police agencies: a national examination of its determinants and effects

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**Diversity in Municipal Police Agencies:  
A National Examination of its Determinants and Effects**

A dissertation presented

by

Joseph L. Gustafson

to

The School of Criminology and Criminal Justice

In partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in the field of

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Northeastern University  
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August, 2010

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ABSTRACT OF DISSERTATION

Submitted in partial fulfillment of the requirements for  
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## **Abstract**

The present study is divided into two component parts. The first examines institutional and external factors associated with racial, ethnic, and gender diversity in policing at the line and managerial ranks (the determinants of diversity). Line representation analyses utilize new data sources and a full range of theoretically informed covariates. Managerial representation analyses provide the first comprehensive attempt to understand the dynamics behind minority promotion. Portions of the U.S. Census of Population and Housing Equal Employment Opportunity Tabulation (EEO), Division of Governmental Studies and Services (DGSS) survey, and Law Enforcement Management and Administrative Statistics (LEMAS) survey were combined to produce a sample of 180 cities/municipal departments. Results indicate that the representation of minorities in political office and their presence in police leadership positions are among the most influential predictors of line officer diversity. Proportions of minorities in administrative police roles are greater in larger departments paying higher salaries. There is also evidence that the career advancement of minorities can be limited when multiple minority groups compete for the same promotional opportunities.

The second portion of the present study tests the hypotheses that organizational diversity reduces police-citizen conflict and ensures impartiality in the formal administration of justice (the effects of diversity). The movement to diversify police department ranks represents one of the longest-running policy initiatives in the history of the field and proponents of this strategy have argued that it can produce these favorable outcomes, despite a lack of empirical support. Diversity is measured in three ways: 1) as relative proportions of minority (African American, Latino, female, and total) line officers and managers; 2) as the ratio of minority managers to line

officers (an indicator of an agency's "diversity perspective," Thomas & Ely, 2001); and 3) as the ratio of minority police to citizens (Walker's EEO Index, indicative of political representation). Portions of EEO and LEMAS datasets were combined to create a sample of 434 cities/municipal departments matched to multiple dependent variables measuring conflict and bias provided in the Uniform Crime Reports (UCR) and related Supplementary Homicide Reports (SHR) and Law Enforcement Officers Killed and Assaulted (LEOKA) data. Results indicate that organizational diversity does have the ability to cool conflict and decrease bias, but that this effect is very modest and only operates under certain conditions. Another key finding relates to the degree of "integration" of diversity at the line and managerial levels of policing: the positive effects of diversity were most likely to manifest in agencies where diversity was evenly distributed across ranks, and not limited to line-level positions. Theoretical and policy implications of all results are discussed, along with directions for future research.

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## Statement of the Problem

At different points in its history, American police have experienced crises of legitimacy, primarily in non-White urban communities, that have culminated in major expressions of civil disobedience such as the Watts riot in 1965 (Kerner Commission, 1968) and the so-called “Rodney King” riot in 1991 (Christopher Commission, 1991), both in Los Angeles. More generally, compromised police legitimacy has been expressed in the form of non-cooperation and perceptions of distrust among the minority urban public (e.g., Jacob, 1971; Kane, 2005). For example, African Americans, as compared to Whites, have consistently perceived police as more corrupt, more unfair, more excitable, more harsh, tougher, weaker, lazier, less intelligent, less friendly, more cruel, and more on the bad side than good (Jacob, 1971, p. 74). Several decades’ worth of studies have shown that residents of structurally disadvantaged communities (who more often than not, are Black) are the least satisfied with police services received and the most likely to perceive unfair treatment by the police (Bayley & Mendelsohn, 1969; Jacob, 1971; Hagan & Albonetti, 1982; Sampson & Bartusch, 1998; Weitzer, 1999, 2000; Weitzer & Tuch, 1999; Sunshine & Tyler, 2003).<sup>1</sup>

Studies of Latino attitudes toward police show patterns similar to those exhibited by African Americans.<sup>2</sup> While the Latino community remains relatively understudied in criminal justice research (cf. Schuck & Rosenbaum, 2005), recently conducted analyses indicate that Latino citizens are more likely than Whites to doubt the legitimacy, evenhandedness, and effectiveness of their police.<sup>3</sup> Latinos as a group more often doubt the ability of police to reduce crime, feel that they are inadequately protected by police, and evaluate police at a significantly lower level than the general population (Carter, 1983). They tend toward more negative opinions

of police officer demeanor and professionalism (Webb & Marshall, 1995) and more frequently question the authority and appropriateness of traffic stops (Lundman & Kaufman, 2003); further, they consider racial profiling more of a widespread practice than Whites and are more often profiled (Reitzel, Rice, & Piquero, 2004).

Such pessimistic perceptions have been attributed in part to the symbolic significance of the police and their disparate treatment of African Americans, Latinos, and other minorities. The police symbolize legal order and have been described as “a visible sign of minority domination” (Bayley & Mendelsohn, 1969: 195). Their historic enforcement of racist slavery, segregation, and discrimination laws set a tone of bias early on that would alienate them from the minority citizens affected by these laws (Williams & Murphy, 1990). To many non-White citizens, police became “ubiquitous, public, authority-laden symbols of their own second-class citizenship,” upon whom their emotional reactions to deprivation at the hands of the majority were projected (Bayley & Mendelsohn, 1969, p. 141). Encounters between police and minority residents thus begin with a lot of history, or “cultural baggage,” behind them and are predisposed to mutual hostility before they take place (Strecher, 1971). Citizen evaluations of personal experiences with police are affected by stereotyping and selective perception; global attitudes already held by minorities toward the police will therefore have an impact on their assessments of specific future contacts (Brandl, Frank, Worden, & Bynum, 1994; Hamilton, 1981; Hamilton & Rose, 1980).

Walker (1999) notes that minority attitudes toward the police have also been affected by both overly aggressive and less-than-vigorous styles of patrol in disadvantaged neighborhoods, or in other words, the over- and under-policing of these areas.<sup>4</sup> Over-policing refers to unusually high rates of unwarranted and intrusive stops, harassment, incivility, and brutality on the part of the police directed toward residents of a given neighborhood (Weitzer, 2000). Weitzer and Tuch

(2004) found that Blacks and Latinos in large metropolitan areas reported more (and repeated) personal and vicarious experiences with over-policing. Hagan, Shedd, and Payne (2005) found Black and Latino youth more likely than White youth to be harassed, questioned, and arrested. These experiences were in turn among the strongest predictors of negative minority sentiment toward police in both studies. The practice of over-policing is experienced by minority citizens as unfair, disrespectful, and intrusive (Weitzer & Tuch, 1999; 2002).

Under-policing, on the other hand, refers to slow response times, insufficient patrols, and cursory investigations of crimes by the police based on the characteristics of a neighborhood (Weitzer, 2000). Blacks and Latinos desire efficient police service to the same degree as Whites and “deprecate a double standard in police operations with respect to both impartiality and conscientiousness of the police” (Bayley & Mendelsohn, 1969, p. 194). Minorities want law enforcement amplified, provided it is achieved in a way that reduces the abuses associated with over-policing (Weitzer & Tuch, 2004, p. 306-307).

A history of racism and patterns of disparate treatment, then, have severely impacted minority citizen perceptions of police legitimacy. Members of racially concentrated structurally disadvantaged communities remain the most likely to perceive injustice in the application of legal norms and to express cynicism about the legitimacy of laws and the ability of the police to be effective and fair (Sampson & Bartusch, 1998, p. 784). Departments perceived as illegitimate run the risk of losing community support and cooperation (Sunshine & Tyler, 2003) which can further intensify police-minority tension and reduce strategic effectiveness.<sup>5</sup> Kane (2005), for example, found a link between indicators of compromised police legitimacy and violent crime in structurally disadvantaged communities. Areas with more police corruption and over-policing (threats to police legitimacy) had higher rates of violent criminal activity.

Yet another explanation for the disconnect between police and minority communities is the inability of police agencies to relate to the citizens they serve (Smith, 2003, p. 150). Police agencies have historically been dominated by officers from White, working-class backgrounds who enter the field having had limited contact with minorities or knowledge of their problems (Strecher, 1971; Bayley & Mendelsohn, 1969). Although minority representation in American police forces has increased, the fact remains that over 75 percent of municipal police officers in the United States today are White (Hickman & Reaves, 2006). Consequently, many police are likely to come to the job out of touch with the true sentiments of the African American and Latino people they encounter (Bayley & Mendelsohn, 1969). This degree of cultural separation has proven powerfully significant for officers' interaction with minorities (Strecher, 1971).

The relationship between cultural separation and police-minority relations is explained by Banton's (1964) concept of social density, defined as the closeness, intimacy, and integration of community life (see Bayley, 1990). In areas where the police are actively engaged in the local culture, the texture of police-citizen social relations is denser; where they are more isolated from the public (as in cities) there is less social density and greater social distance between groups. While police participate in the life of the society they police, their sense of participation can vary considerably, and the performance of duties is related to these variations (Banton, 1964, p. 168). Put another way, the degree of police participation in the social life of an area varies in relation to enforcement styles: the less social distance (or greater social density) between police and the community, the more likely the police are to adopt a helping orientation; as social distance increases (and social density decreases), police become more likely to respond either formally or not at all. Police in less socially integrated places display a more punitive posture, resulting in more coercive tactics and frequent arrests (Smith, 1986). Bayley and Mendelsohn (1969), for

example, found that the wide social distance between police and African Americans engendered a sense of apprehensiveness and suspicion among officers patrolling poor minority sections of Denver. This heightened anxiety led police to feel more animosity toward Blacks and increased the likelihood that force and arrest sanctions would be used against them during encounters. If cultural differences between the police and minorities have effectively increased social distances, this could help explain the over- and under-policing practices experienced in minority areas that have hurt perceptions of legitimacy.

The civil disturbances of the mid- to late 1960s brought the issue of wide social distances between police and minority communities to the forefront. In 1967, President Johnson appointed the National Advisory Committee on Civil Disorders (the Kerner Commission) to investigate the causes of these events and recommend solutions (Williams & Murphy, 1990). The Commission found “deep hostility between police and ghetto communities” and argued that this relationship was a major cause of “grievance, tension, and ultimately disorder” in these poor urban areas (Kerner Commission, 1968, p. 299). One of the solutions to reduce conflict offered by the report was the recruitment and hiring of more minority police officers and their placement in minority neighborhoods (Brown & Frank, 2006; Kerner Commission, 1968).<sup>6</sup> The recommendation came not long after the enactment of Title VII of the 1964 Civil Rights Act prohibiting employment discrimination based on race, color, religion, sex, or national origin and presidential Executive Order 11246 in 1965 which launched the era of affirmative action. A 1972 amendment to the 1964 Civil Rights Act extended its coverage to state and local governments, which includes most police and sheriff’s departments (Walker & Katz, 2008; Martin, 1991). Employment criteria that disproportionately excluded minorities became illegal, unless the standards could be shown to be job related. Ensuing discrimination lawsuits filed by women and minorities resulted in formal

court orders and consent decrees establishing affirmative action programs in many departments, and the implementation of informal, voluntary programs in others that hoped to avoid litigation. Biased recruitment practices, eligibility requirements, and selection criteria (e.g., height and weight requirements disproportionately disqualifying women) were modified to comply with existing case law (Martin, 1991, p. 500; Fyfe, 1986). Due to the protection of both racial and ethnic minority groups and women under equal employment law, affirmative action would eventually play a major role in incorporating not only African Americans and Latinos – but also women – into policing, a field where male-exclusive employment had always been the norm (Zhao, He, & Lovrich, 2006a; Martin, 1991).<sup>7</sup> Subsequent increases in the hiring of minority and female police officers was facilitated by both the recommendations of the Kerner Commission and an equal employment opportunity movement that backed up these recommendations with enforceable law.

Representation, or the conscious recruitment of officers who reflect the racial, ethnic, or cultural diversity of the communities they police, remains a popular solution to the problem of poor police-minority relations today. From a theoretical perspective, it has been argued that diversity influences policing by increasing perceptions of legitimacy among minority residents and increasing constructive interactions between White and non-White officers, helping the former to appreciate minority culture and view minority communities in a more positive way (Smith, 2003, p. 150). Agencies that reflect the demographics of their surroundings will contain officers who better understand the perspectives of minority groups and can communicate with them more effectively (Fridell & Scott, 2005).<sup>8</sup> Under proper conditions, diversity could have the potential to close broad gaps in social distance, both in hiring officers who come from the

neighborhoods they police and using minority officers as liaisons between the police culture and residents of these neighborhoods.

Another explanation for why organizational diversity can reduce police-minority tensions involves the politics of power.<sup>9</sup> Conflict and Marxist perspectives on law may offer some insight into how political power differentials impact interactions between the police and the minority public. According to pioneering conflict theorist George Vold (1958, p. 208-209):

[T]he whole political process of law making, law breaking, and law enforcement becomes a direct reflection of deep-seated and fundamental conflicts between interest groups and their more general struggles for the police power of the state. Those who produce legislative majorities win control over the police power and dominate the policies that decide who is likely to be involved in violation of the law.

Law making and enforcement is a political process: those segments of society with the power to shape public policy formulate criminal definitions in the form of written law and can shape how and against whom these laws are enforced (Quinney, 1970). Less politically powerful groups are thus less likely to have their interests served by the law or law enforcement officials and more likely to be subjected to state coercion (cf. Chambliss & Seidman, 1971). Marxist theory further argues that capitalists' monopoly over the means of production also allows them to control the political state, leaving the masses of workers with no power whatsoever to overcome oppression through approved channels (Akers & Sellers, 2004, p. 217).

It has been shown that residents of disadvantaged areas are more likely to be cynical and perceive legal injustice if they are politically disorganized and cannot influence the structures of power that constrain their lives (Sampson & Bartusch, 1998, p. 783). Unable to shape key policy processes and outcomes to reflect their interests, minority groups lose trust in the state and

perceive the political system as unresponsive (Marschall & Shah, 2007, p. 632). Indeed, the state faces a constant “crisis of legitimacy” as its ideals of freedom and equality contradict the realities of oppression (Akers & Sellers, 2004).

One response to this sense of powerlessness could be contempt or violence directed at authorities (e.g., assaults or murders of police). Certain Neo-Marxists and conflict theorists, for example, consider resistance to authority and criminal violence to be acts of political protest, or political crimes (Jacobs & Carmichael, 2002; Vold, 1958; Quinney, 1964). Political crimes are motivated by the desire to influence existing public policy or power relations (Minor, 1975). These “crimes of resistance” are a response to the inequities of capitalism and state-sponsored “crimes of domination and repression” (Quinney, 1980; Taylor, Walton, & Young, 1973).

Diversifying police forces could potentially reduce feelings of political subordination by giving African Americans, Latinos, and other minorities a symbolic representative in the figure of the minority police officer. The incorporation of minorities into the political mainstream can send powerful cues, raising group pride and conferring psychic benefits from the governing activities of minority politicians (Marschall & Shah, 2007; Gilliam, 1996). Some recent work by Jacobs and Carmichael (2002) indicates that police officers are less often assaulted and killed in cities where African Americans are represented by an African American mayor. Jacobs and O’Brien (1998) found the presence of a Black mayor also associated with fewer police-initiated shooting deaths. Results suggest there are fewer crimes of resistance (violence directed at police by citizens) and crimes of domination and repression (violence directed at citizens by police)<sup>10</sup> when the political system is perceived as legitimate and responsive to minority interests. Since police tend to have a larger presence in poor minority communities (cf. Black, 1976), the

political representation of these groups on the police force may have a similar (or perhaps even greater) palliative effect to their political representation at city hall.

According to Sklansky (2006, p. 1224), “the special skills of officers who are not white males have long been an important part of the case for diversifying police departments.” Hochstedler, Regoli, and Poole (1984, p. 13) further add “there exists a pervasive belief that minority and female recruitment, because it will serve to destroy stereotypes, is an effective mechanism for enhancing objective, even-handed police response, and for easing strains in police-community relations.” At least rhetorically, American police departments have accepted (if not embraced) diversity and its prospective substantive benefits. The U.S. Department of Justice (2001, p. 18), for instance, declares

A diverse law enforcement agency can better develop relationships with the community it serves, promote trust in the fairness of law enforcement, and facilitate effective policing by encouraging citizen support and cooperation. Law enforcement agencies should seek to hire a diverse workforce that can bring an array of backgrounds and perspectives to bear on the issues the agencies confront and the choices they must make in enforcing the law.

Similar assertions are now commonly found in police mission statements and recruitment efforts nationwide.<sup>11</sup> An examination of the websites of the nation’s ten largest police departments (employing approximately 13 percent of all sworn officers in the United States) provides several examples. The New York, Chicago, Los Angeles, Philadelphia, Houston, Detroit, Washington, DC, Baltimore, Dallas, and Phoenix (Reaves & Hickman, 2002) forces all refer to the importance of a diverse workforce in their recruitment materials, although there is considerable variation in the nuance of these messages. Each department’s site features photographs (and often videos) of

assorted combinations of White male, minority male, female, and minority female officers working side by side (an allusion to organizational tolerance and representation). Such imagery is even more conspicuously displayed on linked recruitment pages. Many departments present pictures that more explicitly reference diversity, like the downloadable wallpapers provided by the Houston Police Department entitled “Lady Blues<sup>12</sup>” and “Women in Law Enforcement<sup>13</sup>” and an LAPD<sup>14</sup> flash image of a Black female officer next to the caption “to protect and to serve, *as a woman.*”

Chicago<sup>15</sup> and Dallas<sup>16</sup> call their police workforces “diverse” while other departments offer the following diversity-oriented quotes:

“Our recruiting and hiring practices produce a cadre of officers who represent the city’s vast diversity” (Philadelphia<sup>17</sup>)

“By maintaining a workforce that is diverse and all-inclusive, MPD will continue to provide the District with the best possible response to community issues” (Washington, DC<sup>18</sup>)

“The City of Phoenix Police Department takes pride in its diversified work force” (Phoenix<sup>19</sup>)

“The City of Detroit is constantly striving to provide the highest level of public service by employing men and women from all backgrounds and cultures to maintain a police department that is responsive to the needs of the total community” (Detroit<sup>20</sup>)

The Washington, DC Metropolitan Police Department provides perhaps the most comprehensive diversity discussion of all departments studied via a dedicated diversity link<sup>21</sup> on its recruitment page. The force, one learns, includes an Asian Liaison Unit (ALU), a Hispanic Liaison Unit

(HLU), a Deaf and Hard of Hearing Liaison Unit (DHHLU), and a Gay and Lesbian Liaison Unit (GLLU). These “affinity groups” are staffed by officers and civilians belonging to the respective minority groups served. Also available are statistics on departmental diversity and a specific page for female officers considering a career in law enforcement.<sup>22</sup> The Dallas and Phoenix police follow suit; Dallas promotes Asian American<sup>23</sup> and community liaison<sup>24</sup> units and Phoenix offers a page addressing the issues that surround being a female officer.<sup>25</sup>

Internationally, the British Home Office<sup>26</sup> dedicates a section of its site to police equality and diversity. The main heading reads, “Diversity: a responsibility and a practical necessity.” The page maintains that a representative police workforce can potentially achieve some very significant goals, including: building better relationships with communities; receiving greater cooperation from communities; achieving a reduction in crime; and eliminating tensions between the police and residents.<sup>27</sup>

The websites of these large cosmopolitan law enforcement agencies refer to the supposed substantive and symbolic benefits of organizational diversity, providing unsubstantiated claims that it will make traditional police strategies more effective while at the same time making the police appear fairer and more legitimate to their minority constituencies. These sentiments have accompanied real increases in minority representation in American police forces over the past four decades.<sup>28</sup> Between 1990 and 2000 alone, the number of African American police officers increased by 35 percent, Latino officers by 93 percent, and female officers by 59 percent (Hickman & Reaves, 2003). Historically, African Americans comprised only 3.6 percent of sworn police officers in the mid-1960s when the Kerner Commission issued its report; by 2003, following amendments to the 1964 Civil Rights Act and the trend in promoting diversity, they formed nearly 12 percent of the this total (Walker & Katz, 2008; Hickman & Reaves, 2006).

Latinos made up 4.5 percent of officers in 1987;<sup>29</sup> this figure had doubled to 9 percent by 2003 (Reaves, 1996; Hickman & Reaves, 2006). Data combining all racial and ethnic minority groups indicate that they experienced growth at a rate of approximately 60 percent between 1987 and 2003, representing 15 percent of total officers in the former year and 23.6 percent in the latter (Reaves, 1996; Hickman & Reaves, 2006). The percentage of officers who were female grew at the most significant rate from a low of 2 percent in 1972 to a high of 11.3 percent in 2003 (Walker & Katz, 2008; Hickman & Reaves, 2006). Larger cities (with 250,000+ populations) exhibited the highest levels of minority and female representation in their sworn police ranks. In these urban areas, 38.1 percent of officers were members of a racial or ethnic minority group (20.1 percent Black, 14.1 percent Latino, 3.9 percent other race) and 16.3 percent were female in 2000 (Reaves & Hickman, 2002).

Despite broad support for police diversity and the visible success of minority recruitment programs, important questions remain. First, what factors best explain and can promote growth in minority hiring? Do increases in the proportions of minority and female officers result from mere fluctuations in demographics and police employment opportunities? Or could the increases have more to do with social structural shifts in the political clout of minority communities? Has the impetus come from within departments, or are departments reacting to external pressures?

Second, what are the factors that influence minority promotion to managerial positions? Have the aforementioned increases in representation extended beyond entry-level positions and into supervisory ranks? Census data show that ethnic and racial minority representation has been greater among “service” or line-level police positions; less integration is seen in “professional and administrative” ranks or managerial positions (Ward, 2006). Although many have studied correlates of minority and female hiring (cf. Zhao & Lovrich, 1998; Zhao, He, & Lovrich, 2005;

Warner, Steel, & Lovrich, 1989; Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2006a), few identified researchers have explored the related correlates of minority career advancement (cf. Lewis, 1989; Martin, 1991). This is a noteworthy gap as minority managers are believed to play an important role in hiring fellow minorities for entry-level positions (Saltzstein, 1989). Understanding the dynamics of minority promotions could also help reveal whether the diversification of police has had any impact on internal police power structures and the extent to which minority hiring represents appearance management more so than a real commitment to the goal of equal opportunity.

Third, is diversity capable of achieving its promised goals? Can aggregate representation repair strained relationships between the police and citizens and facilitate fair and effective policing? Are citizens less likely to violently resist police authority if they feel officers on the force represent them and are responsive to their interests? Are officers less likely to resort to the use of deadly force or treat citizens differently when they better understand the cultures of those they police? Few to date (cf. Lott, 2000; Smith, 2003) have directly examined the link between personnel composition and police outcomes, leaving the stated benefits of diversity in this context largely rhetorical and empirically untested. At the same time, no identified authors have considered the impact of managerial diversity on these outcomes. Managers are “task definers” with the power to influence policy (i.e., strategic, hiring, promotion, and budgeting decisions) whereas line officers are more confined to task execution (Ward, 2006, p. 76). If minorities hold leadership positions, are they better situated to alter police cultural notions about minority groups, leading to shortened social distances and unbiased application of discretionary sanctions? Can they use their power and authority to tailor policy that promotes their groups’ interests, and

therefore increase police legitimacy while lessening resistance to police interventions? It could be that diversity's effect is dependent on *where* we find it.

The present study addresses each of these questions, filling a gap in the current state of knowledge on policing and workforce diversity. It adds to prior research conducted in this area by partitioning police numbers for all sampled agencies into management and line ranks. Such a breakdown permits: 1) a comprehensive examination of minority and female hiring that utilizes new data sources and a full range of theoretically informed covariates; 2) the first comprehensive examination of minority and female promotion to managerial positions; and 3) tests of new hypotheses regarding the relationship between both line- and management-level race and gender representation and the tangible social outcomes of police-citizen conflict and discriminatory application of formal sanctions.

## Literature Review

### *Police minority recruitment*

Much research focuses on the factors associated with increases in minority representation in policing.<sup>30</sup> Walker (1985) suggests that demographic, political, legal, and institutional factors combine to influence recruitment. Zhao, He, and Lovrich (2005) call these external and internal environmental factors. Factors external to the police environment include minority population percentages and minority influence in local government. The size of a demographic in a given city determines how many group members are available to apply for and be selected to police appointments. Population size also affects the level of political influence a group will enjoy, and elected officials tend to promote the interests of those who elect them, sometimes by rewarding them with municipal jobs.<sup>31</sup> Where minorities hold more political clout, they may be more likely to be served by departments whose policies benefit their communities (Saltzstein, 1989, p. 532). A larger minority population, then, might lead to increases in minority police. Factors internal to the police environment include the presence of a minority chief and affirmative action programs. Since police chiefs influence personnel policies, it is possible that minority chiefs will be more likely to hire minority officers. Affirmative action programs, on the other hand, set specific goals and timetables for minority and female hiring and therefore directly affect representation (Zhao, He, & Lovrich, 2005; Zhao & Lovrich, 1998).

The percentage of minority residents is among the most robust and consistent correlates of minority police employment at the city level.<sup>32</sup> Zhao and Lovrich (1998, p. 274-275) found percent African American population to be the strongest and most important predictor of hiring rates of African American police officers. Overall, a .58 percent increase in the proportion of

Black citizens resulted in a one percent increase in the representation of Black officers, an accelerated ratio. Kerr & Mladenka (1994) found the percentage of Blacks and Latinos to be the strongest covariate of success in securing public protective services positions for both groups. Percent African American and Latino residents predicted the representation of African American and Latino officers, respectively, for Zhao, He, and Lovrich (2005). Zhao, Herbst, and Lovrich (2001) found a relationship between Black and Latino populations and the hiring of Black and Latina female officers as well.<sup>33</sup> This finding was later confirmed in a panel study by Zhao, He, and Lovrich (2006a) where the size of Black and Latino populations played the most important role in predicting the employment of Black and Latina women officers between 1993 and 2000.

Several studies have empirically tested the link between the race and gender of local government officials and police representativeness, with mixed results. City mayors and city councilors are believed to encourage minority hiring “through the appointment of sympathetic personnel officials and department heads, alteration of personnel policies and rules, or changes in the entire employment climate (Saltzstein, 1989, p. 540). Lewis (1989) found the presence of a Black mayor was the most significant variable associated with the variation of Black presence in combined sworn and police patrol ranks. During the period studied, Black mayors were also responsible for the appointment of significant numbers of Black police chiefs. Percentage of Blacks serving on the city legislature, however, did not reach significance in Lewis’ analysis. Saltzstein (1989) studied 105 municipal governments and found that the presence of a Black mayor accounted for an additional, significant increase in the representation of Blacks in the police force after controlling for percent Black residents. “Each year a black holds the mayor’s office translates into a 1.5% higher level of black representation among the ranks of sworn officers, as compared to cities with comparable black populations” (Saltzstein, 1989, p. 538).

Zhao, He, and Lovrich (2005) found the presence of a Latino mayor associated with increases in minority police officer employment, but the results did not hold when an African American mayor was present. The presence of an African American mayor was insignificant when other variables were held constant by Zhao and Lovrich (1998), Lott (2000), and Marschall and Shah (2007).<sup>34</sup>

With regard to female officer hiring, Zhao, Herbst & Lovrich (2001) found the presence of a female mayor significantly related to the hiring of White and Black (but not Latina) women officers. Female presence on city councils was insignificant across the board. A longitudinal study using a later wave of the same data by Zhao, He, & Lovrich (2006a), though, failed to find a relationship between female mayors and the hiring of White, Black, or Latina women officers. City council representation was insignificant for all categories as well. Neither the presence of a female mayor nor the proportion of females serving on the city council significantly affected the proportion of new women recruits between 1981 and 1991 for Sass and Troyer (1999).

Although the greater part of these studies appear to assign more influence to mayors than city councilors (when significance is found), this was not always the case. Warner, Steel, and Lovrich (1989), for example, found percent female city councilors (but not a female mayor) a major predictor of utilization of women as police officers. Kerr and Mladenka (1994) found Black and Latino mayors had a negligible role in the hiring of each respective minority group for protective services positions; minority city council members played a much more important role, albeit an indirect one – over dozens of cities and several years, minority council members were more likely to hire Black and Latino administrators, who in turn were more likely to hire Black and Latino protective services workers.

The inconsistency of results as they relate to the variables of minority mayors and city councilors leaves no clear consensus on their potential to impact minority police officer hiring. In some studies, the variables were highly significant, but only for certain race/gender categories and not others; in other studies, they were wholly insignificant. A few explanations for this lack of uniformity exist. First, mayors can vary in their power over hiring decisions depending on the form of local government (e.g., “strong” or “weak” mayor-council systems). “Strong” minority mayors are much better situated to directly influence the hiring of minorities to the municipal police service than “weak” minority mayors serving at the whim of councilors. The style of government likely varies across samples in the cited studies, leading to inconsistent levels of significance for minority mayors. This could also explain why mayors and councilors fluctuate in significance and are never both significant when simultaneously introduced into models. Second, it is unclear (particularly in cross-sectional studies) how long minority mayors held office (cf. Saltzstein, 1989).<sup>35</sup> Minority mayors may have been new to the office, in the middle of their terms, or at the tail end of their tenures as of the survey date. Further, some cities may have been headed by minority mayors for multiple terms, others by their first minority mayor. It is possible that the influence of a minority mayor could take time to manifest in changing hiring patterns. Has a new mayor had sufficient time to promote the hiring of minority police officers? Does it take a full (or multiple) terms’ worth of advocacy for a minority mayor to have an impact on hiring these officers? Without knowledge of length of tenure, it is impossible to determine if time was an underlying and unmeasured factor behind observed results. Third, the presence of minority mayors or city councilors may be measuring the same underlying concept as percentage minority population. It could be that the areas with the largest proportions of minority citizens, and thus, minority political clout, are also the ones most likely to elect a minority mayor.<sup>36</sup> If

these two variables are indeed theoretically and quantitatively indistinguishable, there is a high probability that multicollinearity exists, increasing the odds that drastically inaccurate estimates are obtained (Studenmund, 2001). Social scientists vary in their definitions of “high” and “low” multicollinearity and without reference to multicollinearity diagnostics it cannot be ascertained if this was a factor influencing results. Finally, the relatively small proportions of minority mayors across analyses could help explain why these variables lack sufficient statistical power to reach significance.<sup>37</sup>

The presence of a minority police chief has been consistently related to police diversity. Chiefs are considered the most influential figures in policy formation and implementation overall (Eisenberg, Kent, & Wall, 1973; Greisinger, Slovak, & Molkup, 1979; Sparrow, 1988). It has been suggested that these top administrators tend to give preferential assignments to friends and allies in order to informally monitor and maintain control over activities within the department (Walker & Katz, 2008). Lewis (1989) found that Black police chiefs were associated with Black presence in sworn ranks.<sup>38</sup> Zhao & Lovrich (1998, p. 274) found an African American police chief to be the second strongest predictor (after African American population) of Black police employment levels, an indication that these administrators exercise significant power over the hiring process. Both African American and Latino chiefs were associated with increased hiring rates for members of their respective ethnic groups in Zhao, He, and Lovrich’s (2005) later study. Taken together, these findings support the assumption that once minority administrators are selected to head a police agency, they play a crucial role in the recruitment of additional minority employees (Kerr & Mladenka, 1994, p. 914). It should be acknowledged, however, that despite this apparent consistency, only three identified studies included this variable in analyses.

Minority preference remains legally permissible under a variety of circumstances in the United States (Stokes & Scott, 1996). Under Title VII of the 1964 Civil Rights Act, as amended in 1972, public sector organizations are required to make a good faith effort toward affirmative action hiring if women and minorities are underutilized (Code of Federal Regulations, 1989).<sup>39</sup> All employers receiving federal funds must conduct a census of current employees, identify underutilization or concentration of minorities and women, and develop a recruiting plan to correct underutilization (Walker & Katz, 2008, p. 141). This process involves setting goals and timetables to overcome the effects of past discrimination, whether intentional or not, in compliance with federal law and Equal Employment Opportunity Commission implementation guidelines (Martin, 1991, p. 490). Affirmative action programs may be formal and court ordered or informal and voluntary, but the former have been shown to have the greatest effect on minority recruitment (Martin, 1991; Steel & Lovrich, 1987; Warner, Steel, & Lovrich, 1989; Stokes & Scott, 1996). For court-ordered programs, Lewis (1989) found the presence of consent decrees to be a significant predictor of Black presence in law enforcement.<sup>40</sup> Lott (2000, p. 252) found that the number of years a consent decree was in effect dramatically increased minority representation. For every decade under court order, the number of African American and other minority officers increased by 4.1 and 4.8 percent, respectively. Sass and Troyer (1994, p. 579) found a relationship between external legal constraints and minority police hiring decisions in the 1980s. For 1981 and 1987, a prior anti-discrimination court decision was associated with a seven to ten percentage point increase in the proportion of new female hires. Warner, Steel, and Lovrich (1989) concluded that changes in the representation of women police officers occurred only with formal affirmative action or court-enforced programs. Martin (1991) presented evidence that formalized affirmative action was most effective in the hiring and promotion of

female officers between 1978 and 1986.<sup>41</sup> Women made up 10.1 percent of the sworn personnel in agencies under court order, 8.3 percent of the sworn personnel in agencies with voluntary affirmative action plans, and only 6.1 percent of the sworn personnel in agencies with no affirmative action plan. Proportions of female supervisors were 3.5 percent, 2.4 percent, and 2.2 percent over these categories. The effect of affirmative action policies on female representation held after controlling for other sources of influence (Martin, 1999, p. 493). Zhao, Herbst, and Lovrich (2001) found both formal and informal affirmative action policies predictive of the employment of female officers generally. When separate models were run by race, however, only formal programs were statistically significant, and only in the case of White and Black female officers; Latina female proportions were not related to either type of program.

In contrast, Zhao and Lovrich (1998) found both informal and court-ordered affirmative action programs insignificant when other explanatory variables were introduced. Neither formal nor informal affirmative action programs had any influence on minority police officer hiring for Zhao, He, and Lovrich (2005) and Saltzstein (1989). Zhao, He, and Lovrich (2006a) found only informal affirmative action programs important, and even then, only in particular cases. While an informal policy was associated with female hiring generally (and White women, specifically), it was an insignificant predictor of Black and Latina female employment.

These conflicting results could be due to the cross-sectional methods and dichotomous measurement techniques frequently employed in the examinations above as they relate to historical changes in the laws of affirmative action. The dynamic nature of affirmative action programs means that they can have different effects over time (Lewis, 1989) depending on increases in minority representation and changes in the legal environment of police hiring procedures (Zhao, He, & Lovrich, 2005). The studies reviewed cover different samples and a

wide range of time totaling nearly two decades. It is thus reasonable to believe that affirmative action policies in the sampled departments were evaluated, rewritten, or discarded within this time frame. Informal policies could have become formal, and vice versa. Consent decrees may have been lifted upon the timely achievement of targeted goals for minority representation in certain cities; other cities may have come under newly ordered consent decrees between survey waves; still others may have old policies on the books that are no longer necessary as diversity goals have already been reached or population demographics have shifted. With many studies using cross-sectional designs, it is unclear if and for how long the policies were in place and whether or not they had sufficient opportunity to succeed. Also, one cannot determine the phase a program was at as of the date of survey. Recall that affirmative action programs require taking a current employee census, identifying underutilization of minorities and women, and adjusting recruiting emphases accordingly (Walker & Katz, 2008). Departments reporting an affirmative action policy at time  $t$  could be at very different points in their responses. If a program was new, an agency might have been in the initial census phase when approached by researchers; the agency would therefore be recorded as having had an affirmative action policy at that point in time. Minority hiring would not be affected, though, if recruiting strategies had yet to be altered or if the results of the census ultimately indicated no underutilization (triggering no response). Of course, even departments in the final recruiting phase could take a great deal of time to attract and screen minority applicants.

The legal environment surrounding affirmative action had changed drastically over this time period, with two states voting to ban the practice altogether for public employment by the end of the 1990s (California in 1997 and Washington in 1998).<sup>42</sup> The United States Supreme Court decided a series of landmark affirmative action cases between 1978 and 2003 that would

shape the nature and scope of affirmative action policies nationwide. *Regents of the University of California v. Bakke (1978)* struck down the practice of using strict racial quotas to further affirmative action goals. The same Court nonetheless deemed diversity a compelling goal and maintained that race is one of many factors that could justifiably be considered in decisions to remedy chronic underrepresentation of racial and ethnic minorities. Another remedial quota system established by Congress that required 10 percent of federal public works funding go to minority contractors was upheld, though, two years later in the case of *Fullilove v. Klutznick (1980)*. The Court argued that this quota was lawful because it was less rigid and a more valid means of accomplishing the compelling goal of granting equal access to government contracts. In *United States v. Paradise (1987)*, the Court held that narrowly tailored strict quotas for the hiring and promotion of minority state troopers were permissible. A decades-long record of pervasive, systematic, and obstinate discrimination against the hiring and promotion of African American troopers by the Alabama Department of Public safety created a special set of circumstances where a strict quota system was temporarily justified and helped fulfill a compelling state interest. *City of Richmond v. Croson Co. (1989)* and *Adarand Constructors v. Peña (1995)* applied a “strict scrutiny” standard to all affirmative action practices for allocating city, state, and federal government funds to minority contractors. Under this concept, an affirmative action program must be justified by a compelling government interest and narrowly tailored to achieve a remedial purpose. To be constitutional, a quota must be flexible and a record of past discrimination must exist in the specific jurisdiction under decree. *Grutter v. Bollinger (2003)* focused on a law school admission policy at the University of Michigan that considered applicant race. The Court declared the policy constitutional because it took into

account race as just one of many factors and was narrowly tailored. The educational benefits of a diverse study body were acknowledged and formed the basis of a compelling state interest.<sup>43</sup>

The sequence and outcomes of these cases could have had an impact on the results of the above-cited studies. Uncertainty surrounding the bounds of quotas may have led departments to construct their affirmative action plans differently. Lewis (1989), for example, noted in his study that some police departments specified numerical goals and timetables in their plans while others were far more general. It could be that the former agencies were comfortable with more precise provisions while the latter agencies were concerned about implementing quotas the Court might define as unlawfully strict. There was clear consensus that quotas should be “flexible,” but less guidance as to how policies should be drafted or the limits of flexibility. Further complicating the issue was the temporary sanction of a strict quota under the circumstances of *United States v. Paradise* (1987). Perhaps departments operating in the midst of this complex legal environment wrote varying degrees of specificity into their policies, rendering them more or less effective. The proximity of a survey to these individual cases could also have played a role. The level of publicity surrounding each case could have created spikes in lawsuits, consent decrees, and voluntarily implemented affirmative action policies that subsided between decisions.

Further, the trend in these cases has been toward the customization of affirmative action responses. From the late 1970s through the early 2000s, we see consistent support for narrowly tailored remedial programs. What this means is that affirmative action has varied tremendously from place to place. The nature and extent of discrimination could be drastically different in one city compared to another, thereby influencing the nature and extent of the response. Although most studies indicate whether an affirmative action policy exists (with a dichotomous measure), it is impossible to know what discriminatory patterns this policy was responding to and its

specific provisions for corrective action. For instance, one department may underutilize Blacks, another Latinos, and another, women, and these cities could underrepresent their respective minority groups to a greater or lesser degree.<sup>44</sup> Although all three cities would report the presence of an affirmative action program, the first would be principally concerned with hiring African Americans, the second Latinos, and the third, women. The first city may dramatically underrepresent Blacks while the third city disadvantages women only slightly. If Supreme Court decisions have pushed police agencies toward shaping their affirmative action policies to the discriminatory patterns present locally, it is doubtful that on average, policies will consistently explain variation in the representation of a particular race or gender combination overall in samples; on the contrary, these policies are designed to apply to specific situations where there are specific deficiencies in the utilization of specific race or gender combinations. If affirmative action programs in place in a given sample focus on the hiring of Blacks, it would follow that they explain the hiring of Blacks, but not Latinos or women. There may even be occasional circumstances where minority promotion (and not hiring) is the goal of affirmative action. In these hypothetical cities, an affirmative action policy would be in place, but it would not be expected to impact hiring trends.

Finally, making a distinction between informal voluntary and formal or court-ordered affirmative action programs may have presented a complicating factor in the analyses reviewed. As previously mentioned, some affirmative action responses are the result of consent decrees ordering organizations to meet certain criteria for representation of women and minorities; others are voluntarily implemented, often in an effort to preempt lawsuits and formal decrees. Several recent studies (cf. Martin, 1991; Zhao and Lovrich, 1998; Zhao, He, & Lovrich, 2005) treated these programs separately without providing any theoretical explanation for why their impacts

might differ. Even if it is rational to assume that formal programs will have more of an impact because they are more readily enforceable, this does not automatically mean that a voluntary program will be less effective. Voluntary programs could be as or more effective, particularly if the avoidance of litigation is a goal. Further, with how widely affirmative action programs vary due to their historical context and narrow tailoring, it may not be necessary to consider formal and informal policies qualitatively different.

Inconsistencies in the significance of affirmative action policies across models could also occur if the hiring of various minority groups is a zero sum game (McClain & Karnig, 1990). “That is, with a limited number of employees to hire, an increase in the hiring of African American officers, for example, may mean a decrease in the recruitment of Latino officers” (Zhao, He, & Lovrich, 2005, p. 380). Empirical support for this hypothesis has been sparse and mixed. Ramirez (1997) found increases in African American and female police officers related to decreases in proportions of Latino police officers, but the opposite was true for Zhao, He, and Lovrich (2005, p. 384), who found “the hiring of one ethnic group did not exclude the hiring of another group or White female officers.” Kerr and Mladenka (1994) also concluded that African American population did not exert a statistically significant impact upon Latino job share in their study models.

Another common predictor of employment of minority officers in United States cities is the availability of slack resources, or competition for scarce personnel resources. Zhao, He, and Lovrich (2005, p. 380) note, “it is reasonable to postulate that police agencies are more likely to hire minority officers if there are openings available to fill than if employment opportunities are scarce.” The presence of slack resources reflects the financial health of a police organization and has been operationalized in terms of fluctuations in department personnel and budget allocations

(Zhao, He, & Lovrich, 2005; Ramirez, 1997; Saltzstein, 1989, Warner, Steel & Lovrich, 1989).<sup>45</sup> Zhao, He, and Lovrich (2005) found that increases in the number of police positions predicted increases in the representation of Latino, but not African American, officers. Zhao, Herbst, and Lovrich (2001) identified a weak but significant relationship between percentage increases in police department size between 1993 and 1996 and the hiring of female officers generally. Only White females enjoyed this benefit upon further examination, though, as Black and Latina female hiring was unrelated to available positions. Zhao, He, and Lovrich (2006a) found that between 1993 and 2000, the number of commissioned officer openings explained the hiring of women generally and White and Black (but not Latina) women specifically. The availability of positions was not a significant covariate of female hiring for Warner, Steel, and Lovrich (1989).

Such inconsistent findings once again preclude a clear understanding of how this variable impacts minority hiring. The explanation for these varied results could relate to the specification of slack resources as it relates to dependent measures. It is likely these measures are merely proxies for department size and are already reflected in this variable. Slack and budget growth figures are typically not standardized, so larger departments tend to have the greatest number of openings and real dollar amount increases in operating budgets. Another possible cause behind the observed inconsistencies is the lack of a theoretical basis for including slack resources as an explanatory variable. Even if it is logical to assume that more opportunities to hire everyone will increase the chances of hiring anyone, there is not necessarily any reason to believe that available positions will be filled in a disparate or discriminatory way. It is easier to understand why factors like minority group size, minority political representation, or affirmative action policies influence hiring – political power explanations exist for the first two variables; the third is specifically designed to increase the proportion of minorities in policing.

Regarding budgetary variations, Ramirez (1997) found the recruitment of Latino officers negatively associated with the percentage of city budget allocated to law enforcement. Saltzstein (1989), too, found that budgetary expenditures were negatively associated with the hiring of African Americans and explained this relationship as a product of the desirability of high-paying law enforcement work to White applicants; departments spending more on officer salaries may be the same ones that attract non-minority applicants. Warner, Steel, and Lovrich (1989) found that departments facing budget reductions hired fewer women officers. Budget is a less common way of measuring slack resources than differences in openings over time, and as such, not a lot can be inferred from the agreement of just three examinations' results. Budgets could very likely vary in their distribution from city to city. Although two departments may have had budgets that grew by 10 percent, one may spend this on hiring while the second spends it on new equipment. The slack resources variable, as measured, might be saying more about department size than the respective constructs it is believed to reflect. Larger departments, for example, might have more and larger fluctuations in their employment openings and budgets than smaller ones.

Some other common correlates of minority police hiring include city size, geographic region, percentage of minority officers already on the force, and the presence of police unions. Though primarily used as a control measure in most studies, city population size is consistently associated with the hiring of minority police officers (cf. Lewis, 1989, Zhao & Lovrich, 1998; Zhao, He, & Lovrich, 2005, for males and females; Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2006a; Warner, Steel, & Lovrich, 1989; Martin, 1991; Hochstedler & Conley, 1986; Schroedel, Frisch, Hallamore, Peterson, & Vanderhost, 1996, for females only). As Warner, Steel, & Lovrich (1989, p. 567) explain, larger cities tend to hire more minority officers because they “have traditionally offered a wider array of employment opportunities, and in most cases

contain sizable subpopulations of well-educated and civic-minded persons who are predisposed to support affirmative action as a goal of public policy.” Recent descriptive data support this theory and related empirical findings. Larger cities (250,000+ populations) had higher than average levels of minority and female representation in 2000 (Reaves & Hickman, 2002).

Geographic region is another control variable frequently included in minority police hiring models (cf. Lewis, 1989; Zhao & Lovrich, 1998, for males and females; Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2006a; Steel & Lovrich, 1987; Warner, Steel, & Lovrich, 1989, for females only). According to Zhao, Herbst, and Lovrich (2001, p. 246), “given that American policing is highly decentralized with over 16,000 law enforcement agencies scattered across the nation, regional differences are anticipated.” Wilson (1968) has argued that regional effects are important to consider because political context often shapes police organizational policies. Just as local political climates dictate whether the watchman, legalistic, or service style of policing predominates in a city or town, so too could this climate influence what groups will be targeted for police employment. In addition, racial and ethnic minorities who form the pool of potential applicants are not evenly distributed across the United States; African Americans are concentrated in the South and in larger cities while Latinos tend to live in particular cities in the Southwest, East, and South (Walker & Katz, 2008, p. 137). Some empirical support exists that cultural and economic variations between regions are associated with compliance to affirmative action (Warner, Steel, & Lovrich, 1989, p. 567; Steel & Lovrich, 1987). Southern location was negatively associated with African Americans holding city or police administrative positions for Zhao and Lovrich (1998). Steel and Lovrich (1987), though, found Southern departments more likely to hire female officers than those located in the North Central or Northeastern United States. Similarly, Warner, Steel, and Lovrich (1989) found Southern police departments hired

the greatest proportion of women, followed by the North Central, Western, and Northeast regions, in descending order. Zhao, He and Lovrich (2006) did not find location in the South to be significant, but Northeastern location predicted less female, White female, and Black female officer employment. Regional variables were insignificant for Lewis (1989)<sup>46</sup> and Zhao, Herbst, and Lovrich (2001).

Region displays a highly inconsistent effect on minority police officer hiring patterns. Methodologically, this may be the result of differences across analyses in the measurement of region. Researchers diverge in the number of regional categories considered; some dichotomize into South/non-South categories (cf. Lewis, 1989; Zhao & Lovrich, 1998) while others analyze four or more regions (Warner, Steel, & Lovrich, 1989; Zhao, He, & Lovrich, 2006a). Samples also vary in the proportion of cities, and therefore regions, represented by their samples. As a control measure, the decision to include region in hiring models is typically not theoretically justified. Region is incorporated not because of its potential to influence hiring patterns, but because Wilson and others have argued that it influences other police organizational behaviors. Recent work by Zhao, He, and Lovrich (2006b) tested the applicability of Wilson's theory of political culture to today's police agencies. Results indicated that local government culture had no impact on police organizational behavior (e.g., arrest activity). The authors argue that any regional differences in policing style have all but disappeared since the publication of Wilson's influential book in the late 1960s. Three historic changes between then and now resulted in a high level of uniformity among American police agencies (and thus geographic regions): 1) dramatic increases in national crime rates pushed all agencies to adopt "tough on crime" or legalistic stances; 2) departments became more specialized and formalized over time; and 3) the federal government increased its level of involvement in local law enforcement policies and

practices. It is thus possible that any observed regional differences are artifacts of the data. There does not appear to be a longitudinal trend away from the influence of region over the two decade plus period covered by researchers; a trend which would be expected in light of Zhao, He, and Lovrich's (2006b) theory. In conclusion, there appears to be no theoretical argument for the inclusion of region in modern police hiring models, particularly since regional variations in the distribution of minorities can be accurately measured by other more theoretically informed covariates like percent minority population.

The percentage of minority officers already on the force may influence future minority hires (Warner, Steel & Lovrich, 1989; Martin, 1991; Zhao, Herbst, & Lovrich, 2001). Martin (1991) suggests that this occurs when currently employed minority officers recruit their friends and associates to the profession. Her finding that percent Black and female officers in prior years was positively associated with the proportion of new female applicants supports this theory. The proportion of female officers in 1984 was the most powerful predictor of female hiring three years later for Warner, Steel, and Lovrich (1989). Zhao, Herbst, and Lovrich (2001) also found the presence of White, Black, and Latina female (and female, generally) officers in 1993 to be the strongest predictor of employment patterns for each respective group in 1996. Where this variable has been included for analysis, its effect has been quite strong. It must be acknowledged, however, that using a measure of the presence of minority officers in a prior year to explain the presence of minority officers today could create a spurious relationship and misleading results. Zhao, Herbst, and Lovrich (2001) for example, include percent female and minority female officers in 1993 in a model predicting percent female and minority officers in 1996.<sup>47</sup> While it is possible that the proportion of these categories of officers experienced real growth over this short period, it is more likely that the same officers present in 1993 were still

present just three years later in 1996. If this is in fact the case, then the apparently strong significance of minority officers currently employed on minority officers “hired” would really reflect the permanence (and not growth) of minorities hired in 1993 or earlier.

Percentage minorities currently on the force could nonetheless prove valuable in analyses where multiple ranks are considered. Provided hiring continues to be measured by presence of a given group at a given time, predicting today’s officers with yesterday’s does not make practical sense. It may be possible, though, to explain variation in police administrative ranks with figures for police line ranks, using either lagged or cross-sectional designs. Lewis (1989) followed this line of reasoning and found that the proportion of Black line officers best explained the presence of Black police managers.

A final correlate of minority hiring that has seen infrequent use is the presence of a police union (Walker, 1985; Riccucci, 1986; Warner, Steel, & Lovrich, 1989; Sass & Troyer, 1999). As Walker (1985, p. 567) notes, unions “have represented white officers challenging affirmative action plans in courts.” Collective bargaining groups such as the Fraternal Order of Police have filed amicus briefs against affirmative action policies, with varying degrees of success across municipalities (Warner, Steel, & Lovrich, 1989, p. 567). One would therefore hypothesize a negative relationship between police unions and the hiring of minorities. Riccucci (1986) and Warner, Steel, and Lovrich (1989) found the presence of police unions had limited and insignificant impacts on female employment, respectively. The latter authors contend that such counterintuitive findings (no negative union effect) could be due to the affiliation of some police unions with national associations sympathetic to affirmative action policies, but found no evidence of this. The effect of labor unions on female police employment was ambiguous for Sass and Troyer (1999). They found union status positively associated with female hiring over

time in some models, but also found unions associated with support for fitness exams for new recruits – one possible deterrent to female entry (Sass & Troyer, 1999, p. 584). Despite the suggestion of a theoretical basis to do so, no identified researchers had examined the impact of unions on the hiring of racial or ethnic minorities.<sup>48</sup>

In sum, this extensive literature points toward percent minority population, minority chief presence, and city size as the most robust and reliable correlates of minority police officer hiring patterns (see Table 1). Results are mixed for political variables like minority mayors and city council diversity, as well as for institutional variables like affirmative action policies and slack resources. Still other measures may now lack theoretical relevance (geographic region) or have not been fully entered into explanatory models, despite theoretical bases (unionization).

-- Table 1 about here --

Across examinations, minority police officer hiring is measured cross-sectionally as the proportion of minority police officers present (already employed) at a given time. Another trend in research design is the choice to predict the hiring of officers from individual minority groups. For example, Latino police presence models include percent Latino population and the presence of Latino mayors, city councilors, or chiefs; for African American officers, Black population, mayors, councilors and chiefs enter equations. Just one study (see Kerr & Mladenka, 1994) had considered the external effects of crime and its correlates (e.g., poverty, unemployment, family disruption, inequality). The rational choice perspective states that police deployment is related to citizen demands, which are influenced by rates of crime and variations in access to economic resources (cf. Kane, 2003; Jacobs, 1979). More crime may lead to demands to hire more police

officers; less access to resources can increase requests for noncrime services, increasing police workloads and thus, the need for more staff (Kane, 2003). It is therefore somewhat surprising that these variables were absent from almost all analyses reviewed, given their potential to affect police department size.

### *Linking Diversity to Police Outcomes*

Researchers have produced evidence that police diversity has increased and the factors responsible for this increase are now better understood. Less is known, however, about how well aggregate representation accomplishes its presumed goals of reducing community tensions and making police more effective in terms of traditional performance measures like crime control or citizen satisfaction. As Smith (2003, p. 153) notes, the majority of research on race and gender focuses on individual differences between officers, with few macro-level studies of the impact of greater diversity on policing.<sup>49</sup> The handful of examinations conducted at this level of analysis so far (cf. Lott, 2000; Smith, 2003; Donohue & Levitt, 2001; Eitle, Stolzenberg, & D'Alessio, 2006; Fyfe & Kane, 2005) suggest that the effects of greater minority representation can be inconsistent (and in some cases, negative). This section outlines the details of this research and then considers some explanations for the wide variation in observed results.

One assumed benefit of diversity is its ability to influence minority group attitudes about police legitimacy, in part by reducing social distance between police and minority communities. Decker and Smith (1980, p. 388) examined the extent to which representation of Blacks on urban police departments was met with increased satisfaction with the police for Black citizens.<sup>50</sup> They used secondary survey data (see Campbell & Schuman, 1968) of African Americans from 14 large cities to find that relative minority recruitment effort and minority police per capita had

little, if any, effect on minority citizen perceptions of the police. Frank, Brandl, Cullen, and Stichman (1996) examined Black and White police perceptions in Detroit. The city is unique in that “African Americans are a substantial majority of the population; the city has had a black mayor since 1973, and a significant number of major municipal government officeholders are black; nearly 50 percent of the police force is black, as are the chief and a substantial number of administrators in the department” (Frank et al., 1996, p. 332). When a Black majority existed in law enforcement and politics, being African American increased satisfaction with the police. Though it is difficult to disentangle the effects of police and local political diversity in this study, the results suggest that the former could be important either on its own or in combination with the latter in predicting minority group attitudes toward the police. Marschall and Shah (2007) studied 104 cities to find out if the incorporation of minorities into local government and law enforcement agencies influenced how trustworthy these agencies appeared comparatively to Black and White citizens. A key finding was that “the percentage of Blacks among the ranks of the city’s sworn officers has a substantial effect on Black residents’ trust: for every one percentage point increase, Blacks’ likelihood of trusting the police increases by 3.1 percentage points” (Marschall & Shah, 2007, p. 646).

With only three studies to compare and inconsistencies in results, it is impractical to draw firm conclusions about diversity’s ability to impact minority group impressions of the police. It is nonetheless noteworthy that the results appear to mirror the historic growth trends in minority officer representation. Decker and Smith’s (1980) sample was comprised of police personnel composition figures from the late 1960s when nationwide diversity levels were relatively low (and found no effects) while Frank and colleagues (1996) and Marschall and Shah (2007) both analyzed more recent samples, when diversity levels were significantly higher (finding effects).

Observed differences in results could also be attributed to differences in dependent measures; the first two studies reviewed specified citizen satisfaction as their outcomes but the third specified trust. Citizens might trust their police officials but not necessarily feel satisfied with their job performance, or vice versa.

Another implicit benefit of aggregate diversity is its ability to reduce historic tensions between police and minority groups by granting the latter a political voice in shaping the law enforcement policies that impact their lives. Police-citizen conflict is commonly specified as the number of police-initiated fatal shootings of citizens and felonious killings and assaults of police (Jacobs & O'Brien, 1998; Jacobs & Carmichael, 2002; Smith, 2003), with the assumption that police and citizens will be less likely to use violence against one another when levels of police legitimacy (and consequently, compliance) are high. Jacobs & O'Brien (1998) found that racial inequality best predicted the use of deadly force by the police against Blacks, but that these shootings were substantially reduced in cities where a Black mayor held office. Although the authors did not directly account for police organizational diversity in their estimates, prior research has suggested (cf. Lewis, 1989; Saltzstein, 1989; Zhao, He, & Lovrich, 2005) that there is a link between the presence of a minority mayor and greater minority representation in law enforcement agencies. It is plausible that African American mayors influenced rates of police use of deadly force indirectly through the hiring of more minority officers and that this political responsiveness enhanced legitimacy. At the same time, however, the more robust and consistent correlate of minority police hiring patterns – percent African American – was associated with more police-initiated fatalities. If the proportion of African American citizens can explain Black representation in the police workforce, this second relationship would suggest that diversity is not working at reducing tensions.

A parallel study by Jacobs and Carmichael (2002) examined the factors related to acts of violence directed at the police by citizens. In a pattern similar to that found earlier by Jacobs and O'Brien (1998), the current authors found the number of officers killed and assaulted was greater in cities with higher rates of racial inequality; once again, the presence of a Black mayor had a protective effect, reducing the incidence of violent citizen-initiated acts. Jacobs and Carmichael (2002, p. 1242) addressed the aforementioned proposal that an African American mayor's effect could be channeled through the hiring of more Black police officers. They ultimately concluded that this was dubious because Black officers are statistically more likely to be killed than White officers. Black population size (a possible proxy for police diversity) was again associated with more killings and assaults against police in this study, leaving further doubts as to the ability of organizational diversity to reduce tensions.

Only Lott (2000) and Smith (2003) specifically included police personnel composition as a potential correlate of police-citizen violence. Lott (2000) found that female representation was associated with both increased assaults on the police and increased counts of civilians shot by the police. A one percentage point increase in female officers increased the number of assaults on police by 15 to 19 percent; a one standard deviation increase in female officers increased police shootings of civilians by .87. Black male officer representation had the opposite effect, reducing civilian shootings by 1.4 per 100,000 citizens. Smith (2003) compared minority group threat, community violence, and police diversity hypotheses as explanations for police-initiated acts of lethal violence. His analyses revealed that measures of racial threat and community violence predicted police-caused homicides in cities with 100,000 or more residents, with racial threat an important predictor in cities with 250,000 or more residents; minority representation had no significant influence on levels of police violence for either city size (Smith, 2003, p. 157-158).

These studies, the only ones identified to date that include diversity as an independent variable, were unable to consistently show that greater minority representation reduced tensions between police and the community. For female officer representation, tensions were actually amplified.

Yet another assumed benefit of diversity is its ability to substantively improve police operations, as measured by official performance indicators like arrest, crime, and misconduct rates. Lott (2000) tested whether racial preferences actually helped further the central purpose of police departments as government agencies. He found that the presence of consent decrees, increases in minority representation, and increases in female representation were each linked to increases in violent and property crime rates and decreases in arrest rates, with the strongest effects in minority neighborhoods. A reduction in the number of White male officers by 6,912 (assuming minority, female replacements) had increased murders by 1145 and rapes by over 100 in the sample under study (Lott, 2000, p. 263). These findings would suggest that diversity has impaired, rather than improved, the effectiveness of the police at achieving their primary mandate – crime control (cf. Manning, 1997).

Several studies examined the effect of police personnel composition on arrest patterns (Slovak, 1986; Donohue & Levitt, 2001; Eitle, Stolzenberg, & D'Alessio, 2005). Slovak (1986) found that aggregate arrest rates in 42 American cities were unrelated to the percentage of Black police officers in these cities. Donohue and Levitt (2001) studied 122 large U.S. cities and found that more White officers were associated with more minority arrests, while more minority officers were associated with more White arrests. Minorities were less likely to arrest other minorities, particularly in the case of more discretionary misdemeanor arrests.<sup>51</sup> Same-race policing reduced the number of total arrests across a variety of crime categories. The authors calculated that reassigning police to maximize same-race policing settings would yield decreases

of 16, 10.4, 17.1, and 11.5 percent in total, property, violent, and drug arrests, respectively. Eitle and colleagues (2005) combined several large archived datasets to construct a multi-level model of departmental diversity and individual-level arrest probabilities. They found that more Black officers predicted a greater likelihood of arrests of White and Black suspects for simple assaults and that departmental racial composition conditioned the relationship between offender race and the likelihood of simple assault arrests. There was no relationship between racial composition and aggravated assault arrests.<sup>52</sup>

It is important to acknowledge the well-known drawbacks of using official data like the Uniform Crime Reports (UCR) to measure crime. To say that increases in the representation of minority and female officers increased violent and property crime rates is to say that with more diversity came more reporting of these offenses to the police. If more crimes are reported under conditions of greater diversity, this result can be interpreted either positively or negatively; more reporting could indicate more criminal activity, but it could also indicate more cooperation from the public in sharing information with police.<sup>53</sup> At the same time, fluctuations in arrest rates can indicate a combination of positive and negative effects as they relate to a diverse police force. Fewer arrests may point to less criminal activity or a greater capacity on the part of police to solve neighborhood crime and disorder problems informally through order maintenance, “broken windows,” or “watchman style” policing strategies (cf. Wilson & Kelling, 1988; Wilson, 1968); or, fewer arrests could be a sign of less responsive and attentive police work, or “under-policing” in a given city (cf. Weitzer, 2000). Recent contributions to the research in this area that consider race-specific and discretionary versus nondiscretionary arrest patterns have helped address these issues by focusing not so much on quantitative variation in aggregated arrest rates, but on the

qualitative categories of arrest where differences based on race, ethnic, and gender makeup are most likely to manifest.

Fyfe and Kane's (2005) study of career-ending misconduct in the New York City Police Department produced two key findings that directly relate to the present diversity discussion. First, a strong positive correlation was found between the percentage of White male police and the department's annual rate of involuntary separations (i.e., firings). Second, increases in Latino and Asian officers were associated with decreases in their involuntary separation rates; Black involuntary separation rates decreased too, even though this group's representation remained relatively flat over the 22-year period of study (Fyfe & Kane, 2005). These results suggest that diversity may have played a role in improving this large municipal force by reducing levels of police misconduct. As police diversity increased, rates of career ending misconduct decreased. Fyfe and Kane (2006, p. xxix) conclude, "[t]aken together, these findings produce what is for us a very important conclusion: *as the NYPD has become more diverse by gender and race, it has become significantly better behaved*" (emphasis in original).

#### *Minority Police Representation and Police Outcomes: A Complex Relationship*

There are several possible reasons why increased minority representation has produced inconsistent and sometimes counterintuitive results. First, affirmative action policies, designed to reduce bias in the hiring process, may have had the inadvertent effect of lowering standards (Steel & Lovrich, 1987). To reduce the disparate impact of hiring procedures, an administrator may either lower standards for lower-scoring minorities or for all applicants (Gottfredson, 1996). According to Lott (2000, p. 249), changing entrance requirements to employ a greater percentage of minorities can make it more difficult to screen out lower quality candidates of any race. Therefore, Black representation may be a proxy for changes in the level of standards used to hire

employees in general. Lott (2000, p. 260) offered this theory to explain his finding that more diversity led to higher crime rates. The observed relationship was not present because Blacks were inferior law enforcers, but rather because lower quality officers in general were being hired; increases in minority share were merely correlated with increases in crime.

Cashmore (2002) found similar attitudes amongst the ethnic minority officers interviewed for his qualitative study. The officers felt concern that recent and widespread policies aimed at attracting additional minority recruits would inevitably lead to a less qualified pool of applicants. “The problem, as many saw it, is that anyone who is persuaded by marketing is not going to be cut from the same cloth as officers who have endured the vexing application procedure, a frequently distressing probationary period, and an initial posting that may be potentially destructive” (Cashmore, 2002, p. 331).<sup>54</sup> In short, even minority officers were of the opinion that fellow minority recruits attracted by slogans and advertising campaigns would lack the necessary motivation to be effective police (Cashmore, 2001, p. 655).

Gottfredson’s (1996) evaluation of a Nassau County, NY, police entrance examination highlighted how the U.S. Justice Department (along with a private contractor) had consciously set out to lower hiring standards to reduce disparate impact in the hiring process. In response to litigation, Nassau County was under a 1990 consent decree to revise its entrance examination in accordance with antidiscrimination law. The new exam would have to either: 1) have no adverse impact on women and minority applicants; or 2) be shown to be job related. A private exam development firm hired by Justice was pressured to place more emphasis on hiring protected minorities than measuring essential skills, resulting in an exam that while unbiased, completely lacked predictive validity. The exam, which was heralded as a model for other departments to

emulate, turned out upon administration to be at best only marginally better than tossing a coin to select police officers.

Johnston (2006) found hiring standards were lowered in the rush to meet targets set for minority representation among police community support officers (PCSOs) in the Metropolitan Police Service (MPS). “Faced with demands for the recruitment of large numbers of ethnic minority PCSOs, the MPS first appointed a number who were ill suited to the job. Having done so, it then failed to provide the institutional support that might have helped to bring them up to standard (Johnston, 2006, p. 397).<sup>55</sup> Despite this support for the idea that diversity policies could lower police hiring standards, many authors (cf. Zhao & Lovrich, 1998; Bureau of Census, 1995; Stokes & Scott, 1996; Carter, Sapp, & Stephens, 1989) have presented evidence that if anything, the quality of minority applicants has vastly improved, with consistently better educated minority police entering the field today than in the past.

Second, loyalty to the police culture may outweigh any race-, ethnic-, or gender-based skills or loyalties minorities bring to the force. Police occupational culture plays a central role in shaping how police work is seen and performed and in affecting the quality of relations between minority and White officers (Cashmore, 2001, p. 651; Chan, 1996; Holdaway, 1997).<sup>56</sup> Minority police must demonstrate to White police colleagues and citizens that they are “blue” and racially unbiased (Weitzer, 2000, p. 318; Sklansky, 2006; Walker, Spohn, & DeLone, 2004). Reluctant to “rock the boat” and jeopardize their opportunities for advancement, they view and treat fellow minority residents in the same way as their White counterparts (Cashmore, 2001; Weitzer, 2000; Holdaway, 1996; Sherman, 1983).<sup>57</sup> Alex’s (1969) classic concept of “double marginality” emphasizes the pressure to conform placed upon minority officers who are caught in a loyalty conflict between the police and minority cultures, but tend to act in ways that put allegiance to

the former ahead of allegiance to the latter. Martin's (1979) work describes how female police officers, too, often feel compelled to sacrifice their individual identities by defeminizing or deprofessionalizing themselves to fit with male stereotypes. Cashmore (2002, p. 334) concludes "being in the police whitens you," through an assimilation process where values, attitudes, and perspectives of a police culture are gradually absorbed by new recruits. Some prefer to be seen as a police officer (and not a minority police officer); others struggle to balance the two matrices of ethnicity and professionalism (Cashmore, 2002).

While it would appear that minority police do not treat minority citizens any differently (cf. Walker, Spohn, & DeLone, 2004), it is also apparent that citizens tend to view the police in terms of their role first and race second. To the public, "it is the color of the uniform, not skin color, that determines police behavior. Cops are 'blue,' not Black or White. A police officer's occupational status eclipses racial background" (Weitzer, 2000, p. 318; Decker & Smith, 1980). One of the underlying assumptions of diversity policy is that female and minority status relates to officer behavior and that officers of different races and genders perform their work differently (Brown & Frank, 2006). If police respond to the public the same, regardless of citizen race, and citizens view police the same, regardless of officer race or gender, it follows that diversifying police ranks will not improve police-citizen interactions in any noticeable way. The process by which the cultural understanding that comes from being a minority police officer translates into action on the street is a complex one, with the already weak link between attitudes and behavior further attenuated by the pressure of police subcultural norms (Decker & Smith, 1980, p. 392; cf. Herbert, 1998; Waddington, 1999).

Third, the relationship between police diversity and community outcomes may have been oversimplified by well-intentioned policymakers. The problem of police-minority relations goes far deeper than employment practices. According to Bayley and Mendelsohn (1969, p. 140),

Among the many afflictions of minority people, police protection and police treatment are not especially salient problems. That is, there are a host of other things that minority people feel ought to be done first in order to make an improvement in their lives. One can hardly conclude on the basis of this testimony that amelioration of police-community relations will get at the heart of minority discontents.

Housing, income, occupational, and related social factors are not affected by the employment of more minority officers (Decker & Smith, 1980, p. 392). Indeed, police alone cannot remedy the macrosocial factors that affect minority life, regardless of the composition of their departments; they have no control over unemployment, household income, or poverty rates, or the availability of affordable housing. Weitzer's (2000) recent survey of 169 residents in three Washington, DC neighborhoods (White middle class, Black middle class, and Black lower class areas) found that neighborhood class position (and not racial composition) best explained opinions of the police.<sup>58</sup> "Controlling for individual level factors, residents of the two middle-class areas were more likely than people living in the lower-class neighborhood to say that Black and White officers act the same in their communities" (Weitzer, 2000, p. 322). Could the poor opinions of the police found in lower-class areas stem from residents projecting their frustrations with structural disadvantage upon police officers, the most visible representatives of government? If class (and not race) is responsible for the disjunction between police and minority communities, as Weitzer's findings suggest, then hiring more minority officers is unlikely to eliminate the problem.

Weitzer's findings raise one additional related issue: the faulty assumption that "minority communities" exist in modern day. Most of the research and theorizing surrounding the benefits of diversity promotes the idea that African American, Latino, or women officers can successfully act as representatives of and liaisons to their respective populations. As members of a minority group, it is assumed that they will share in and appreciate the culture of those they police and use this bond of sympathetic understanding to open lines of communication and restore perceptions of legitimacy. But is it reasonable to believe that a Latino officer will better relate to a Latino citizen simply because the two share ethnicity? In light of Weitzer's finding that class matters more so than race, it could very well be the case that a middle-class Latino officer is just as far removed from the lifestyle of a poor Latino citizen as a White officer. Further, are the African American officers who enter policing necessarily from the same poor neighborhoods where they will patrol? Walker, Spohn, and DeLone (2004) caution that it is important to recognize there are different groups within racial and ethnic minority communities. American society has moved away from the romanticized small, culturally homogeneous community of yore and toward a mass society dominated by cultural pluralism and moral fragmentation (Strecher, 1991). It is not too much of a stretch to venture that this trend applies also to minority communities. If modern minority cultures are fragmented and variegated, it will be all the more difficult to match officers and citizens by cultural background in order to reap the benefits of more open communication. The inconsistent results observed above could stem from an overly simplistic vision of minority cultures; if they are not as uniform as believed, one of the primary mechanisms through which diversity impacts police-citizen relations will not work.

Finally, some diversity initiatives may not be sincere. An indicator of how sincerely a department takes the potential benefits of representation is its perspective on workforce diversity.

Thomas & Ely (2001) identified three different views that organizations may hold regarding diversity: the integration-and-learning perspective, the access-and-legitimacy perspective, and the discrimination-and-fairness perspective. For present purposes, the first two perspectives are most relevant.

The integration-and-learning perspective considers the insights, skills, and experiences employees have developed as members of various cultural identity groups potentially valuable resources that the work group can use to rethink its primary tasks and redefine its markets, products, strategies, and business practices in ways that will advance its mission. Diversity is linked to work processes – how people do and experience work – and provides a resource for learning and adaptive change (Thomas & Ely, 2001, p. 7). An indicator of this perspective is the degree to which minority groups can alter the organization's power structure by influencing traditionally represented groups (Thomas & Ely, 2001).

The access-and-legitimacy perspective, on the other hand, is based on the recognition that the organization's markets and constituencies are culturally diverse. It is therefore a good idea for the organization to match that diversity in parts of its own workforce as a way of gaining access to and legitimacy in the eyes of those markets and constituency groups. Where this perspective prevails, diversity is used only at the margins, to connect with a diverse market; there is no incorporation of cultural competencies into core functions (Thomas & Ely, 2001, p. 9). An indicator of this perspective is whether there is sufficient representation in boundary positions or visible positions that would enhance the legitimacy of the organization from the viewpoint of outside markets.

The design of justice workforce power structures suggests that most police departments hold the more superficial access-and-legitimacy perspective on diversity. Although minority

representation has certainly increased, this representation has been limited to service positions in both the United States and abroad (Ward, 2006; Martin, 1991; Sklansky, 2006; Rowe, 2002). As Ward (2006, p. 79) notes, “non-whites are heavily concentrated in service sectors of the justice workforce, and underrepresented in professional and administrative roles.” This fits national trends for all occupations: Euro Americans make up 43 percent of the work force, but 95 percent of senior management positions (U.S. Labor Department Glass Ceiling Commission, 1995).

Cashmore (2002) makes a case that diversity has been used tactically and insincerely, a viewpoint that is once again consistent with the access-and-legitimacy perspective. He refers to the idea of diversity as a solution to police problems as nothing more than a myth created by the police to manage their appearance before a public demanding representative law enforcement. According to Cashmore (2002, p. 330),

The promise to recruit more ethnic minority candidates is seen, from this perspective, as a ritualistic response, its purpose more to present the image of positive action than to effect any significant change. On this account, the aim is not harmless, but pernicious, contriving to provide the appearance of action and progress while actually achieving nothing – apart from the image of seeking a solution to the enduring problem of racism.

Cashmore’s perception echoes the theoretical work of Manning (1997), who suggests the core strategy of police agencies is the management of appearances. Through the use of presentational strategies (professionalism, the bureaucratic ideal, technology, crime statistics), police perpetuate the myth that they can and do control crime rates to please critical audiences and ensure survival. Diversity rhetoric (i.e., creating the appearance of a representative police) could be the latest in a long line of creative police presentational strategies designed to convince the minority public that formal social control agents have their interests in mind too. This allows police to present a

superficial appearance of representativeness (line officers are most visible) without letting their presence alter internal power structures or strategies (the domain of white male executives).<sup>59</sup> In integration-and-learning organizations, where the benefits of diversity are genuinely appreciated and utilized to improve work processes and outcomes, one would expect to see a greater degree of minority representation in influential managerial ranks.

Marschall and Shah (2007) explain that representation can be descriptive (symbolic) and substantive. The former is the mere presence of minorities in a given organization; the latter concerns whether or not gains in representation lead to the redirection of public resources, or in other words, if representation translates into influence over policy. Their findings indicated that Black descriptive representation (measured as minority mayors, city councilors) had limited direct effects on trust in government for Black and White citizens. Black descriptive representation was, however, associated with the distribution of (pro-minority) police policies across cities, and these policies were positively and significantly related to White and Black trust in police, specifically. The authors conclude that “descriptive representation alone may not be enough; rather, attitudinal change may occur only as a result of more substantive policy change” (Marschall & Shah, 2007, p. 650).

If minority representation remains limited to positions with little say in administrative and policy decisions, this could explain why increases in diversity have had mixed results on police outcome measures in the reviewed empirical studies. Put another way, if police diversity rhetoric is only “window dressing” (Cashmore, 2002), there is no reason to believe that phony policies will produce real effects. If, however, departments are sincere about using diversity as a resource for learning and adaptive change and show this by granting minorities access to managerial positions, it may be more likely that the potential benefits of representation will be

realized. Established theory, workforce diversity statistics, and empirical results all propose that it may be the quality, rather than (or perhaps in addition to) the quantity of minority police positions that matters most.<sup>60</sup>

Consequently, Cashmore (2002) advocates a change in diversity policy that shifts the focus from numbers alone to the quality of positions held by minorities. Accelerated promotion schemes or fast-tracking could have a more positive impact on the police service than decades-old policies based on entry-level officer representation. He writes, “a new policy should take into consideration the possibility that the appointment of more senior ethnic minority officers might affect the character, composition and standing of the police service more significantly than any previous initiative” (Cashmore, 2002, p. 339). Greater representation of minorities in senior positions would have three consequences, with the benefits of the first two outweighing the harm of the third (Cashmore, 2002, p. 339):

- It will demonstrate to prospective recruits from ethnic minorities that advancement to the highest levels of the police hierarchy is possible and that the rewards of a professional career are equally available to all groups, regardless of ethnic affiliation;
- It will increase the visibility of ethnic minorities in the police service and particularly the visibility of senior ethnic minority officers in the popular media;
- It will increase the resentment of white officers who will not be able to take advantage of such a scheme.

While his concept has intuitive appeal (just as balancing minority group numbers has), it remains to be seen whether greater minority representation in managerial roles impacts minority line hiring or police outcomes any more than line-level representation. No identified researchers

have examined the variable of minority rank and its relationship to these tangible organizational and social outcomes, making it difficult to tell if authority translates into substantive policy.<sup>61</sup>

In conclusion, “while enhanced representativeness is a desirable end in itself, it is important to recognise that the relationship between greater minority representation in the police service and more sensitive policing of ethnic minorities by the police service remains complex” (Johnston, 2006, p. 400). There are many factors other than police personnel composition that mediate police-citizen relations, including wider social conditions, the strength of police culture, and policies that may or may not lower hiring standards and lack a sincere motive.

The complexity of the relationship between organizational diversity and police outcomes helps explain the inconsistent nature of results reported above. That diversity is a complicated construct whose dynamics are not yet fully understood, however, is no cause to abandon it as a fertile avenue for inquiry. The race, ethnic, and gender diversification of personnel is among the most long-standing policy initiatives for reducing police-citizen violence in American municipal police history, yet it remains relatively understudied (Smith, 2003; Walker & Katz, 2008). Such an influential line of policymaking certainly deserves empirical attention. The present study will attempt to address some of the shortcomings of prior works which have served to cloud the effect that diversity may have on police performance indicators. It is anticipated that the following methodological adjustments will lead to more definitive diversity hypothesis testing results.

First, this research takes a multifaceted approach to the measurement of diversity at line and managerial levels. The concept is measured by three distinct constructs, each based upon a sound theoretical perspective. Diversity is here defined as: 1) the relative proportion of minority officers and managers; 2) the ratio of minority managers to minority line officers; and 3) the ratio of minority police to minority citizens. Measure 1 speaks to the question of whether diversity’s

impact is dependent upon where we find it (structurally) – do more visible line positions have a symbolic effect on perceptions? Does managerial diversity create a more substantive benefit? The second measure reflects the sincerity of diversity initiatives by tapping a given department's diversity perspective (as will be seen), while the third considers the degree of political control minority groups enjoy over their police. This more comprehensive approach may demonstrate a higher degree of validity than prior research which has typically measured a very complex idea in a one-dimensional way (e.g., percent minority line only).

Second, the present study controls some of the major organizational and environmental factors that work alongside diversity to impact police outcomes. Although the available data and unit of analysis preclude a more detailed measure of a police department's culture, a bureaucracy construct acts as an indicator of organizational structure, which can influence both police culture and behavior (cf. Scott, 1992; Maguire, 2003; Bittner, 1970; Bayley 1994). The macrosocial environmental factors (beyond the control of police) that affect minority life are also controlled by a structural disadvantage scale including elements of poverty and unemployment rates, family disruption, and economic inequality. In conjunction with other theoretically informed controls to be introduced later on, these variables will help sort out the unique contributions of diversity to any movement in the dependent measures.

Third, the dependent variables studied were selected specifically because they represent situations where diversity's impact is most likely to be felt, and therefore detected in empirical models. Rather than focusing on vague indicators of police performance like aggregated rates of serious crime or arrest, this research considers three key measures of police-citizen conflict and a race-specific measure of disparate patterns of arrest. Conflict variables include police use of deadly force and citizen-initiated attacks on police, both of which indicate a degree of tension

between both parties and offer a subtle comment on perceptions of police legitimacy. From the outset, organizational diversity policy has been heralded as a solution to the problem of violent conflict between the police and the public making these indicators quite appropriate. The arrest measure is comprised of the ratio of Black to White arrest rates for misdemeanor drug offenses. This construct's potential advantage is twofold: 1) as a discretionary category of arrest, it offers more room for variability in police response; there may, for example, be little variation in arrest rates for felonies (where an arrest is all but required) regardless of the composition of personnel; and 2) it allows for an examination of the fairness, or evenhandedness of responses to majority and minority community members by more or less diverse agencies. Each dependent measure is related to one of the specific benefits theorists and practitioners have suggested will spring from a diverse justice workforce (i.e., less conflict/greater legitimacy and less biased policing).

## Methodology

This chapter describes the sources of data, sampling procedure, and methodology used to merge multiple archived files for analysis in the present study. It then addresses data quality issues and other methodological limitations.

The present study has two separate, but related empirical components: the first examines covariates of minority hiring and promotion (the determinants of police diversity); the second examines the effects of aggregate diversity on the outcome measures of violent police-citizen conflict and biased application of coercive control (the effects of police diversity). The next two chapters describe the components individually. For each, primary dependent, independent, and control variables are defined and operationalized. Then, corresponding research hypotheses are formulated based upon theoretical frameworks and empirical findings discussed in the literature review. The chapters specify the statistical models to be employed and conclude with the results of each analysis.

### *Sources of Data and Sampling*

Data for the present study are assembled from a series of archived cross-sectional datasets aggregated at the city/agency level,<sup>62</sup> including U.S. Census of Population and Housing Equal Employment Opportunity (EEO) Tabulations, The Division of Governmental Studies and Services study (DGSS), Law Enforcement Administrative and Management Statistics (LEMAS), Law Enforcement Officers Killed and Assaulted in the line of duty (LEOKA), sections of the Uniform Crime Reports (UCR), and U.S. Census data.

EEO data are the primary external benchmark for comparing the race, ethnicity, and sex composition of an organization's internal workforce, and the analogous external labor market, within a specified geography and job category. The 2000 wave is used in the present study. This source provides key personnel composition variables partitioned by rank; counts and percentages of line officers and police managers can be broken down by race, ethnicity, and gender for cities with 50,000 or greater population. The DGSS study, conducted by Washington State University, is a longitudinal survey of 281 municipalities and their corresponding police departments. Data from 2000 on the race and gender of mayors and councilors, the race and gender of chiefs, and affirmative action policies come from this comprehensive source. LEMAS has collected data from a nationally representative sample of publicly funded state and local law enforcement agencies in the United States every three years since 1987. It surveys all departments with at least 100 officers, as well as a subsample of smaller agencies. Some variables include agency personnel, expenditures and salary of line and staff, operations, community policing initiatives, equipment, computers and information systems, and written policies. The present study uses 2000 LEMAS figures pertaining to municipal agencies<sup>63</sup> primarily in the calculation of control measures. Law Enforcement Officers Killed and Assaulted (LEOKA) data are collected by the FBI and provide information about law enforcement officers killed or assaulted in the line of duty. Agencies annually file LEOKA forms that provide in-depth information on circumstances surrounding killings or assaults, including type of call answered, type of weapon used, and type of assignment officers were on when victimized. LEOKA waves for 2000-2004 are used to calculate five-year counts of felonious killings of police and assaults on officers. Since 1930, the FBI has compiled the UCR to serve as a periodic nationwide assessment of reported crimes. The UCR sums counts of Index and other specified offenses reported to the police and arrest counts

and rates of clearance for all law enforcement agencies nationwide. This source provides drug arrest counts by race for agencies sampled for the five-year period 2000-2004 and crime rate figures to be used as controls. The Supplementary Homicide Report (SHR), a special UCR tabulation that provides victim, offender, and situational information related to annual homicides investigated per agency, provides five-year counts (2000-2004) of individuals killed by police officers. Finally, 2000 U.S. Census data allow for the calculation of city-level control measures, like city size, percent minority population, and rates of poverty, inequality, and segregation.

The files described above were merged to create two original master datasets for analysis. The *DGSS Master File* combines data from the DGSS, EEO, LEMAS, UCR, and Census surveys for 2000. DGSS cases were matched by place name to cases in EEO, LEMAS, and Census and by ORI (originating agency identifier) codes to the UCR. The final sample was thus constrained by the total number of cases that matched across datasets. Of the 281 cities in the original DGSS file, 193 matches with the EEO file resulted.<sup>64</sup> An additional 13 cases were lost when LEMAS was merged. UCR and Census figures were available for all remaining cities, preventing further case attrition. The final sample stands at 180 cities with at least 100 officers serving populations of 50,000 or more. The *DGSS Master File* is used in the first part of the present study to test hypotheses related to minority hiring and promotion.

The *EEO Master File* is used in the second part of the present study to test hypotheses related to the impact of line and managerial diversity on the external outcomes of police-citizen conflict and biased enforcement. It combines data from the EEO, LEMAS, UCR, and Census surveys for 2000. EEO cases were matched by place name to cases in LEMAS and Census and by ORI codes<sup>65</sup> to UCR cases. The final sample was again constrained by the total number of cases that matched across files. Of 609 cities (all U.S. cities with 50,000 or greater population)

in the original EEO file, 434 LEMAS matches resulted. UCR and Census sources were available for all cities and created no additional case attrition. The file was next matched by ORI code with LEOKA, SHR, and UCR sources to obtain figures for the following dependent variables: officers feloniously killed (LEOKA, 434 matches); officers assaulted (LEOKA, 434 matches); citizens killed by police (SHR, 434 matches); and drug arrests by race (UCR, 403 matches). The first three dependent variables matched the *EEO Master File*, and therefore share a sample of 434 cities representing *all* American cities with at least 100 officers serving populations of 50,000 or greater. Data for 31 cities were not available for drug arrests, resulting in a slightly smaller sample for this portion of the analysis.

#### *Some Methodological Considerations*

As in many studies, sample size is limited by the availability of data. The final aggregate datasets are constrained since the primary criterion for selection is the consistent availability of variables for each case across component data sources. It is thus a possibility that bias may exist and that the generalizability of results may be limited. For example, there may be qualitative differences between those departments that chose to respond to each respective survey and those that did not or between those departments appearing in one dataset, but not in another. Further, the empirical findings of this study may not hold in cities with fewer than 50,000 residents and 100 officers. With that said, the sample analyzed for part one of the present study ( $n = 180$ ) is of respectable size; on a scale of samples ranging from 46 agencies (Lewis, 1989) to 281 agencies (Zhao & Lovrich, 1998; Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2006) seen in the literature, the present sample is of average size. This reduction in cases is a tradeoff which will allow for the inclusion of a much broader set of theoretically informed covariates and testing of

novel research hypotheses. The sample analyzed for part two of the present study (n = 434) is significantly larger and more representative, but it necessarily leaves out smaller agencies in smaller cities.

To better understand the impact of case attrition on each samples' representativeness, a comparative analysis was conducted to check for significant differences between the *DGSS* and *EEO* file samples on several key variables.

-- Table 2 about here --

Table 2 compares means for city size, percent Black and Latino population, as well as the departmental variables of organization size and percent Black, Latino, and female police. The *DGSS* sample (n = 180) features slightly larger cities with more African Americans, on average, than the *EEO* sample (n = 434). As the *DGSS* sample includes larger cities and a larger Black population, it follows that police departments are larger in size and staffed by more Black officers here too. The analysis found no differences between samples on the variables of percent Latino population, percent Latino police, or percent female police. The regional distribution of cities/agencies was consistent across both samples.

The unit of analysis in the present study is the city/agency. While some precision may be lost by aggregating to this level, there are many benefits to testing our diversity hypotheses using cities as cases. First, municipal police departments are organized at the city level and have geographic ties to these urban jurisdictions (Walker & Katz, 2008). Second, studying cities allows one to examine each case as its own system of interdependent sources of influence, taking what Walker, Spohn, and DeLone (2004) call a "contextual approach." Combining multiple data

sources can help describe population (e.g., racial composition, socioeconomic status), political (e.g., race of mayors and councilors), and organizational (e.g., officer, chief race) characteristics, making it possible to observe how the social spheres internal and external to each agency interact to impact dependent measures. Such a “big picture” approach is not viable at lower levels of aggregation, like Census tracts, blocks, or neighborhoods. A third reason why the city/agency level (particularly, larger cities) makes sense is that large urban areas more often rely on formal social control than smaller ones, where informal controls predominate (e.g., Jacob, 1971). Large populations could be more likely to react to variations in police personnel composition because police play a larger role in the regulation of their social life. Finally, much research on police subcultures suggests that organizational structure is more influential in shaping the attitudes and behavior of police officers than the individual psychological dispositions they bring to the job (cf. Stoddard, 1968). For example, the “rotten barrel” perspective has effectively challenged the traditional “rotten apple” view in the popular area of police corruption research and theorizing (Armacost, 2004). Examining cities (and municipal organizations) is in line with this school of thought. The present study acknowledges that it is more likely entire organizations, as opposed to individual officers, will impact the overall attitudes and behaviors of each department, and thus, relationships between the police and community members.

This study will utilize a cross-sectional research design to infer complex social processes. Though some social scientists have criticized the merits of cross-sectional designs in favor of longitudinal ones, others have made a case that the former can be just as effective as the latter, if properly specified. Gottfredson and Hirschi (1987), for example, contend that cross-sectional studies are capable of replicating many of the benefits of longitudinal studies when they are carefully designed and reasonably conceptualized. For certain variables, longitudinal effects will

be approximated with lagging procedures. Lags are appropriate when it is likely that time might elapse between changes in the independent variable and a corresponding change in the dependent measure (Studenmund, 2001).

## **Part I – The Determinants of Police Diversity: Minority Hiring and Promotion**

### *Dependent Variables*

The dependent measures in this component of the present study are line and management *diversity*. Line *diversity* is operationalized as percentage African American, Latino, and female<sup>66</sup> officers. Managerial *diversity* is operationalized with counts of African American, Latino, and female managers.<sup>67</sup> Total (African American, Latino, and female) line and managerial diversity is separately examined.<sup>68</sup> All figures were calculated from 2000 Census of Population and Housing Equal Employment Opportunity (EEO) Tabulations counts of line law enforcement officers (Census Occupation Category 385) and first-line supervisors/managers of police and detectives (Census Occupation Category 371). The counts represent the number of citizens who reported working as a police officer or manager in a given city on their 2000 Census forms.<sup>69</sup>

-- Table 1a about here --

### *Independent Variables*

Several external and institutional explanatory variables were selected to explain variation in their respective dependent measures. The percent *Black/Latino/minority population*, presence of *Black/Latino/minority mayors*, *length of Black/Latino/minority mayor's tenure*, and percent *Black/Latino/female/minority city councilors* comprise the external measures; the presence of *Black/Latino/minority police chiefs*, *formal/informal affirmative action policies*, *unions*, and *other minority groups* comprise the institutional measures.<sup>70</sup> These variables were included due

to their theoretical significance and consistent empirical correlations with minority police officer representation (cf. Lewis, 1989; Warner, Steel, & Lovrich, 1989; Zhao & Lovrich, 1998).

*City size*, a theoretically and empirically relevant variable, was ultimately excluded as an external measure due to its high correlation ( $r = .943$ ) with *department size*.<sup>71</sup> *Budget* and *slack resources* were also highly correlated with department size ( $r = .960$ ,  $r = .738$ , respectively).<sup>72</sup> In light of this result and the lack of a theoretical basis for their inclusion, neither was entered into models. Budgets may not necessarily be spent on hiring and promotion and there is no reason to believe that available openings will be filled in a manner that either advantages or disadvantages minority applicants. The number of *minority officers already employed* was not considered as a covariate due to the methodological flaws surrounding the measure's inclusion in cross-sectional models; when officers present in time  $t$  are used to predict officers present in time  $t + 1$ , it is likely that any statistical relationships found are spurious (e.g., 1996 African American officers remaining on the force through 2000 would simply be predicting their own presence). Finally, geographic *region* is not considered in this research. Zhao, He, and Lovrich's (2006b) recent findings suggest that region may no longer play a significant role in influencing policing styles and regional variation in the distribution of minorities can be measured with minority population figures.<sup>73</sup>

The percent Black/Latino/minority population figures were collected from Census 2000 Summary File 1 and represent the bloc voting power of each minority group (cf. Eisenger, 1982). The DGSS study provided data on whether a Black or Latino mayor had held office in 2000, coded dichotomously (0 = no, 1 = yes). Figures from 1993 and 1996 were used to construct a minority mayor tenure variable; a Black (or Latino) mayor was given one point for being present in each of the three available years (1993, 1996, and 2000). For example, when a Latino mayor

served in 1993 and 1996, but not 2000, this was scored a two out of a possible three.<sup>74</sup> DGSS also provided data on the percent of city councilors who were Black, Latino, or female in 2000.

Preliminary correlation matrices and multicollinearity diagnostics indicated fairly strong associations between these variables, resulting in variance inflation factors (VIFs) that exceeded the accepted limit of four (Fisher & Mason, 1981; Studenmund, 2001). A principal components analysis was performed to remedy this issue and revealed that each of the four variables was essentially measuring the same underlying theoretical construct – *minority political power*. A minority political power scale was then created for both African American and Latino influence by summing the z-scores for each variable ( $\alpha = .880$  for Black scale,  $\alpha = .868$  for Latino scale, and  $\alpha = .863$  for total minority scale).<sup>75</sup> Female political power is measured solely in terms of percentage female city council figures, as data on female mayors were not available.<sup>76</sup> For all constructs, higher values represent greater minority political control.

-- Table 2a about here --

DGSS also provided data on the presence of Black or Latino chiefs (0 = no, 1 = yes) and formal and informal affirmative action programs (0 = no, 1 = yes)<sup>77</sup> for 2000. Formal programs are defined as either formal voluntary programs with specific goals and timetables for hiring minorities and women or formal programs reflecting a consent decree or court-ordered system of preferential consideration for minorities and women. Informal programs, on the other hand, are defined as informal voluntary programs with specific goals and timetables for hiring minorities and women. Departments were asked to select from these options the one that best characterized their program at the time. EEO percent minority officer and manager data were used in various

combinations to assess the impact of multiple minority groups competing for scarce positions and promotions (e.g., to test the zero-sum game hypothesis; cf. McClain & Karnig, 1990). For example, where Latino line officer percents were modeled, percent African American line was controlled; when Latino manager counts were modeled, percent Black managers was controlled.

-- Table 3a about here --

New independent measures examined in the present study are officer and manager *average salary*, *percent minority line/percent minority management*, and *union presence*. Officer salary is operationalized as the average of minimum and maximum annual salaries for officers as reported in the 2000 LEMAS; manager salary equals the average annual salaries for sergeants. Officer salaries indicate the desirability of employment with a given department, and therefore, the amount of competition to be expected from majority group applicants. Similarly, salaries of mid-level managers influence competition for desirable promotions (cf. Saltzstein, 1989). EEO data for percent minority officers and managers (defined above in “dependent variables”) enter models as predictors of one another; percent minority line will appear in models for minority promotion, and percent minority managers in those for minority hiring (cf. Lewis, 1989). Union presence is measured with 2000 LEMAS figures for whether or not a given department engaged in collective bargaining that year (0 = no, 1 = yes). Unions have had theoretical relevance to the explanation of minority representation in policing but have only been considered in analyses of gender patterns.

### *Control Variables*

The following controls helped isolate the effects of independent measures: organizational structure, economic resource deprivation, and rates of violent crime. How a police organization is structured can impact its hiring and promotion policies and patterns. Organizational structure is here measured as *degree of bureaucratization* (cf. Eitle et al., 2005). Police bureaucracies are large, complex organizations characterized by the differentiation of tasks, a hierarchical chain of command, and written rules and regulations (Walker & Katz, 2008). This key construct was initially set to include the following elements of complexity and control, as specified in previous analyses (cf. Maguire, 2003, Eitle et al., 2005): organization size (total full time employees), task scope (services and functions performed<sup>78</sup>), functional differentiation (# of special units<sup>79</sup>) civilianization (the ratio of civilians to sworn), formalization (# of written policies<sup>80</sup>), spatial differentiation (# of district stations), and height (chief salary less officer salary / officer salary). Principal components analyses revealed that the z-scores for five of the original seven variables clustered around a single factor: department size, spatial differentiation, height, task scope, and functional differentiation. These z-scored variables were then used to create a *bureaucracy* scale ( $\alpha = .700$ ), with higher scores indicating a greater degree of bureaucratization. The 2000 LEMAS survey provided the necessary data for each component variable (or its calculation).

-- Table 4a about here --

Bureaucracies have been associated with impersonality, efficiency, and appointment and promotion based on seniority and technical merit, so more bureaucratic departments could show less bias in patterns of hiring and promotion. Reiss (1971) though, argues that more bureaucratic departments tend to be less responsive to citizens and politicians, neutralizing civic power. He

argues “there should be little doubt that most central bureaucracies, including the police, have been slow to respond to pressures – at least from minorities and the poor in our cities – to change policies and practices” (Reiss, 1971, p. 207). Further, police organizations have been known to promote in their personnel commitment to the bureaucratic ideal over commitments to friends, kin, or members of the same racial or ethnic group (Manning, 1997), making it less likely that minorities will recruit and promote others members of their groups. These facets of bureaucratic organizations could theoretically impact diversity in police agencies and are therefore controlled.

-- Table 5a about here --

According to the rational choice perspective, police deployment is related to citizen demands, which are influenced by rates of crime and variations in access to economic resources (cf. Kane, 2003; Jacobs, 1979). More crime may lead to demand for more police and less access to resources can increase requests for noncrime services (Kane, 2003).<sup>81</sup> The same variables that explain the placement of police officers and the demand for police services could also explain the hiring of new police officers, some of whom might be minorities. *Violent crime* is measured as the rate per 100,000 population of 2000 UCR figures for reported violent crimes. *Economic resource deprivation* is a composite of 2000 Census figures<sup>82</sup> for percent households in poverty, percent households receiving public assistance, unemployment, and a Gini Index of economic inequality<sup>83</sup> ( $\alpha = .884$ ) (see Kane, 2003).

*Adjustments for Missing Data*

A small number of values were missing on key explanatory and control variables. In the 2000 wave of the DGSS survey, data were missing on the following variables: race/ethnicity of mayor (14 cities, 7.8 percent); percent Black council (29 cities, 16.1 percent); percent Latino council (28 cities, 15.6 percent); percent female council (25 cities, 13.9 percent); race/ethnicity of chief (25 departments, 13.9 percent); and presence of a formal or informal affirmative action program (39 departments, 21.7 percent).

Internet searches were conducted for the missing mayors via municipal websites and online news sources. Once a mayor's name and tenure were determined and verified, available photographs were analyzed to ascertain whether he or she appeared White, Black or Latino. All missing mayors were found and categorized through this process (13 were White, 1 Black).

Percent Black and Latino councilors were imputed using data from the 1996 and 2003 waves of the DGSS survey. These provided data on the same variables in the time periods directly prior to and following the 2000 administration of the survey. Rather than replacing the missing values with an overall mean, values from 1996, 2003, or both years (whenever available) were used to estimate racial, ethnic, and gender makeups of city councils. The following decision rules were implemented, in this order: 1) when values for 1996 and 2003 matched, that value was substituted for 2000; 2) when values for 1996 and 2003 were available, but differed, the average of the values for these two years was substituted for 2000; 3) when a value for either 1996 or 2003 was available, that value was substituted for 2000; and 4) when no data were available for any years, a regression model was run to predict Black/Latino city council representation with percent Black/Latino population. Minority populations of respective cities were then plugged into the equation to estimate their percent minority council. Imputation of percent female council followed decision rules 1 through 3, but used mean substitution in place

of rule 4. Dichotomous variables (0 = not missing, 1 = missing) were created to indicate those cities for which an imputation was necessary and facilitate missing data analyses. All missing city council data were replaced through this process.

Where data were missing on city police chiefs, (as with mayors) internet searches were conducted via municipal websites and online news sources. Once a chief's name and tenure were determined and verified, available photographs were analyzed to ascertain whether he or she appeared White, Black or Latino. Ten missing chiefs were found and categorized through this process (5 were Black, 4 White).<sup>84</sup> Data on the race/ethnicity of an additional 11 chiefs were obtained by contacting departments directly by telephone and email.<sup>85</sup> Four police departments could not be reached; in these cases, 1993, 1996, or 2003 DGSS data were used to estimate the race or ethnicity of their chief in 2000.

Affirmative action information (presence of a formal or informal program in 2000) was missing in the greatest proportion, compared with other variables. Of 39 missing cases, 25 were imputed using data from the 1993, 1996 and 2003 waves of DGSS. The following decision rules were implemented, in this order: 1) if a department reported a formal/informal/neither policy in both 1996 and 2003, it was assumed that the department had the same program in place in 2000; 2) when a department reported a formal/informal/neither policy in 1993 and 1996, but data were not present for 2003, it was assumed that the pattern observed from 1993 to 1996 carried into 2000, and so this value was substituted. Data on the affirmative action policies of an additional nine departments were obtained by contacting departments directly by telephone and email.<sup>86</sup> Five departments located in California and/or Washington were coded as having no affirmative action program as these states had banned affirmative action in public hiring as of 2000. A

dichotomous variable was created to indicate the 16 departments for which an imputation was necessary and facilitate missing data analysis (0 = not missing, 1 = missing).<sup>87</sup>

For three cities, no police managers were recorded, making the calculation of percentages of White, Black, Latino, and other race male and female managers impossible. Means were substituted for each managerial race/ethnic/gender combination. Six cities lacked the necessary UCR data to calculate crime rates. Means of crime counts by category (total, violent, property) were substituted and these averages were used to calculate rates of crime per 100,000 residents. Two cities had inappropriate values for the percent Black and Latino council variables. One reported 142.86 percent Black councilors; this value was replaced with 100 percent. The other city reported 120 percent Black councilors and 420 percent Latino councilors; regression imputations were used to predict more realistic percentages based on percent Black/Latino population. In both cases, cities were coded as having missing data.

### *Research Hypotheses*

#### Line representation

Hypothesis 1a: A combination of external and institutional factors will explain variations in total African American line officer representation in this sample

Hypothesis 1b: A combination of external and institutional factors will explain variations in total Latino line officer representation in this sample

Hypothesis 1c: A combination of external and institutional factors will explain variations in total female line officer representation in this sample

Hypothesis 1d: A combination of external and institutional factors will explain variations in total minority (African American, Latino, female) line officer representation in this sample

#### Managerial representation

Hypothesis 2a: A combination of external and institutional factors will explain variations in total African American managerial representation in this sample

Hypothesis 2b: A combination of external and institutional factors will explain variations in total Latino managerial representation in this sample

Hypothesis 2c: A combination of external and institutional factors will explain variations in total female managerial representation in this sample

Hypothesis 2d: A combination of external and institutional factors will explain variations in total minority (African American, Latino, female) managerial representation in this sample

-- Figure 1a about here --

External factors are the forces acting upon police agencies from without to influence their priorities and decisions. Even though police are coercive, it is well recognized that what they do is largely driven by the demands of their various audiences (cf. Bayley, 1994; Manning, 1997). Minority populations, percent minority city councilors, minority mayor presence, and minority mayor tenure combine to create the construct of minority political power.<sup>88</sup> In cities with larger African American or Latino populations, these groups will enjoy more bloc voting power, and thus be better poised to elect political representatives in the form of mayors and city councilors who will champion their causes and interests. Among these interests could be a diverse police workforce that is more responsive to its minority constituents. Once elected, minority politicians can appoint sympathetic personnel officials, change hiring and promotion policy, and alter the municipal sector employment climate (Saltzstein, 1989; cf. Jacobs & O'Brien, 1998). Minority mayors or largely minority councils could appoint or support a minority chief of police, who, in his or her executive capacity, has the ability to recruit and promote fellow minorities. Further, a diverse line provides minorities who are available for promotion; a diverse management provides mid-level personnel officials sympathetic to minority recruiting.

Institutional factors are the internal characteristics of police organizations that influence their priorities and decision making. Minority chiefs, managers, and line officers represent the distribution of minority personnel throughout a given department. These individuals, as we have seen, could play a role in hiring and promoting fellow minorities. Chiefs and managers are well positioned to use their authority to reward other minorities with jobs and promotions; minority line officers provide a pool of prospective managers and can draw others from their respective groups into the law enforcement profession. Affirmative action policies are explicit statements of an organization's commitment to diversity, and should therefore be expected to influence minority line officer hiring. Less is known, however, about how these policies shall influence minority promotions.<sup>89</sup> Average officer and manager salaries should be inversely related to the hiring and promotion of minorities. Saltzstein (1989) has hypothesized that higher pay increases competition for police jobs, enticing more White applicants and limiting minority opportunities. Additional competition can arise when multiple minority groups vie for the same police positions and promotions. When, for example, both Black and Latino citizens seek police employment, does the presence of one group limit opportunities for the other to make inroads? If very few positions exist and several groups are capable of satisfying affirmative action goals, this could be the case. Finally, while no identified studies of line race and ethnicity have considered union presence, this variable is thought to be associated with resistance to affirmative action through litigation; it is therefore expected that unions will decrease the likelihood of hiring minorities.

Modeling total female representation (Hypothesis 1c) at the line and management ranks presents special methodological challenges. Data limitations preclude the creation of a construct similar to Black or Latino political power that taps gender influence.<sup>90</sup> Consequently, the percent female councilors alone represents female political power in total female representation models,

without reference to a female mayor's presence or tenure, or female population. Data are also not available regarding police chief gender. For the purposes of the present study, it is proposed that African American chiefs will explain variation in total female representation because this measure reflects an environment that is friendly to the goal of diversity through affirmative action. Perhaps the link between Black chiefs and the hiring and promotion of female officers generally is a function of: 1) a willingness on the part of African American police leaders to reach out to another underrepresented minority (women); and 2) the influence that Black chiefs have over the appointment of Black female officers, specifically – as the representation of Black female officers and managers increases, this bump might be felt in the form of an increase in all female officers and managers.<sup>91</sup> The remaining institutional variables are not as theoretically problematic and should interact with total female line officer and manager representation in the expected way: affirmative action programs are not necessarily race specific in their aims; data on total female officers/managers is available; competition with other minorities over positions can be controlled with percent Black and Latino male officers/managers; and union hostility to affirmative action policies should disadvantage women just as much as it does racial and ethnic minorities.

It is anticipated that the control measures of economic deprivation and violent crime will be positively associated with minority and female representation. Together, these variables stand for city-level variations in crime and access to economic resources – factors which have been related to patterns of police deployment, generally (cf. Kane, 2003; Jacobs, 1979).<sup>92</sup> The same variables that explain placement of police officers and the demand for police services could also explain the hiring of new police officers, some of whom might be minorities. Also, since there is a well-established link between race, crime, and structural disadvantage (cf. W. Wilson, 1987), it

could be the case that cities suffering the most from these social ills will be inhabited by more minorities who will in turn demand representation in their police forces. Or, police departments in these less privileged areas may hire more minority line officers in furtherance of a symbolic “access-and-legitimacy” campaign (Thomas & Ely, 2001). The degree of bureaucratization is hypothesized to be negatively associated with minority hiring and promotion. As departments grow larger and more complex, they tend to grow less responsive to the communities they serve (cf. Reiss, 1971). It is also believed that dedication to the bureaucratic ideal often outweighs any commitments to friends, kin, or members of racial, ethnic, or gender groups (Manning, 1997), making it less likely that minorities will recruit and promote fellow minorities.

### *Analytical Techniques*

Part one of the present study employs a combination of Ordinary Least Squares (OLS) and count data regression procedures to explain variations in race, ethnic, and gender diversity.<sup>93</sup> OLS regression is appropriate when dependent measures are continuous and unbounded. The percent Black, Latino, and female variables examined in line models are quantitative measures capable of taking on a wide range of values and therefore meet this assumption in principle (Lewis-Beck, 1995; Studenmund, 2001).<sup>94</sup> Early diagnostics of the normality of the distribution of minority manager proportions, however, indicated that they were highly skewed toward zero. Based upon this finding, it was decided that a count data model was more appropriate and could better address the limitations of these dependent variables. For dependent count measures that represent relatively rare events and tend toward a value of zero, OLS regression is inappropriate because its assumptions are violated. Using OLS under these circumstances produces inefficient, inconsistent, and biased estimates (Long, 1997).

Poisson regression is one option that can overcome such shortcomings, making it a more appropriate procedure for working with the counts of minority managers examined in this study. The probability of a count is determined by a Poisson distribution, where the mean of the distribution is a function of the independent variables (Long, 1997, p. 218). However, it is often the case that Poisson models do not fit because in most applications, the conditional variance is greater than the conditional mean (Long, 1997). When overdispersion exists, applying the basic Poisson model underestimates standard errors and produces misleading tests of statistical significance (Osgood, 2000). Preliminary Poisson output indicated overdispersion in all models of minority manager representation (the overdispersion parameter was significant). When these conditions exist, Negative Binomial regression is the more appropriate analytical procedure (Long, 1997). The final analyses of minority managerial representation proceeded with Negative Binomial regression models created using LIMDEP 7.0.

### *Results*

#### African American line representation

-- Table 6a about here --

The first OLS regression models total African American line officers. As expected, the political power construct is the most significant, indicating that component variables are in fact associated with the representation of Blacks in the large municipal police agencies sampled. As Blacks gain political momentum, they are better represented in police line ranks. Neither formal nor informal affirmative action policies had any effect. The presence of African American chiefs

is associated with increased African American representation in line positions, evidence that these top police leaders do in fact play a crucial role in recruiting fellow minority employees. It is also notable that the percentage Black mid-level management is an even stronger institutional covariate of Black line representation (the second most powerful overall). The percentage Latino line variable is insignificant, casting doubt upon the zero-sum game hypothesis; the presence of a competing minority group did not disadvantage African American hiring in this model. In line with past theorizing, it does appear that the presence of a police union predicts less Black police officer representation. Unions have been associated with anti-affirmative action sentiment, but this premise has until now gone empirically unexamined. Measures of bureaucracy, line officer salaries, economic deprivation, and violent crimes rates proved insignificant. The explanatory power of this model is moderately strong, with an  $R^2$  of .645.<sup>95</sup>

Latino line representation

-- Table 7a about here --

The total Latino line representation model is equally robust ( $R^2 = .673$ ). As was the case for the African American model, Latino political power presents itself as the strongest predictor of Latino line officer presence in this sample. More Latino political power, an external measure, translates into greater Latino representation at the line level. Following a pattern similar to that found in the Black line model, Latino police chiefs and police managers are each associated with a higher degree of Latino presence, with managers exhibiting a stronger effect than chiefs. Other minorities (African Americans) competing for police positions with Latinos and both varieties of

affirmative action policy are not significant in this model. Latino representation is unaffected by the presence of a police union, a measure that had been associated with fewer Black line officers. One additional difference between Black and Latino models is that the latter displays a positive relationship between average line officer salary and Latino line officer presence. Recall that this variable was hypothesized to decrease minority representation by increasing competition from majority group applicants lured into police work by more attractive salaries. Violent crime rates and economic deprivation are once again wholly insignificant.

Female line representation

-- Table 8a about here --

The total (White, African American, Latino, and Other) female line representation model has the least explanatory power of all models presented thus far ( $R^2 = .194$ ).<sup>96</sup> Consistent with Black and Latino models, female political power (percentage female city council) is a significant covariate of the representation of women in line-level police positions. While this measure is not the most powerful predictor this time, it remains among the top predictors. Whether an agency was headed by an African American chief does not factor into female representation, nor does the presence of a formal or informal affirmative action policy. The presence of Latino and Black male line officers did not reduce the likelihood that female officers of the same rank would also be present, a third consecutive finding that sheds doubt upon the zero-sum game hypothesis. Interestingly, the proportion of female managers does not help female line officers entering the police profession. Bureaucracy and economic deprivation for the first time reach significance in the female model; larger, more complex organizations serving more economically depressed and

unequal populations are most likely to employ female officers. Also, like Latinos, women are more common in those agencies with higher pay scales.

#### Combined minority line representation

-- Table 9a about here --

The final line regression models combined minority line representation. When percents African American, Latino, and White female are aggregated, many of the same patterns that are visible in the disaggregated models reemerge. Minority political power is far and away the most powerful predictor; minority manager presence is a significant covariate, as is the presence of a minority police chief. Overall diversity is unaffected by affirmative action policies, the degree of bureaucratization, the presence of a police union, or either of the contextual controls – economic deprivation and violent crime. It is worth noting that all minorities appear to be attracted to the field of policing by average line officer salary; in the combined minority line model, this is the second most powerful predictor of minority representation.

#### African American managerial representation

-- Table 10a about here --

The first Negative Binomial count model of African American managerial representation reveals that affirmative action policies are associated with the presence of Black managers, albeit

in different ways, depending on formality. Formal policies increase Black managerial presence while informal ones are negatively associated with this dependent variable. While this finding is in part consistent with prior findings that formal policies have more of an impact, the direction of the effect for informal policies is unexpected. This could perhaps indicate that formal policies work because they set specific goals and timetables, and in some cases, are enforced by law. The informal policies, on the other hand, could actually decrease representation because they are akin to good intentions and lack any real enforceability. Contrary to findings from the line models, the percentage of Latino managers decreases opportunities for African American managers. This result likely reflects the relative scarcity of managerial positions in comparison to line positions. Percentage Black line officers is a positive correlate, as predicted; Black officers provide a pool of potential applicants to managerial slots. The bureaucracy variable is found to be significant, with more bureaucratic agencies (or agencies serving larger cities) promoting a greater number of Blacks to mid-level management jobs. Another key explanatory factor in the model is average manager salary. Departments where managers are paid more also have more African American managers. It is noteworthy that the construct of political power is insignificant. Despite its very consistent relevance in most hiring models, it appears that Black political power is neutralized where internal decision making on promotion is concerned. The Black manager presence model has a similar degree of explanatory power to its corresponding Black line officer presence model (McFadden Pseudo  $R^2 = .622$ ).

Latino managerial representation

-- Table 11a about here --

The Negative Binomial model for total Latino managers has moderate explanatory power (McFadden Pseudo  $R^2 = .649$ ) but few predictors find statistical significance. Only degree of bureaucratization (or city size) and average manager salary explain the representation of Latino managers. More complex agencies serving larger populations with higher managerial pay scales have more Latino managers. Latino political power has no impact, nor do affirmative action policies, Latino mayors, competition from other minority managers, percentage Latino line, or union presence.

Female managerial representation

-- Table 12a about here --

Total female managers are associated with several hypothesized covariates: formal and informal affirmative action policies, other (i.e., African American male) minorities represented in management, police unions, degree of bureaucracy, and manager salary. As observed for the African American management model above, formal policies increased female representation amongst police administrative ranks while informal policies had the opposite effect. Females were less likely to staff management positions in departments with larger proportions of African American males in the same roles, offering further support to the theory that the zero-sum game hypothesis is at work at this organizational level. Police unions exhibit a negative effect on the presence of total females in police management while larger agencies with higher pay scales have more female managers. The complete model for women exhibits strong explanatory power

with a McFadden Pseudo  $R^2$  of .672. External political power is once again neutralized in the internal decision making processes influencing their promotion. Institutional boosts from fellow minority chiefs and female line officers are not felt for women in police management.

#### Minority managerial representation

-- Table 13a about here --

The final Negative Binomial regression models combined minority line representation. When counts of African Americans, Latinos, and White females are aggregated, the model which results displays the most explanatory power thus far (McFadden Pseudo  $R^2 = .768$ ). When total diversity is examined, it becomes apparent that formal affirmative action policies are responsible for increased minority representation in police management ranks. Combined minority line-level representation behaves in the expected fashion, with more minority police officers linked to more minority police managers. As with all other disaggregated minority categories, bureaucracy is a significant predictor. The largest agencies (serving the largest cities) have the greatest diversity overall. If bureaucracy is in fact tapping the underlying variable of city size, such a finding does make theoretical sense. City size is a well-proven covariate of minority police representation; theory predicts that bigger cities will hire more minorities because they are home to a larger minority applicant pool as well as residents who are both progressive and pro-affirmative action (Warner, Steel, & Lovrich, 1989). It may be that large cities have more minority representation at the line level, and thus minority officers available to be promoted to management positions.

## **Part II – The Effects of Police Diversity: Minority Representation and Police Outcomes**

### *Dependent Variables*

This component of the present study examines four dependent variables: *police use of deadly force, felonious killings of police, assaults against police, and drug arrest disparities* by race. The first three items are indicators of the broader construct of police-citizen conflict; the fourth measures bias in the application of formal sanctions. Diversity has been hypothesized to have an impact on such outcomes, but empirical support has been scant and mixed.

Police-initiated fatal shooting statistics were gathered from 2000-2004 waves of the SHR. The SHR annually collects detailed data on various categories of homicide reported to the police. All homicides which resulted when felons were killed by police (circumstance category 81) were summed for each agency in each year. Due to the rarity of this event, a five year count of total police-caused homicides was calculated to facilitate matching and ensure a meaningful analysis.

-- Table 1b about here --

The 2000-2004 waves of LEOKA provided figures for felonious killings of police as well as assaults against police. For felonious killings, monthly counts were summed to create annual totals for each agency in each year.<sup>97</sup> Since LEOKA only provides data on those departments that reported a feloniously killed officer in a given year, it is assumed that all agencies for which there is no record did not experience this kind of homicide event that year.<sup>98</sup> Monthly counts of total assaults on officers were also summed to create annual totals for each agency and year.<sup>99</sup>

Once again, five year counts were calculated for both variables to account for the comparatively infrequent nature of the events.<sup>100</sup>

Drug arrest rate disparities were calculated using race-specific UCR data<sup>101</sup> for total drug arrests (UCR offense code 18).<sup>102</sup> Drug arrests are an appropriate measure in that minorities have historically faced disproportionate arrest rates for drug offenses, a disparity sometimes attributed to institutional racism (cf. Parker & Maggard, 2005, who review this and other explanations). Drug arrest patterns vary in accordance to fluctuations in political pressure for more or less drug law enforcement and corresponding changes to police drug enforcement policy and strategy; they do not necessarily reflect actual patterns of drug use (cf. Musto, 1987; Tonry, 2005). Rosenfeld and Decker (1999, p. 697) explain that drug arrest statistics may reflect responses to citywide or neighborhood political pressure as well as officers' priorities in problem solving. Arrests for misdemeanors like drug offenses tend to be officer initiated and discretionary, leaving room for extralegal characteristics to influence the outcome of encounters (Ousey & Lee, 2008). It is under these conditions (when arrest is one of many options) that diversity's impact is most likely to be felt, as opposed to situations where the serious nature of a felony forces an arrest. Since the drug arrest has historically disadvantaged poor minorities, has political elements to it, and allows for discretionary enforcement, it is selected as a dependent measure here.

To operationalize the construct of disparate patterns of arrest, ratios of Black to White arrest rates were calculated for each of the years from 2000-2004 and then averaged.<sup>103</sup> A higher score indicates greater disparity between Black and White drug arrest rates. Prior studies of police diversity and arrest (cf. Donohue & Levitt, 2001; Eitle et al., 2005) focused on the relationship between race, ethnic, and gender personnel composition and race-specific arrest rate

levels, but not inequality in these arrest rates. Inequality in arrest patterns is a more theoretically salient outcome measure for the present purposes because it helps test the theory that diversity is capable of reducing bias in the application of formal sanctions against minority groups through cultural exposure and political representation.

### *Independent Variables*

The main explanatory variable is departmental diversity. This measure is operationalized as: 1) the proportion minority (African American, Latino, female, total minority<sup>104</sup>) officers and managers; 2) the ratio of minority (African American, Latino, female, total minority) managers to officers of the same respective categories; and 3) the ratio of African American, Latino, and total minority<sup>105</sup> police to minority citizens of the same categories. The relative proportion of minority and female police officers is the most widely used indicator of department composition. Figures were calculated by dividing EEO counts for a given race/ethnic/gender combination by total officers or managers per agency. This measure may not be sophisticated enough, however, to fully capture the complexity of diversity as a theoretical construct, and so two additional constructs enter equations.

-- Table 2b about here --

Ratios of minority officers to minority managers were calculated by dividing proportions of Black, Latino, female, and total minority managers by proportions of Black, Latino, female, and total minority officers.<sup>106</sup> This ratio serves as an indicator of the diversity perspective held by a given department (Thomas & Ely, 2001). Recall that agencies with an integration-and-

learning perspective maintain a sincere interest in diversity and see it as a resource for learning and adaptive change; this perspective is present when minorities hold positions of power over majority group members and can influence policy decisions (Thomas & Ely, 2001). It would be expected, then, that when minorities are represented equally well at the line and management levels, this balance signifies true commitment to the ideals of equal opportunity. It would also be expected that if diversity has an effect, it will most likely be felt in agencies that are more fully integrated at all levels. Departments with higher ratios reflect the integration-and-learning perspective on diversity. Access-and-legitimacy agencies have a less sincere interest in diversity; they view it as an expedient means to connect with minority communities and establish an outward image of fairness. These agencies exploit the mere appearance of diversity, and are not concerned with learning from the unique perspectives, insights, skills, and experiences of their minority personnel. The perspective is present when there is sufficient representation in boundary positions or visible positions that would enhance the legitimacy of the organization from the viewpoint of outside markets (Thomas & Ely, 2001). As this perspective on diversity is more symbolic than substantive, it is expected that the less integrated access-and-legitimacy agencies will be less likely to reap the hypothesized benefits of a diverse police workforce. Departments with lower ratios reflect the access-and-legitimacy perspective on diversity.

Finally, the ratio of total minority police to minority citizens offers an opportunity to test a political power explanation for diversity's impact on external outcomes. Percent Black police (line plus management), percent Latino police (line plus management), and percent total minority police (here, Black and Latino line plus management) were divided by 2000 Census figures for percent Black population, percent Latino population, and percent Black and Latino population, respectively.<sup>107</sup> Minority citizens face frustration when the political system appears

unresponsive and they are unable to influence departmental policy processes or outcomes (Sampson & Bartusch, 1998; Marschall & Shah, 2007). The response to this sense of powerlessness is often to offend or lash out against agents of social control (Jacobs & O'Brien, 1998). Giving minorities a symbolic representative in the form of the minority police officer might help reduce feelings of political subordination and increase perceptions of police legitimacy. With a greater degree of perceived legitimacy could come less resistance to police intervention, and thus fewer arrests and acts of police-citizen violence. In addition, greater minority presence in the municipal police sector could result in the revision of policies sensitive to the demands of minority citizens and reduce racial conflict. Higher ratios indicate greater political representation.

### *Control Variables*

Several controls are included in models to isolate the effects of the independent measures – organizational structure, minority group threat, structural disadvantage, and violent crime rates. Organizational structure has successfully explained police outcomes (e.g., arrest rates) in prior studies (Eitle et al., 2005; Mastrofski, Ritti, & Hoffsmaster, 1987; Maguire, 2003; Brown, 1981; Murphy, 1986; Smith & Klein, 1984). It is well recognized in the field of general organizational theory that organizational structures can influence organizational performance (Scott, 1992). Organizational structure is measured as *degree of bureaucratization* (see Eitle et al., 2005) for each police agency. Bureaucracies are large, complex organizations that are characterized by the differentiation of tasks, a hierarchical chain of command, and written rules and regulations (Walker & Katz, 2008). This construct was initially set to consist of the following elements of complexity and control, as specified in previous analytic models (cf. Maguire, 2003, Eitle et al.,

2005): organization size (total full time employees), task scope (services, functions performed<sup>108</sup>), functional differentiation (# of special units<sup>109</sup>), civilianization (ratio of civilians to sworn officers), formalization (# of written policies<sup>110</sup>), spatial differentiation (# of district stations), and height (chief salary less officer salary over officer salary). Principal components analyses revealed that the z-scores for five of the original seven variables clustered around one factor: department size, spatial differentiation, height, task scope, and functional differentiation. The z-scored variables were then used to create a *bureaucracy* scale ( $\alpha = .651$ ),<sup>111</sup> with higher scores indicating a greater degree of bureaucratization.<sup>112</sup> The 2000 LEMAS provided the necessary data for each component variable (or its calculation).

-- Table 3b about here --

Bureaucracies have been associated with impersonality, efficiency, and uniformity and this objective stance can potentially impact police-citizen conflict and discriminatory patterns of arrest in different ways. More bureaucratic departments could decrease tensions and increase police legitimacy by displaying less bias in their interactions with the public. Or, a more bureaucratic department could increase frustrations and decrease police legitimacy by being less responsive to citizens and politicians, thus neutralizing civic power (Reiss, 1971). As Reiss (1971, p. 207) argues “there should be little doubt that most central bureaucracies, including the police, have been slow to respond to pressures – at least from minorities and the poor in our cities – to change policies and practices.” Further, bureaucratic organizations have been criticized for sharply limiting professional autonomy and discretion, stifling creativity, and ignoring the unique talents of their employees (Reiss, 1971; Walker & Katz, 2008). Police

organizations, specifically, have been known to promote in their personnel commitment to the bureaucratic ideal over commitments to friends, kin, or members of the same racial or ethnic group (Manning, 1997), making it less likely that the hypothesized cultural competencies of minorities will affect outcome measures. These facets of bureaucratic organizations could theoretically impact the predicted relationships in this study and are therefore controlled.

Much research and theorizing has surrounded how threats posed by minorities to majority group interests influence patterns of police behavior (cf. Greenberg, Kessler, & Loftin, 1981; Jackson & Carroll, 1981; Liska, Lawrence, & Benson, 1981; Liska & Chamlin, 1984). Blalock's (1967) racial threat thesis posits that as the size of a minority group increases, so too will the perceived amount of threat to White economic resources and political power. Consequently, as non-Whites become more prevalent, Whites will move to protect the existing status quo by using formal social control resources as a means of controlling these groups (Ousey & Lee, 2008). *Minority threat* is measured with 2000 Census Summary File 1 and 3 figures for percent Black citizens, the ratio of White to Black median incomes and an index of dissimilarity for racial residential segregation.<sup>113</sup> To reduce redundancy and multicollinearity, z-scored versions of each variable were combined into a summative minority threat scale ( $\alpha = .718$ ).<sup>114</sup>

Minority group size and growth has been associated with expansion of racial conflict. Jacobs and Carmichael (2002) found that lethal and non-lethal violence was more often directed at police in cities with more minorities and a growing minority population. At the same time, police officers are more likely to use violence against citizens under these circumstances. Jacobs & O'Brien (1998) found that police were more likely to kill Black felons in cities that had more Black citizens and had experienced an increase in this population. The authors contend that this is because the threat posed by a large, growing racial underclass leads to harsh law enforcement

measures and fear of crime. The same threat measures have also explained race-specific arrest activity, including drug arrests (cf. Parker & Maggard, 2005; Parker, Stults, & Rice, 2005).

The ratio of White to Black median household incomes, or racial inequality, measures the economic distance between both groups. Where the distance is greater, perceived threat to White economic interests is lower (Parker et al., 2005). Racial inequality has significantly predicted violence against the police (Jacobs & Carmichael, 2002), the use of lethal force against citizens (Jacobs & O'Brien, 1998), and drug arrests (Parker & Maggard, 2005). Racial residential segregation taps minority threat to Whites' feelings of safety. Parker et al. (2005, p. 1116) explain that isolation of racial minorities amplifies perceived group differences, increasing anti-Black dispositions and racial threat. The experience of this threat is most likely to occur when non-Whites encroach on the intimate social space of Whites. It is thus important to consider the degree to which Whites are exposed to Blacks, and not just the relative size of the minority population, when operationalizing threat (Ousey & Lee, 2008, p. 326).<sup>115</sup> Since these measures of minority group threat have explained variation in many dependent variables related to police behavior, including those examined in this study, they are controlled.

The dependent measures are affected by powerful social forces beyond the control of police (Smith & Decker, 1980). The current prevailing view in the academic literature is that police-citizen violence is a by-product of the amount of conventional interpersonal violence and the social conditions that produce it (Jacobs & Carmichael, 2002, p. 1230). It is thus appropriate to include as controls violent crime and its determinants. *Violent crime* is measured as 2000 UCR figures for the interpersonal offenses of murder/non-negligent manslaughter, rape, robbery, and aggravated assault. Indicators of inequality and social disorganization have consistently explained not only violent crime rates (Sampson, 1987; Sampson & Groves, 1989), but also

police use of deadly force against citizens and lethal and non-lethal violence directed against the police (Jacobs & O'Brien, 1998; Jacobs & Carmichael, 2002).

A *structural disadvantage* index ( $\alpha = .840$ )<sup>116</sup> tapping elements of inequality, economic deprivation, and social disorganization was created to control for the effects these macrosocial factors may have on police-citizen interactions. With disparities in economic rewards comes an unstable social order that must be maintained by force or its threat, often from agents of social control (Jacobs & O'Brien, 1998; cf. Chambliss & Seidman, 1980). Economic inequality was calculated using a Gini Index<sup>117</sup> for 2000 Census household income figures. Gini coefficients range from 0 to 1. Smaller coefficients represent a more even distribution of wealth; larger ones, the concentration of wealth within a smaller proportion of the population. Socially disorganized areas experience more crime because they lack the social capital to build collective efficacy and informal networks of social control (Sampson, Raudenbush, & Earls, 1997). The social disorganization indicators selected for the structural disadvantage scale include: measures of economic resource deprivation (percent households in poverty, percent households receiving public assistance, and adult unemployment rates) (cf. Kane, 2003); and measures of family disruption (divorce rates, percent female-headed households) (cf. Sampson, 1987).<sup>118</sup> Data for all component measures were available through the 2000 Census.<sup>119</sup> Together, this composite control helps ensure that police diversity, and not structural disadvantage, is influencing each dependent measure.

The final control measure, African American mayor presence, is political in nature. Black mayors have been shown to have a protective effect on the dependent variables examined in this study.<sup>120</sup> Jacobs and O'Brien (1998) found that Black mayors reduced the occurrence of fatal police shootings; Jacobs and Carmichael (2002) determined that these public officials also

reduced the number of police officers killed and assaulted. Since mayors in most cities exercise substantial control over the police department, a Black mayor could theoretically play a role in revising internal policies to reduce police-citizen conflicts (Jacobs & O'Brien, 1998). Figures on the presence of Black mayors nationally were found in *Black Elected Officials: A Statistical Summary, 2000* (Bositis, 2000).

-- Table 4b about here --

### *Adjustments for Missing Data*

Nineteen cities lacked the necessary UCR data to calculate crime rates. Means of crime counts by category (total, violent, property) were substituted and these averages were used to calculate rates of crime per 100,000 residents. A separate variable was created to indicate missingness (0 = not missing, 1 = missing) to facilitate missing data analysis. Twelve cities did not report managers of any race or gender, making the calculation of percentages of White, Black, Latino, and other race male and female managers impossible. Means were substituted for each managerial race/ethnic/gender combination. Imputations were recorded with a separate dichotomous variable for missingness (0 = not missing, 1 = missing).

### *Research Hypotheses*

-- Figure 1b about here --

Hypothesis 1a: Line officer diversity will not reduce police-citizen conflict or disparate patterns of arrest in this sample

Hypothesis 1b: Managerial diversity will reduce police-citizen conflict and disparate patterns of arrest in this sample

Taking into account the dearth of empirical evidence connecting line officer diversity to external police outcomes (cf. Lott, 2000; Smith, 2003) and the theory that diversity policies are nothing beyond symbolic attempts at appearance management (Cashmore, 2002; Manning, 1997) it is expected that line diversity will not affect police use of deadly force, felonious killings and assaults of police, or racial inequities in drug arrest rates. It is, however, expected that mid-level managerial diversity will impact these dependent measures. While minority managers do not enjoy as much executive power as the Chief, they can play more of a role in the development of departmental policy than line officers. This influence could result in policy tailored to reflect the interests of minority groups and reduce violent confrontations. In addition, mid-level minority managers (e.g., squad sergeants) are responsible for the day-to-day supervision and semiannual evaluation of their subordinates. Consequently, they are in a unique position to set standards of conduct, priorities, and norms of activity for line officers. Van Maanen (1974) explains that a sergeant is most concerned with the “activity” of his men. “By satisfying the sergeant’s rather unambiguous demands (tickets, drunks, vice, juveniles, field investigation reports, and so on) a man can ensure a harmonious relationship with the department. If not, he may find himself working his days off or transferred to another, less desirable sector” (Van Maanen, 1974, p. 249). Line officers’ activities are largely driven by the demands of their immediate superiors who can punish or reward their on-the-job behavior. Minority first-line supervisors, then, are in the best position to translate their cultural backgrounds and experiences into real changes in the way that police work is done. They can change line officer attitudes toward minorities and proscribe any

aggressive tactics or styles of patrol that might alienate minority communities through positive or negative reinforcement: outwardly racist officers or those who regularly mistreat minorities will receive the least desirable assignments; those whose interactions with minorities show fairness and compassion will enjoy the most pleasant work environments and multiple opportunities for advancement. In short, officers are accustomed to adapting to the various idiosyncrasies of their squad sergeants and will carry out their wishes (whatever they may be) to avoid “making waves” (Van Maanen, 1974). Even if these wishes are carried out grudgingly, they are still carried out – proof that the first-line supervisor can effectively change officer behavior.<sup>121</sup>

If Hypothesis 1b finds in the converse, with line (vs. managerial) diversity reducing the dependent measures, this result could indicate that representation matters more at the street level, where it is more visible to the public. While it has been argued that diversity’s substantive effects are the most powerful (cf. Marschall & Shah, 2007; Ward, 2006), it is also true that its symbolic impact can be quite positive as well (cf. Gilliam, 1996). There is no reason to believe that merely seeing minority officers does not play some role in influencing perceptions of police legitimacy and other relevant outcomes. A null (or negative) finding for minority representation at either rank could indicate that police occupational subcultures or bureaucratic organizational structure overshadows any race-, ethnic-, or gender-related qualities brought to the job by any individual minority group.

Hypothesis 2a: Departments with an integration-and-learning diversity perspective will display reduced police-citizen conflict and disparate patterns of arrest in this sample

Hypothesis 2b: Departments with an access-and-legitimacy diversity perspective will not display reduced police-citizen conflict and disparate patterns of arrest in this sample

Fully integrated agencies (equally diverse at line and managerial levels) are hypothesized to hold an integration-and-learning perspective on diversity. These organizations make a sincere

commitment to representativeness and appreciate its potential benefits (Thomas & Ely, 2001). Departments with integration-and-learning views grant minorities access to positions of power, from which they can respond to minority concerns by influencing policy, priorities, and strategy. Such responsiveness has the potential to remedy many of the issues that have led to poor police-citizen relations in the past, including compromised perceptions of police legitimacy and feelings of political subordination among the minority public (cf. Sampson & Bartusch, 1998; Marschall & Shah, 2007). Greater legitimacy can encourage cooperation with police and reduce contempt or violence directed toward them (Sunshine & Tyler, 2003; Jacobs & Carmichael, 2002). It is expected, then, that agencies holding an integration-and-learning perspective on diversity will experience less police-citizen conflict in the form of felonious killings and assaults of officers and officer-initiated fatal shootings of citizens.

In addition, the process of sharing ideas in an integration-and-learning environment exposes majority officers to minority cultures, promoting mutual respect and reducing the social distance between groups. White officers who have gained a better understanding of the minority experience may proceed more sensitively in on-the-street encounters with minority citizens, reducing incidents of deadly force and disparities in drug arrest rates. At the same time, minority citizens who have experienced fair, respectful treatment from the police may perceive them as more legitimate, reducing the level of violence directed at police, or the type of disrespect that might influence an officer's decision to make an arrest. In sum, the internal dynamics associated with the integration-and-learning model can potentially reduce the social distance between both White and minority officers and White officers and minority citizens. It has been theorized that police responses will tend toward the informal in areas where police legitimacy is high and social distance short (Banton, 1964; Bayley & Mendelsohn, 1969). Therefore, it is expected that those

agencies with an integration-and-learning perspective will reduce the overall number of Blacks arrested for drug crimes, thereby reducing the inequity between rates of Black and White arrests in the sample.

On the other hand, in departments where diversity is limited to line rank, the commitment to diversity may be superficial and insincere. Access-and-legitimacy agencies deliberately and strategically use visible minority officers to enhance legitimacy within minority areas. These organizations do not see diversity as a valuable resource, nor do they allow minorities to hold positions of power or influence policy in ways that favor their groups (Thomas & Ely, 2001). Instead, the mere appearance of representativeness (and responsiveness) is presented to minority communities while the traditional majority group police administration retains power. Given the fact that under-integrated departments do not exhibit a real commitment to diversity or allow it to change policy, priorities, and strategy, it is not expected that these organizations will have an impact on the outcome measures. Limiting minority access to power structures precludes the empowerment of minority citizens that stands to foster increased perceptions of legitimacy for police. Further, because access-and-legitimacy organizations choose not to incorporate cultural competencies into their core functions, it is less likely that social distances will change. The contributions (insights, skills, and experiences) of minority employees are not respected, shared, or learned from; only their physical appearances are exploited to send wholly symbolic messages of legitimacy.<sup>122</sup>

Hypothesis 3a: Departments whose ranks proportionally represent their minority population will reduce police-citizen conflict and disparate patterns of arrest in this sample

Hypothesis 3b: Departments not proportionally representing their minority population will not reduce police-citizen conflict and disparate patterns of arrest in this sample

The third set of research hypotheses offers an opportunity to test a political power explanation for diversity's impact on felonious killings and assaults of police, police fatal shootings of felons, and racially disparate rates of arrest for drug crimes. Minority citizens can get frustrated when the political system appears unresponsive and they are unable to influence public policy processes and outcomes (Sampson & Bartusch, 1998; Marschall & Shah, 2007). The response to this sense of powerlessness is often to offend or lash out against agents of social control (Jacobs & O'Brien, 1998). Giving minorities a symbolic representative in the form of the minority police officer might help reduce feelings of political subordination and increase perceptions of police legitimacy. Police are the most visible manifestation of government power, making it all the more important that minority groups feel represented by those who police their communities. It may be, for example, that because citizens are most likely to interact with police (as government agents), it is among police ranks that they will most likely notice the political representation of their respective groups. With a greater degree of perceived legitimacy could come more cooperation and less resistance to police intervention, and thus fewer arrests for drugs and reduced acts of police-citizen violence. In addition, a greater minority presence in the municipal police sector could result in the revision of policies designed to be sensitive to the demands of minority citizens and reduce racial conflict.

In areas where the departmental demographics do not reflect the racial and ethnic spread of the city, minority groups may see fewer officers that look like them and have less control over the direction of organizational policy and practice. This political subordination might influence the outcome measures by sparking more police-citizen conflict and formal sanctioning. Police officers might be responding to minority group threat (cf. Kane, 2005) and citizens, to a sense of injustice (Jacobs & Carmichael, 2002), by acting violently toward one another. When police

must resort to deadly force and when citizens attack police, it can be inferred from this lack of compliance that perceptions of police legitimacy are low. Otherwise, citizens would be more likely to accept the authority of officers, obey their commands, and respect their physical integrity. It has already been argued that groups who feel they do not hold any political power to change the structures that constrain their lives (cf. Sampson & Bartusch, 1998) may respond by using crime and violence as a form of political protest (Jacobs & O'Brien, 1998). If this is in fact the case, it would be expected that less political representation will increase the incidence of acts of felonious killings and assaults against police. Finally, police may be more likely to arrest for minor offenses (like drug crimes) in areas where respect for their legitimacy is low. When social distance is greater, police responses will tend toward the formal. Conversely, in areas where legitimacy is high and social distance short, similar behaviors will be dealt with more informally by police (Banton, 1964; Bayley & Mendelsohn, 1969).

### *Analytical Techniques*

For the second part of the present study, a combination of Ordinary Least Squares (OLS) regression and limited dependent variable procedures was used to estimate various models. For Hypotheses 1a and 2a, OLS was selected. OLS regression is most appropriate when dependent measures are continuous and unbounded. The misdemeanor arrest rate ratio variable examined is a quantitative measure capable of taking on a wide range of values and therefore meets this assumption in principle (Lewis-Beck, 1995; Studenmund, 2001). Diagnostics performed showed that the ratios were not normally distributed. A log transformation was applied to the variable, smoothing out the distribution and bringing both skewness and kurtosis into acceptable ranges.

For dependent count measures that represent relatively rare events and tend toward a value of zero, OLS regression is inappropriate because its assumptions are violated. Using OLS under these circumstances results in inefficient, inconsistent, and biased estimates (Long, 1997). Poisson regression can overcome these shortcomings, making it a more appropriate procedure for count outcomes like the police killing, police assault, and citizen killing measures examined in this study. The probability of a count is determined by a Poisson distribution, where the mean of the distribution is a function of the independent variables (Long, 1997, p. 218). However, it is often the case that Poisson models do not fit because in most applications, conditional variance is greater than the conditional mean (Long, 1997). When overdispersion exists, applying the basic Poisson model can underestimate standard errors and produce misleading significance tests (Osgood, 2000). Preliminary Poisson output indicated overdispersion in all diversity models for all three count measures (overdispersion parameters were significant), signaling that Negative Binomial regression would be the more appropriate analytical procedure (Long, 1997). The final analyses of felonious killings of police, assaults on police, and police use of deadly force each proceeded with Negative Binomial regression models created using LIMDEP 7.0.

### *Results*<sup>123</sup>

#### Felonious killings of police

-- Table 5b about here --

Very little variance in the felonious killing of police officers is explained across Negative Binomial models (McFadden Pseudo  $R^2$  statistics range from .040 to .068).<sup>124</sup> Line and manager

diversity (African American, Latino, female, and total minority) are each insignificant, as is a department's perspective on diversity and representativeness when compared with respective minority population proportions. Black mayors are not associated with a protective effect in this study, as in prior examinations of violence directed at police (cf. Jacobs & Carmichael, 2002). The only significant predictor (in 10 of 11 models) is degree of bureaucratization. As a police department becomes larger and more complex, the number of police officers intentionally killed by citizens increases. The relationship between more bureaucracy and more police officer deaths could mean that larger agencies are less responsive to public demands; it could also mean that these bigger departments feature organizational cultures that serve to neutralize any impact that workforce diversity could have (cf. Reiss, 1971; Manning, 1997). Or, this result may simply indicate that police are most likely to be killed in the line of duty in larger cities, served by correspondingly large police departments. Larger cities could be home to the most active gangs, increasing the likelihood of shooting incidents. Diversity, in any of its operationalized forms, does not appear to exert an impact over this particular measure of police-citizen conflict.

#### Assaults against the police

-- Table 6b about here --

The felonious killing of a law officer is thankfully a rare event, so the idiosyncratic nature of this variable might be at least partially responsible for the unexpected findings and very weak explanatory power noted above. Assaulting a police officer, however, is comparatively a much more commonplace act. Negative Binomial models of total assaults against police<sup>125</sup> display a far greater ability to explain variance in this measure of conflict. The degree of bureaucratization

remains a significant covariate across all minority category models. Some measures of diversity are significant in female and total minority models, but not necessarily in expected ways. While the ratio of female managers to line (representing diversity perspective) decreases the total number of assaults on police officers, the percentage of female line officers is associated with more of these assaults. A similar pattern emerges when the total minority count data model is examined. If all minority (Black, Latino, other race, female) line officers are aggregated, greater diversity predicts more assaults. Such a seemingly incongruent finding might be explained in terms of diversity perspectives. It is suggested by the results that diversity's impact could be contingent upon the relationship between line and management representation. That line representation (when considered on its own, or without reference to management diversity) is positively associated with assaults on police may reflect an access-and-legitimacy perspective. Those departments with line diversity alone may use these more visible minority officers as a means of entering minority communities to create a symbolic sense of representation. Recall that this use of minority social capital is insincere and does not typically lead to progressive changes in organizational philosophy, given that management ranks remain less diversified. Appearance management techniques may be perceived as such by minority communities who recognize that no substantive changes are taking place, leading to a greater degree of conflict, or in this case, assaults on police. Another way of interpreting the positive association between line-level gender and total diversity and assaults could be that these minority officers are in fact more responsive to their constituents. Perhaps a higher number of assaults are simply the consequence of more proactive policing techniques in response to community demands.

It is notable that the measures of percent minority managers and political representation (minority line to population) do not appear to influence the dependent variable as hypothesized.

Minority managers do not achieve statistical significance in any models, despite the expectation that their influence over internal policies and practices would have a protective effect on conflict measures. Further, no apparent relationship exists between how well police agencies represent minorities in comparison to their respective representation in the surrounding community. The control of minority threat achieves fairly consistent significance across models for assaults. As the threat posed by Blacks to White interests grows, greater conflict between the police and citizens is found. Police may be called upon to use more coercion against minorities where these groups grow larger in size, encroach upon White economic resources, and are residentially segregated, emphasizing racial differences. Finally, structural disadvantage is frequently linked to more police assaults. Areas suffering from greater economic inequality, poverty, and family disruption are the most likely to have citizens who act out violently against police officers. Such a finding could reflect responses of residents to more frequent and aggressive police interactions.

Police use of deadly force

-- Table 7b about here --

The Negative Binomial models explain a far greater degree of the variance in police use of deadly force than the effectively similar police officer murder models.<sup>126</sup> Bureaucracy is once more a highly significant predictor of police-initiated killings. This might indicate that more bureaucratic agencies are less responsive or that larger departments in larger cities are the most likely to have crime events that end with suspects being killed by police. The relevant diversity measures show that the percentages female and minority line officers are associated with more

deadly force incidents. Female and minority managers, too, exert a significant positive effect on this dependent measure. Interestingly, when Latinos are equally represented in line and manager ranks, less lethal force is used by that agency. This finding offers further support in part to the hypothesis that diversity perspectives matter. Line and management diversity when considered on their own can lead to more deadly force, and not less. It is only when these two variables are measured in light of one another that representation produces the expected reduction in police-citizen conflict. In other words, when line- and management-level diversity are examined independently in models, their impact is a decidedly negative one; when the relationship between line and managerial diversity is taken into consideration, though, the effect becomes more theoretically meaningful. What this could suggest is that the degree of organizational diversity at the line and management levels is not as important as how evenly spread, or well-integrated, diversity is between ranks. Perhaps relative proportions measure only symbolic representation, while the ratio figures representing diversity perspectives are indicative of diversity's substantive effects.

The ratio of Black, Latino, and total minority police to citizens belonging to these same groups is unrelated to police use of deadly force. The political will of minority groups does not appear to influence the degree of police-citizen conflict. Recall the hypothesis that political representation through proportional minority presence in law enforcement would reduce conflict by giving minority groups a voice in directing police policy; this power would enhance minority perceptions of police legitimacy, and thus cooperation. Minority threat has influence over police use of deadly force. In the cities where Blacks represent the greatest threat to majority group member interests, police are more likely to exercise deadly force against citizens. The structural disadvantage scale and the minority mayor presence variable are found significant intermittently.

That minority mayors are associated with more use of deadly force (and not less) is surprising and contrary to what other researchers have found (cf. Jacobs & O'Brien, 1998). However, some have argued (cf. Ousey & Lee, 1998; Parker et al., 2005) that minority mayors could actually represent a threat to White majority control over the machinery of politics and the distribution of resources. In light of the significant effect found for the threat scale, the positive direction of the relationship between mayors and force may find explanation in this theory. Violent crime rates reach significance across models, but the sign of this effect is also not as anticipated. It would appear that areas with more violent crime are home to police officers who exhibit a greater level of restraint.

Disparate drug arrest rates<sup>127</sup>

-- Table 8b about here --

The OLS models of drug arrest rate disparity have relatively strong explanatory power ( $R^2 = .668$  to  $.701$ ).<sup>128</sup> As the representation of African Americans in manager and line positions approaches parity, there is a concomitant reduction in the disparity between Black and White drug arrest rates. Integration-and-learning agencies, as operationalized here, do appear to promote the equitable distribution of formal sanctions. The effect of percentage Black line is consistent with its effect in assault and deadly force models; as the proportion of Black officers increases, so too do arrest rate disparities. Note yet again that no effect is present for Black managerial proportions, considered discretely. Taken together, these results lend further support to the centrality of diversity perspectives, with positive effects observed when diversity is evenly

spread (integration-and-learning organizations) and negative effects when it is limited to first-line positions (access-and-legitimacy organizations). Diversity, in two of its operationalized forms, appears to be a key variable that encourages evenhandedness in the distribution of formal sanctions.

The minority group threat index behaves as anticipated. In fact, minority threat is the most powerful correlate of arrest disparities in the entire model. African American population size, economic competition, and residential segregation increase in line with the rate of disparity between Black and White arrest rates; evidence that police use a disproportionate amount of coercion when White interests are threatened. Rates of violent crime are significant and positively related to the dependent measure. In more violent cities, more Blacks than Whites are arrested for the same drug offenses. Interestingly, degree of bureaucratization is for the first time insignificant in relation to the dependent measure. Minority mayor presence is associated with greater racial unevenness in drug arrest rates (in 2 of 3 models), just as it had been in police use of force models. The question remaining is whether this construct is measuring minority political threat or something else; could a minority mayor influence his or her police department to focus on the crime issues facing minority communities, thereby increasing the quantity of Black drug arrests? Finally, cities with more crime have higher disparities in arrest rates. Where violent crime is common, drug and arrest activity could be more common too; if overall arrests increase, it is likely that any patterns of disparity will be amplified.

## Conclusions and Policy Implications

### *The Determinants of Diversity – Minority Line Representation*

Several consistencies are evident across all minority line officer representation models. First, the minority political power constructs are extremely powerful explanatory factors in most cases. The amount of political power and representation that a group enjoys is closely related to the hiring of officers belonging to these same groups. This is particularly the case for racial and ethnic minority police models. Second, minority leadership plays a very large role in the hiring of minority line officers. While it was predicted that minority chiefs and managers would both explain minority line officer presence, it was not expected that the latter would exert a greater degree of explanatory power than the former. Perhaps mid-level police managers are more direct participants in the recruitment and screening process than farther removed police chiefs. For example, it may be that managers are responsible for conducting many of the intermediate steps involved in the hiring process, including background checks and panel interviews, granting them more control over final selection decisions. Third, we notice that for the most part, the presence of other minority groups in line positions is not an encumbrance. Results consistently contradict the zero-sum game hypothesis. Fourth, higher salaries are associated with more minority line officer presence, and not less. Recall the hypothesis presented earlier that higher salaries would increase competition from Whites who found police positions desirable (Saltzstein, 1989). It could be that majority group members are less willing to endure the danger, physicality, and sleaze (cf. Bayley, 1994) that are part of police work, despite the field's attractive compensation, benefits, and job security.<sup>129</sup> A fifth observation relates to the results gleaned from the racial and ethnic (as compared with gender) line officer models. It would appear based on model predictive

power that many of the hypothesized correlates of minority hiring best explain African American and Latino representation in particular. If these models serve as examples, we see that almost every theoretical explanation for minority group hiring proposed in the literature is statistically significant. Far fewer of these explanations are relevant when female presence is examined. This may indicate that recent recruiting and diversity initiatives have targeted and work best for racial and ethnic minorities, not women – a theory that finds support in the fact that female officers remain significantly underrepresented in the field despite historic increases in the representation of Blacks and Latinos (cf. Hickman & Reaves, 2006).

-- Table 14a about here --

#### *The Determinants of Diversity – Minority Managerial Representation*

Consistencies are also evident across minority management representation models, some of which are evidenced in line representation models. The first observation concerns a striking lack of significance for the minority political power constructs. One of the more central predictors in line models, this variable has no impact whatsoever on the promotion of minorities. It was hypothesized that minority group size and political representation would explain not only the hiring of minority officers, but also their promotion to the mid-level management positions that exercise a greater degree of control over organizational decision making. The size and strength of minority groups was expected to manifest in the promotion of fellow minority police managers sympathetic to the interests of minority communities and well positioned to change department-wide policies and priorities accordingly. That political power explains hiring and not promotions could be interpreted to mean that diversity initiatives are insincere and based

primarily upon an access-and-legitimacy diversity perspective. The political demands of Blacks and Latinos may be satisfied when the more visible ranks of police agencies are reflective of the race and ethnic makeup of a given city; minority officers are therefore hired to gain access to a minority community and enhance perceptions of legitimacy there. Meanwhile, management jobs are unaffected by this political influence, allowing majority group members to retain most of the control over policy while projecting an appearance of diversity.

Minority management models find affirmative action policies sporadically significant for certain race/ethnic/gender combinations and not others. Results show that such policies explain the representation of Black, female, and total minority managers, but not Latino managers. Affirmative action policies are wholly insignificant in all line representation models. Perhaps this finding coincides with the argument posed earlier that most affirmative action policies are narrowly tailored, as required by law, and thus influence the recruitment of certain groups under certain circumstances while not benefitting others in any substantive way. Where affirmative action policies are significant in managerial models, it appears that only formal policies have a positive impact; informal policies actually reduce diversity. To reiterate, formal policies could have this effect because they set specific goals and timetables, and in some cases, are enforced by law. Informal policies lacking a clear focus, mechanisms for gauging success, or the “teeth” of legal recourse might prove counterproductive by creating an impression of equal opportunity that is not backed up with real change in the composition of personnel.

Line and management models are also consistent in their emphasis on bureaucracy and average salary as key covariates. Large and bureaucratically complex agencies are most likely to be staffed by minority managers of all race, ethnic, and gender combinations. This finding lends more support to the argument that larger agencies reflect larger populations whose minority

concentrations and openness to affirmative action encourage the promotion of minority police officers to more prestigious and better-paying management jobs. The same argument for the relationship between minority line representation and average officer salary pertains to the representation of minority managers. Perhaps policing represents a blue-collar profession with white-collar pay and benefits; this unique status could make the field more appealing to minority applicants who subsequently form the pool of potential candidates for promotion.<sup>130</sup>

Line and management models differ slightly in that the percentage of minority line police is not consistently associated with minority promotion, as percentage minority manager is with minority line police. Only percent African American and percent total minority line figures explain increases in the managerial representation of their respective categories. The managerial models do not assign any influence to the minority police chief; chiefs appear to maintain power over hiring decisions only. Finally, there is some evidence that the zero-sum game hypothesis may apply more so to management than line representation. The quantity of Black managers shrinks when a greater proportion of Latino managers is present and more Black managers mean fewer female ones in this study. In comparison, no one minority group shuts out any other in line representation models. This could be a factor of the relatively small number of managerial positions available. Opportunities for promotion are exceedingly rare in the field of policing, with most officers remaining in line-level positions throughout their careers (cf. Bayley, 1994).

#### *The Effects of Diversity – Minority Representation, Conflict, and Bias*

The analyses presented above do offer some evidence that organizational diversity has an influence on the outcome measures of police-citizen conflict and racially biased arrest patterns. Perhaps the most notable findings relate to Hypotheses 2a and 2b. Results indicate that the ratio

of minority managers to minority line has the most consistent and theoretically salient impact on the dependent measures examined. Despite the lack of a relationship with felonious killings of police officers, this ratio is significant in multiple models explaining police assaults, police use of deadly force, and patterns of arrest for drug offenses. The direction of this effect is arguably “positive;” diversity as specified is beneficial, saving the lives of both police officers and citizens and ensuring that formal sanctions are not disproportionately applied to minorities.

The diversity perspective (Thomas & Ely, 2001) that a department holds would appear to have some degree of influence over these very constructive outcomes, in certain situations. An access-and-legitimacy diversity perspective predominates in agencies with a lot of line diversity, but little evenness in minority representation across line and administrative ranks. It could be that in these agencies, minority police are hired for the sole purposes of gaining entry into minority communities and promoting perceptions of legitimacy; their cultural capital is not appreciated or cultivated, as it is in the integration-and-learning environment, and therefore does not lead to the kind of cultural awareness that might affect behavioral change. The access-and-legitimacy perspective is less sincere. It relegates minority representation to the most visible fringes and blocks its entry into positions of power and authority, which remain the province of majority group members. If diversity is just an appearance management technique that disguises police policies that favor majority group interests, it would follow that more minority officers might increase conflict and arrest rate disparities. Also note that minority managers, on their own, only twice impact a dependent measure (police use of deadly force), and even so, this effect is not in the expected direction; they do, however, have the hypothesized impact when they are found in proportions greater than or equal to line-level minorities. Minority management may only be significant in relation to the corresponding percentage line because this ratio is reflective

of police agencies where managers are fully integrated, and not just found in token numbers. A more sincere diversity commitment prevails in integration-and-learning organizations, and the results indicate that it is in these organizations that diversity sometimes helps in the ways it has been assumed to by policymakers. The distribution of minorities throughout police departments appears to be of great importance when diversity effects are concerned.

A second observation concerns the overall lack of significance for two proposed diversity constructs: minority managerial proportions and ratios of minority police to minority citizens. In just two out of 13 models is the former found significant; in no models is the latter a significant covariate of any dependent measures. It was hypothesized that minority managers would reduce police-citizen conflict and bias (Hypothesis 1b) due to their influence over internal policies and priorities, as well as their ability to control line-level officer behavior. This is not found to be the case. Indeed, managerial representation actually appears to aggravate the dependent variables (Hypothesis 1a), a result that may find explanation in the diversity perspective discussion above. At the same time, it was also expected that those agencies that represented the demographics of the cities they served would experience fewer acts of violence and less disparity (Hypothesis 3a). Minority representation in policing was expected to replicate the benefits other forms of political representation (e.g., minority mayors, city councilors) had in prior studies. Minority groups were anticipated to cooperate with police more if they had some influence over the police strategies that affected their day-to-day lives. This empowerment should have reduced “acts of resistance” like assaults and killings of police on the part of frustrated minority groups. A measure identical to Walker’s EEO Index, this variable is never significant, lending no support to this theory. The minority public may not necessarily view the police as political representatives in the same way they view other elected officials like mayors or city councilors; perhaps less symbolic meaning is

attached to the presence of minorities in these less prominent government roles. Maybe minority police do not inspire the same group pride and psychic benefits that minority political leaders do (cf. Marschall & Shah, 2007; Gilliam, 1996). Also, the proportionality between minority police and citizens says nothing about how a given organization uses diversity to its advantage. For example, even if a department's ranks mirror the composition of the city it serves, this measure gives no indication of the diversity perspective that agency holds; is it an access-and-legitimacy agency or does it favor the integration-and-learning perspective more? Two departments with identical ratios on this particular scale could view diversity very differently. The political power constructs do not measure the extent to which organizations value minority contributions or how they might use their cultural resources to affect the outcomes examined.

A third significant trend relates to the contributions of specific minority groups across models. Ratios of female managers to line and Latino managers to line reduce assaults and use of deadly force, respectively. Percents female and minority officers are associated with increases in both measures independently. Further, African American manager to line ratios and percent Black line figures explain variations in drug arrest rate disparities. For this set of outcomes, it would seem that various minority groups exert their own unique effects. Perhaps agencies that appreciate a female perspective learn from women officers, who are believed to use less physical force and be better at defusing and de-escalating potentially violent confrontations with citizens, such as those that might lead to assaults (Lonsway et al., 2003). The relationship between less deadly force and organizations that integrate Latinos could be explained by the ability of these minority officers to enhance communication with citizens, in part by exposing fellow officers to Latino culture and in part by breaking down language barriers (cf. Walker & Katz, 2008). Those agencies that integrate and learn from African American police officers might be better equipped

to resist racial stereotypes and allow perceptions of minority threat to influence patterns of police coercion. The results suggest that each minority group may contribute to the effects of diversity in their own unique ways and that “diversity” can come in many forms. Different combinations of minorities bring different benefits.

A final comment concerns the importance of controls to the integrity of all models. The lack of a protective effect for minority mayor presence was unexpected, particularly in light of previous empirical results (cf. Jacobs & O’Brien, 1998; Jacobs & Carmichael, 2002). Where these mayors are significant, they actually increase conflict and disparity, rather than reducing it. Nonetheless, several other control measures are consistent in their statistical and theoretical significance, explaining moderately large portions of variability across four dissimilar dependent variables. Bureaucracy represents the most widely significant variable, playing a key role in most models, and standing alone as the only significant covariate of felonious officer deaths. This robust result might be interpreted in one of two ways: 1) higher scores on the index of bureaucracy indicate less responsive agencies whose officers are “blue” rather than members of Black, Latino, or female cultures; 2) higher scores on the bureaucracy index are a proxy for city size, in which case the largest cities population-wise have the most assaults, officer killings, and police use of deadly force.<sup>131</sup> Minority threat is also a very powerful predictor across models, and in one set (for arrest rate disparities), the most powerful predictor. As threat becomes more prevalent, Whites can move to protect the status quo by using formal social control resources as a means of controlling minority groups. In multiple models, percent Black, racial inequality, and racial residential segregation combine, intensifying conflict and biased police practices. This finding is consistent with prior research that noted minority threat’s contribution to increases in police officers killed or assaulted (Jacobs & Carmichael, 2002), felons killed by police officers

(Jacobs & O'Brien, 1998), and arrest rate disparities (Parker & Maggard, 2005). Minority threat exerts a great deal of influence over the dependent variables examined here. That some diversity measures maintain statistical significance when threat is held constant, though, is confirmation that the race, ethnic, and gender composition of police personnel can work to counterbalance majority group efforts to protect their interests by using police coercion against minorities.

### *Study Limitations*

This examination is certainly not without its methodological limitations, so results should be considered tentative, with the following qualifications in mind. Both sections of the present study feature samples that are constrained by the availability of data across multiple sources. This is particularly of concern for the hiring and promotion analyses presented, as the use of DGSS data resulted in the loss of several hundred cases and a final sample size of 180 cities/agencies. While there is no reason to believe the matching process employed eliminated cases in a systematically biased manner, it remains possible that significant differences could exist between those departments whose data is and is not reported from dataset to dataset. Also, both the smaller “determinants of diversity” sample and the considerably more representative “effects of diversity” sample (n = 434) generate results which cannot be generalized beyond large American municipal police organizations. The same hiring, promotion, and organizational behavior trends related to diversity might not be observed in smaller agencies or county, state, federal, or international police settings. Finally, external validity could suffer due to the age of this data. Since all sources are over a decade old, it is possible that the dynamics affecting the various dependent variables analyzed herein have changed and that results will not be replicated in agencies operating in 2010 and beyond.

The unit of analysis in this research is the city/agency. It was argued earlier on that this unit of analysis has its merits when examining line and managerial police representation in that it allows for more of a “big picture” or contextual approach, taking into consideration a wide range of internal and external factors. It also makes sense given the facts that most American police agencies are organized at the city level of geography and influenced by the budgetary and other decisions of local politicians like mayors and city councilors. The same argument is tenuous though, when applied to the “effects of diversity” portion of this analysis. Even if it is true that police are a bigger part of social life in large cities, using the overall degree of minority officer representation in a given agency to explain aggregated outcomes is imprecise; it is impossible to determine what types of officers are interacting with what types of citizens in what types of areas on a day-to-day basis. For example, it could be that Latino officers working in primarily Latino neighborhoods reduce a given conflict measure there while total Latino officers have no impact on this measure when data from all neighborhoods comprising a city are combined. Aggregating to the city level here would obscure the very real (albeit small, comparatively) and theoretically significant effect taking place at a more precise unit of analysis. The results from the second part of this study are limited in this sense and should thus be interpreted with caution.

In the present study, complex social processes are inferred from cross-sectional data. The line and managerial representation analyses do include lagged measures (e.g., mayor tenure), but for the most part, the hiring and promotion of minorities in 2000 is explained using variables that measure various internal and external characteristics of each city/agency at one specific point in time that same year: factors like minority chief presence might take time to manifest in changing patterns of representation; affirmative action policies could be more or less effective depending on when they were instituted and how long they were in effect; crime rates might not lead to

calls for more police officers until several years of increases accumulate, signaling a trend. At the same time, the same sets of factors that explain minority representation at the ranks of line and management in 2000 might not have the same effect on this representation in prior or later years. In light of this limitation, it is important to clarify that the terms “minority hiring” and “minority promotion” are referring to the actual presence of minorities in line and managerial police roles, respectively, in 2000 and not necessarily the total number of minorities hired or promoted in that year; minority hiring and promotion are in reality minority line and managerial representation at a specific time and should be understood as such. Analyses of diversity effects are less limited by this study design. The three diversity constructs are cross-sectional and show how diverse agencies were in each respect in 2000; the four dependent variables studied, though, are all calculated using five years of data covering 2000 through 2004. Whereas this is not a true longitudinal approach, the lags used do help in approximating the temporal relationships between variables.

Additional limitations relate to the specification of several variables used in the present study. The construct of diversity, as both an independent and dependent measure, is limited in scope. While justifiable, not all race and ethnic minorities (e.g., Asians, Native Americans) are studied, nor are specific analyses of race/ethnic/gender status combinations performed. Also, it is quite possible that diversity is a concept to which many other social minorities contribute, including homosexuals, those who are physically or mentally disabled, or members of certain religious groups. The individual impacts of these minorities are not given the opportunity to be felt. The operational definition of diversity used in this study is however consistent with how police researchers, policymakers, and practitioners have characterized the concept since the 1960s (i.e., in terms of racial, ethnic, and gender representation). The ratio of minority managers

to minority line officers is at best, a very rough indicator of a department's diversity perspective. Even though steps were taken to enhance the meaningfulness of this variable, it is still a fairly large theoretical leap to assume this simple calculation reflects the very complex social dynamics that create the norms and value systems of an organizational culture. The measure is limited, but nonetheless novel and theoretically sound, based upon Thomas and Ely's (2001) proposition that the level of minority presence in administrative positions is one factor that helps identify how an organization views diversity. The political power construct (i.e., minority police to citizen ratio) also has its limitations in that it might not be measuring the degree to which minority citizens feel their voices are being heard. Just because police officers and citizens from a given minority group reach representational parity does not necessarily mean that the former will be any more or less responsive to the latter. Citizens might not channel their political influence and concerns with police through police personnel directly; instead, they may prefer to petition other elected officials like mayors. Also, minorities might not perceive the police as a political institution in the same way as other political offices, so representation in the police force might not have the same symbolic impact as representation at city hall. Finally, minority police to citizen ratios will probably have less meaning in cities with the smallest minority populations. This limitation is partially addressed by the inclusion of a minority mayor presence variable in all models.

The dependent variables from the "effects of diversity" portion of the present study all share some important flaws that should be noted. First, each is calculated with data gathered from official sources. Data for police assaults and arrests reflect only those incidents that are known to and recorded by police officers. Definitions of assault and narcotics offenses can vary tremendously from jurisdiction to jurisdiction. Both outcomes can include a very wide range of behaviors and precision is lost by aggregating minor and serious assaults and all drug arrests into

single categories. There is less concern with the felonious police officer death and police use of deadly force figures in this respect, as these events are more likely to be accurately reported. It should still be acknowledged that police officer and citizen deaths are exceedingly rare incidents (and therefore more difficult to model statistically) and that both parties can be killed under very different sets of circumstances. Second, the nature of these dependent variables can make the interpretation of diversity's effects on them somewhat ambiguous. For example, decreases in police use of force, arrest rates, or police assaults and murders (in light of diversity level) could be taken to mean one of two things: 1) diverse agencies do a better job of reducing police-citizen conflict and bias; or, 2) diverse agencies are less responsive to the community. Are decreases in the conflict and bias measures really the result of less interaction with citizens? It is possible that a more responsive agency (thanks in part to its level of diversity) has more negative encounters with citizens because it is being asked by the community to be more aggressive. An agency may need to use more force, make more arrests, and face the threat of violence more frequently to effectively do its job. In this sense, increases or decreases could be either "good" or "bad" police work. Finally, three of the dependent measures are limited because they are not race-specific. Most diversity hypotheses expect that minority representation will have an impact on minority outcomes. The three conflict indicators sum incidents of lethal and nonlethal violence against police and lethal violence used by police against citizens; no information is available regarding the race, ethnicity, or gender of the officers or citizens involved. This precludes what would be a more theoretically relevant examination of whether diversity reduces force directed at minority citizens or assaults or murders of police carried out by minority citizens. Data limitations only allow for the modeling of diversity's relationship to total conflict. The bias construct, as noted, is the only race-specific dependent measure analyzed.

### *Implications for Policy and Future Research*

Notwithstanding its methodological limitations, this study of the determinants and effects of organizational diversity in municipal police agencies still offers many key policy implications. One rather broad social policy suggestion is to promote the representation of minorities across the spectrum of public employment. As diversity in public office emerged as one of the most robust correlates of diversity in policing, one of the best ways of ensuring a representative police may be to ensure a representative local government. There is evidence that one way in which minority leaders reward their constituents is by helping them attain local police jobs. A problem with this suggestion, though, is that the presence of minorities in political office tends to be highly correlated with the size (and therefore collective influence) of the minority populations inhabiting a particular community. It is unclear what repercussions this finding has for cities that are home to small African American or Latino populations or the other less prevalent minority groups (e.g., Asians, Native Americans, etc.) not considered here. If political representation plays such a central role, how much more difficult will it be for the aforementioned categories to make inroads into the policing field? Agencies actively seeking to recruit a diverse workforce under these conditions should be mindful of the potential effects of political underrepresentation; it may be necessary for them to take deliberate steps to reach out to smaller minority populations and attract a sufficient number of candidates.

A second theme illuminated by the results of line and managerial representation analyses is that key explanatory variables influence different types and levels of minority representation in different ways. The racial and ethnic line officer diversity models are the most complete and consistent, but the same factors do less of a good job of explaining female officer presence and the presence of managers of any minority affiliation. What this suggests is that “diversity” is not

a one-dimensional concept – that race/ethnic, gender, and line vs. managerial diversity are each unique somehow and therefore require separate lines of theorizing and empirical study. This and prior research has assumed that all diversity is the same and can be explained using the same theoretical bases and set of factors, ignoring the possibility that these might impact some groups and not others or that other, thus far unmeasured variables are associated with the representation of particular groups in particular roles. Future researchers might seek out distinct explanatory factors that are theoretically pertinent to individual minority groups. For example, it is possible that female (but not African American or Latino) representation is affected by social perceptions of the gender-appropriateness of police work for women, resistance on the part of police culture to feminine presence, or the requirements of physical abilities test. Viewing police diversity through a feminist lens, for example, might aid in identifying additional covariates relevant to female officers' decisions to apply for police jobs or promotions, or their perceptions of barriers blocking these goals. Furthermore, minority advancement could be a function of the number of opportunities for promotion, officer seniority, or the level of education required for management jobs. Or, maybe a conflict point of view has something to offer as a theoretical basis here; are majority groups blocking minority access to more prestigious management positions in an effort to protect their interests in them? Future researchers seeking to answer these important questions should consider a qualitative methodological approach at a more precise level of analysis. An inductive approach can be used to uncover any thus far overlooked explanatory factors and build theory; at the same time, a deductive approach can enhance the validity of quantitative findings by asking minorities directly whether our interpretations of patterns are correct and represent the real minority experience. Results gleaned could then inform hypotheses in future macro-level studies, completing the feedback loop.

This is not to say that researchers should discard those correlates which have traditionally been included in representation models; many have had consistently powerful predictive power and a few (e.g., bureaucracy/city size, average salary) work well to explain all diversity. Instead, future inquiries should add to the present list of common correlates by experimenting with new ones. This research, for example, offers minority managerial representation as a new covariate for consideration. A fuller understanding of diversity dynamics would appear crucial because those groups whose representation is the least studied and least well understood are the same groups (i.e., female line, minority managers) who remain considerably underrepresented in policing (cf. Hickman & Reaves, 2006; Ward, 2006). Departments will be better able to diversify their ranks and target specific underrepresented groups if they are aware of what “pushes” and “pulls” draw these individuals into the field and tailor their recruiting strategies accordingly. Developing more complete models of minority promotion may be especially important because mid-level managers were shown to exert even greater influence over the selection of minority line officers than minority chiefs.

The second part of this examination (the effects of diversity) also makes a case for why the continued study of minority managerial representation and its correlates is essential. Results lend some support to the theory that line-level diversity on its own cannot produce the beneficial “diversity effects” theorists and policymakers have expected it to produce. What seems to really matter is how well integrated minorities are in a police organization’s rank structure. Relative proportions of line and managerial minority representation, when considered individually, are found to increase conflict and disparity, when significant. Measuring these proportions in light of one another, however, reduces the same outcome measures in select cases: female manager to line ratios reduce police assaults; Latino manager to line ratios reduce police use of deadly force;

and African American manager to line ratios reduce disparate patterns of drug arrest. The implications of this trend are in agreement with Cashmore's (2002) diversity policy proposal. Recall that he advocated shifting the focus from numbers alone to the quality of positions held by minorities. Cashmore called for accelerated promotion schemes or fast-tracking to diversify the upper ranks of police agencies. Provided that the modest results of this study find replication in future research, departments hoping to benefit from diversity might consider this option, with the qualification that they continually monitor the parity of line *and* managerial representation.

The observed relationship between management and line ratios and the outcomes studied also underscores the significance of organizational diversity perspectives. The ratios are crude indicators of whether a given agency holds an access-and-legitimacy or integration-and-learning perspective (Thomas & Ely, 2001). As operationalized, integration-and-learning departments are more likely to display positive diversity effects across a series of police-citizen interactions. Future researchers should more methodically examine the role that diversity perspectives play in policing and develop more valid ways to measure them. It might also be valuable to learn more about the social processes through which perspectives develop and what can be done to promote the apparently more beneficial integration-and-learning approach in modern agencies through education and training. Since Thomas and Ely's (2001) foundational work was the result of a qualitative methodology, it may be more suitable to qualitatively examine diversity perspectives in a police context. As discussed previously, the construct used to measure diversity perspective in the present study is admittedly basic; future qualitative research could advance understanding of these complex social phenomena while identifying more valid ways to operationalize diversity perspectives in larger-scale studies.

The second part of the present study provides some preliminary evidence that diversity's effect is dependent on where we find it and thus that diversification policy should focus on both the hiring and promotion of minorities. That the ratio of minority police officers to citizens is never significant suggests that the traditional benchmark by which departments have gauged their success at achieving representativeness is misguided. The Equal Employment Opportunity (EEO) index has been used for decades to measure how well a police department reflects the race and ethnic composition of the community it serves (Walker & Katz, 2008). As a result, agencies have focused more on the ratio of their ranks to city demographics than the ratio of management to line diversity. While the EEO index is certainly a very useful measure, departments may also wish to collect data on and calculate ratios for the degree of representation found between ranks.

A final note relates to the observed patterns of significance for the diversity perspective construct. The diversity measure yielding the most theoretically salient results only "works" under specific conditions. Agencies with integrated gender diversity experience fewer police assaults while Latino managerial and line parity decreases use of deadly force incidents; African American ratios reduce bias in arrest patterns. Indeed, the "total diversity" ratio is the only diversity perspective measure that fails to achieve significance in at least one model. This could indicate that the members of different cultural identity group bring to the police workforce unique insights, skills, and experiences that render them more or less able to positively affect a given substantive outcome. As with studies of minority hiring and promotion, future researchers may want to examine the potential contributions of minority groups independently. If diversity continues to be specified in terms of either a single minority groups' presence or aggregately (combining all minority groups), any observed results could be misleading. This rationale for specificity inevitably begs the question of whether the parameters of diversity should be

expanded to include more minority groups. No identified authors have defined diversity in anything other than race, ethnic, or gender terms. If we are to believe that race, ethnic, and gender minority groups provide special benefits, why then, would we not expect homosexual, Jewish, physically disabled, older, younger, poorer, or richer officers to follow suit? In addition to lesser-studied race and ethnic groups (e.g., Asians, Native Americans), future research might include these minorities (and perhaps combinations of minority statuses) in analyses explaining a wide range of outcomes to help parse out which groups influence which indicator.

It is also important to build a more comprehensive theoretical basis for understanding the unique impacts associated with a given group's presence in an agency. Why, for example, does female diversity alone impact police assaults? Is this explained by cultural proscriptions on the use of violence against women? Does it indicate that females do a better job of peacefully resolving conflicts than males, as others have suggested (cf. Lonsway et al., 2003)? Once again, female officer impact on various police outcomes may be better understood in light of a feminist perspective than the narrow diversity perspective and political power approaches offered here. At the same time, why do departments with more diversity in the form of Latino integration use less deadly force? Is this a product of better communication between officers and citizens, perhaps due to Latino officers' excellent foreign language skills (cf. Walker & Katz, 2008)? Finally, does an agency with a greater degree of African American diversity reduce bias in the application of formal sanctions because Black officers identify with Black citizens and help acquaint White colleagues with an unfamiliar culture (cf. Smith, 2003)? The unit of analysis in the present study precluded more sensitive, in-depth analyses of these research questions. Future researchers may find it fruitful to qualitatively examine some possible theoretical explanations

for the observed quantitative relationships. It is recommended that these patterns are considered from multiple criminological perspectives, and not just those presented in this study.

Researchers, policymakers, and police officials should recognize that diversity comes in many forms. It is a complex phenomenon whose determinants and effects will require further systematic inquiry before firm policy recommendations are in order. The present study's results are by no means conclusive but they do at least suggest that the continued study of organizational diversity is promising and worthwhile. This research brings the academic community one small step closer to understanding the dynamics of minority hiring and promotion and offers some very modest support to the oft-touted proposition that diversity can enhance the performance of a police force in substantive ways. Future researchers are encouraged to test and build upon the conclusions of this study.

## Notes

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<sup>1</sup>Although, see Weitzer (1998) who argues that disparities in perceptions of the police fall more along class lines than racial ones.

<sup>2</sup>While Latinos rate police lower than Whites, their ratings are nonetheless consistently higher than those offered by African American respondents (cf. Webb & Marschall, 1995; Weitzer & Tuch, 2004; Hagan, Shedd, & Payne, 2005; Schuck & Rosenbaum, 2005; McCluskey, McCluskey, & Enriquez, 2008).

<sup>3</sup>Some recent analyses, however, had conflicting results. Schuck & Rosenbaum (2005) found no difference between White, Black, and Latino respondents in regard to their satisfaction with the police; McCluskey, McCluskey, and Enriquez (2008) and Correia (2010) found that Latino respondents and immigrants held higher opinions of police than Whites.

<sup>4</sup>Walker points out that perceptions of over- and under-policing might be related to age. As a result, the same neighborhood might be over- and under-policed at the same time, depending on who you ask. Older residents feel the police do not meet their demands while younger residents feel harassed by aggressive police tactics.

<sup>5</sup>According to Brandl et al. (1994), police practitioners consider citizen support an essential element in the coproduction of public safety (e.g., community policing initiatives)

<sup>6</sup>Walker (1985) points out that virtually every national report on the police over the 20 year period following the Kerner Commission report recommended hiring more minorities and women.

<sup>7</sup> Women, like minority males, are also believed to bring certain special competencies to police work. Researchers from The National Center for Women and Policing, for example, maintain that women officers use less excessive force, are better communicators, and respond more effectively to violence against women than male counterparts (Lonsway, Moore, Harrington, Smeal, & Spillar, 2003). Despite their unique qualities, it is well accepted that the impact of minorities, women, and minority women is a positive one.

<sup>8</sup>Police departments have taken steps to hire Latino officers to overcome language barriers in Spanish-speaking areas (Walker & Katz, 2008; cf. Herbst & Walker, 2001).

<sup>9</sup>The political nature of crime and justice is well recognized (Minor, 1975). Quinney (1964:20) notes that “As an instrument of social control, criminal law is most importantly characterized by its politicality. That is: 1) specific rules of conduct are created by a recognized, legitimate authority, 2) designated officials interpret and enforce the rules, and 3) the code is binding on all persons within a political unit. Criminal law is thus an aspect of politics, one of the results of the process of formulating and administering policy.”

<sup>10</sup>Fewer police-initiated fatal shootings could also be interpreted as an indicator of less resistance on the part of the public. Provided police officers are acting within the law, they should only employ deadly force in response to serious citizen-initiated threats against them.

<sup>11</sup>The Commission on Accreditation of Law Enforcement Agencies (CALEA) *Standards for Law Enforcement Agencies* even include a reference to diversity, recommending that the minority composition of police forces reflect minority presence in the communities policed.

<sup>12</sup> <http://www.hpdcareer.com/SS6-1280.html>

<sup>13</sup> <http://www.houstontx.gov/police/career/images/wile.jpg>

<sup>14</sup> <http://www.joinlapd.com>

<sup>15</sup>[https://portal.chicagopolice.org/portal/page/portal/ChicagoPolice/GET\\_INFORMED/InsideCPD/JoinTeamCPD](https://portal.chicagopolice.org/portal/page/portal/ChicagoPolice/GET_INFORMED/InsideCPD/JoinTeamCPD)

<sup>16</sup>[http://recruiting.dallaspolice.net/index.cfm?page\\_ID=7809&CFID=80029&CFTOKEN=86426083](http://recruiting.dallaspolice.net/index.cfm?page_ID=7809&CFID=80029&CFTOKEN=86426083)

<sup>17</sup>[http://www.ppdonline.org/pdf/hq/2002report\\_low.pdf](http://www.ppdonline.org/pdf/hq/2002report_low.pdf)

<sup>18</sup><http://dcpolice.jobs/diversity.aspx>

<sup>19</sup>[http://www.phoenix.gov/joinphxpd/women\\_topics.html](http://www.phoenix.gov/joinphxpd/women_topics.html)

<sup>20</sup><http://www.detroitmi.gov/Departments/PoliceDepartment/PoliceJobOpenings/tabid/792/Default.aspx>

<sup>21</sup><http://dcpolice.jobs/diversity.aspx>

<sup>22</sup>[http://dcpolice.jobs/women\\_line\\_duty.aspx](http://dcpolice.jobs/women_line_duty.aspx)

<sup>23</sup>[http://www.dallaspolice.net/index.cfm?page\\_ID=2708&subnav=53&openid=2](http://www.dallaspolice.net/index.cfm?page_ID=2708&subnav=53&openid=2)

<sup>24</sup>[http://www.dallaspolice.net/index.cfm?page\\_ID=6114&subnav=53&openid=2](http://www.dallaspolice.net/index.cfm?page_ID=6114&subnav=53&openid=2)

<sup>25</sup>[http://www.phoenix.gov/joinphxpd/women\\_topics.html](http://www.phoenix.gov/joinphxpd/women_topics.html)

<sup>26</sup><http://www.homeoffice.gov.uk/police/about/police-equality/>

<sup>27</sup>No citations are presented to support these claims.

<sup>28</sup> Walker & Katz (2008) caution that trend data on minority and female representation are not strictly comparable because national surveys over the years have used different samples.

<sup>29</sup>This was the earliest year for which data were available; Walker & Katz (2008) explain that longer term data on Latino police representation is difficult to obtain because early surveys did not ask for data on this group.

<sup>30</sup>The term “minority” here refers to empirical analyses of the representation of African American, Latino, and (White, African American, Latino) female police officers. No identified studies have examined the representation of other minority groups (e.g., Asians, Native Hawaiians or other Pacific Islanders, American Indians, Alaska Natives, and any other race). This is likely due to the fact that Blacks, Latinos, and women form the largest and fastest-growing minority segments of American municipal police ranks. The other minority groups listed above are relatively rare in the field of policing, comprising only 2.8 percent of all officers (when combined) as of 2003 (Hickman & Reaves, 2006).

<sup>31</sup>This is referred to as “active” (vs. “passive”) representation (Saltzstein, 1989; Eulau & Karps, 1977).

<sup>32</sup>No identified authors had considered the impact of the rate of change in minority group representation over time. This measure enjoys popularity in the minority group threat literature, much of which considers the impact of minority group size on police strength (e.g., department personnel and budget fluctuations; cf. Nalla, Lynch, & Leiber, 1997; Jackson, 1989).

<sup>33</sup>Percentage Black population has consistently predicted the hiring of both Black male officers and female officers of all races (Zhao, He, & Lovrich, 2006a, p. 467).

<sup>34</sup>Marschall and Shah (2007) offer a historical context explanation for the insignificance of African American mayors in these studies. They write “the gains in descriptive representation made by Blacks coincided with a period

of urban decay, which may in turn have severely limited the ability of Black elected officials to pursue policies favorable to their Black constituents” (Marschall & Shah, 2007, p. 630).

<sup>35</sup>Only Lewis (1989) and Saltzstein (1989) factored in the number of years a minority mayor held office; the remaining studies cited offered dichotomous measures (e.g., 0 = minority mayor absent, 1 = minority mayor present at time t).

<sup>36</sup>For example, Zhao & Lovrich’s (1998) correlation matrices shows that percent Black population is moderately correlated with Black mayor presence ( $r = .59$ );  $r = .57$  for these variables for Zhao, He, & Lovrich (2005) for Black and .36 for Latino.

<sup>37</sup>For example, Zhao, He, & Lovrich (2005) report that of their sample of 281 cities, approximately 10 percent (28) were governed by Black mayors; approximately 6 percent (17) were governed by Latino mayors.

<sup>38</sup>The presence of an African American police chief did not explain variation in the proportion of Black police managers in this research.

<sup>39</sup>Underutilization has typically been defined by the Equal Employment Opportunity Index, credited to both Samuel Walker and William Lewis. This measure calculates a ratio of percentage minority police officers to percentage minority citizens in a given city. EEO Index figures below 1 indicate underutilization.

<sup>40</sup>The presence of an affirmative action consent decree did not explain variation in the proportion of Black police managers in this research.

<sup>41</sup>Despite this and other similar findings, affirmative action programs have had a much greater impact on minority male representation than on female representation of any race (Martin, 1991; Hochstedler, Regoli, & Poole, 1984). This could be because sexual equality is more difficult to achieve than racial equality because of the major social changes the former would require (Warner, Steel, & Lovrich, 1989; Burstein, 1985). Minority women are more common than White women, though, as some departments select minority women to meet affirmative action goals simultaneously (Martin, 1991, p. 497).

<sup>42</sup>These referenda are known as Proposition 209 in California and Initiative 200 in Washington. Several researchers cited used Division of Governmental Services and Studies (DGSS) survey data for their respective quantitative analyses (e.g., Warner, Steel, & Lovrich; Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2005; 2006a). Of the 281 cities in this sample, 55 (or approximately 20 percent) are located in California and Washington.

Michigan (Proposal 2 in 2006) and Nebraska (Initiative 424 in 2008) would also ban affirmative action programs for public employment and education.

<sup>43</sup>The most recent legal development in the realm of affirmative action came from the 2009 Supreme Court decision in *Ricci v. DeStefano*. This case, concerning a promotional exam for firefighters in New Haven, CT, illuminated some of the inherent legal difficulties that can arise in the effort to diversify municipal agencies. When the results of an exam to fill lieutenant and captain positions showed that White candidates had outperformed Black candidates, the city threw out the results. New Haven claimed that it did this to avoid Title VII (of the 1964 Civil Rights Act) liability for adopting a practice that had a disparate impact on Blacks; White and Latino firefighters who took the exam countered that they had been denied an opportunity for promotion based solely on race, an action that also violated Title VII. The Court ultimately held in favor of Ricci et al., explaining that New Haven had used express race-based discrimination (against Whites and Latinos) with no other justification. The city failed to convince the Court that a disparate impact lawsuit on the part of Black firefighters would have ensued had the results of the exam been certified. This recent case brought to the forefront the contradiction between the dual purposes of Title VII: to prevent disparate *treatment* and disparate *impact*. Despite the importance of this case, it will not impact the results of this study because it was decided after all data had been collected.

<sup>44</sup>Cities vary in their demographic makeups, and thus their rate of utilization of various minority groups; regional differences in minority populations might also play a role (cf. Walker & Katz, 2008).

<sup>45</sup>Slack resources are frequently measured by subtracting the number of sworn officers at time  $t$  from the number of officers at time  $t-1$ . The difference represents growth (or decline) in the number of police positions between these two points. In cases of growth, this number indicates how many jobs were open to be filled by minority applicants. Budgets can be measured in terms of their basic amounts or similarly to slack resources by comparing their growth (or decline) over time.

<sup>46</sup>Region was a significant predictor of minority promotion, however, for Lewis (1989).

<sup>47</sup>It is important to reiterate the point made above that most hiring studies measure hiring in terms of officer presence at time  $t$ , and not as some more specific indicator like number of new hires.

<sup>48</sup>It should be acknowledged that unions are typically measured dichotomously (0 = not present, 1 = present). While this is a useful and widely available (e.g., through LEMAS waves) measure, it suffers from some weaknesses. The mere presence of a collective bargaining agreement or union does not necessarily reflect the level of police officer involvement in union activities or the frequency with which a union opposes affirmative action in court.

<sup>49</sup>Most empirical research conducted at the individual level has not found differences between White, African American, and Latino officers' on-the-job behaviors, including rates of arrest or use of physical or deadly force (Fyfe, 1981; Reiss, 1968; Black, 1980; Sherman, 1980). The studies reviewed in this section select as their unit of analysis the police organization and examine the relationship between aggregate personnel composition and their respective dependent variables. The present study is concerned with organizational diversity's causal impact on certain outcomes, and not necessarily individual-level differences between officers of different race, ethnic, or gender persuasions. Police agencies can vary widely in terms of personnel composition and the quality of their relationships with minority communities (Walker, Spohn, and DeLone, 2004); comparing organizations may prove more useful in detecting a diversity effect than comparing individual officers within one department.

<sup>50</sup>Recall that Blacks have consistently held lower opinions of the police over several decades of research (cf. Bayley & Mendelsohn, 1969; Jacob, 1971; Hagan & Albonetti, 1982; Sampson & Bartusch, 1998; Weitzer, 1999, 2000; Sunshine & Tyler, 2003).

<sup>51</sup>See Black (1976) regarding minor offenses and police discretion.

<sup>52</sup>That misdemeanor (not felony) arrests were significant for Eitle and colleagues supports the notion that less serious crimes allow police the most opportunity for discretionary (and therefore, uneven) decision making. Variation was present in how Whites and minorities handled misdemeanors, but a null finding regarding felonies suggests that both types of officers respond to these more serious crimes the same.

<sup>53</sup>Lott (2000) acknowledges this and provides a separate analysis of murder and non-negligent manslaughter rates (the two crimes least likely to be mis- or under-reported) to account for the impact of reporting rates. His results held, with minority and female representation still linked to increases in these rates.

<sup>54</sup>Surprisingly, minority officers interviewed by Holdaway (1991: 371) disliked and rejected recruiting strategies with special procedures for minorities, fearing these measures would stigmatize them among their White colleagues as second-class police officers.

<sup>55</sup>This example brought to the forefront some of the implementation issues agencies might expect to face as they attempt to diversify their ranks, especially if representation increases rapidly.

<sup>56</sup>Several recent authors (e.g., Herbert, 1998; Waddington, 1999; Paoline, 2003; Sklansky, 2006) have challenged the idea of a monolithic police subculture, arguing in part that: 1) the link between talk or attitudes and action is tenuous; 2) police attitudes merely reflect the attitudes of the communities they serve; and 3) diversity has effectively fragmented what was once a White middle class male police occupational culture. According to

Sklansky (2006, p. 1225), “the demographic transformation of American law enforcement has done much to break down the police subculture, by weakening both the occupational solidarity and social insularity of the police.”

A lesser known benefit of diversity is its ability to reduce levels of racism within police departments. To this end, however, the individual-level evidence suggests representation has failed. Cashmore (2001, 2002) studied the minority police experience and found that institutional racism continues to be a problem in modern-day forces. Of the 80 minority officers he interviewed, only four had not experienced some form of racism from their White colleagues (Cashmore, 2001). Nearly all cultural diversity policy and training focuses on issues that are external to the police department (e.g., improving police-community relations). Consequently, attention has been deflected away from the racism of fellow officers (Cashmore, 2002, p. 335). Holdaway (1996, p. 379) agrees and writes “the police are familiar with the notion of race relations between themselves and the minority ethnic communities they serve, but much less ready to identify and develop policies to deal with race relations within their own organization.”

<sup>57</sup>Although see Sklansky (2006) who argues academics have misinterpreted a lack of evidence that minority and majority officers differ in their policing styles for proof that there is no difference between them in this respect.

<sup>58</sup>It has been argued that race is merely a proxy for class position (Sampson & Lauritsen, 1997).

<sup>59</sup> An example reflecting the access-and-legitimacy perspective is the case of Police Community Support Officers (PCSOs) in London. The new community oriented ranks (equivalent to auxiliary police or police cadets) rapidly reached diversity targets for representative proportions of minorities. Notwithstanding this apparent success, the traditional Metropolitan Police Service (enjoying full police powers) remained dominated by Whites. Johnston (2006, p. 399) writes, “the danger is that a particularly unbalanced form of two-tier policing might emerge over time in which a predominantly white, male, regular police service works alongside a body of PCSOs made up, disproportionately, of female and minority ethnic personnel.” Here, minority officers were placed in visible positions, but not positions of power and authority.

<sup>60</sup>This is not to say that the mere appearance of diversity does not provide any benefits. Ward (2006) notes that one argument in favor of the diversification of police forces is that the symbolic representation of minority groups has value, whether or not it substantively changes the attitudes or behaviors of police actors. “This premise holds that ethnoracial diversity in justice-related occupations bolsters the perceived legitimacy of justice systems” (p. 70). The visible presence of a minority in a political position (or as police officers, managers) can send powerful cues to minority citizens, raising group pride and conferring psychic benefits (Gilliam, 1996). Marschall and Shah (2007) found that while substantive diversity effects were more influential, symbolic diversity effects nonetheless played an indirect role in enhancing minority citizens’ level of trust in the police.

<sup>61</sup>An equally strong case can be made, of course, that minority superiors are under more pressure to conform to organizational norms than minority officers. They serve at the whim of upper police management (who, as we have seen, more often than not are White) and lack the same degree of job security as unionized patrol officers. If this is in fact the case, then minority representation in managerial ranks could theoretically have a null or negative impact on both minority hiring patterns and the quality of police-citizen encounters. Perhaps minority managers, too, identify themselves as “blue,” or loyal to the police culture over their individual racial, ethnic, or gender cultures.

<sup>62</sup>This study treats the city and agency as interchangeable units of analysis. Municipal police departments are organized at the city level and tied geographically to the cities they serve (see Walker, 2007; Wilson, 1968).

<sup>63</sup>County and state agencies are excluded to fit the city level of analysis and facilitate matching across datasets.

<sup>64</sup>EEO data are available for all cities with at least 50,000 population or greater; cities lost had fewer than 50,000 residents.

<sup>65</sup>Since the EEO file includes cities (and not police departments) as cases, ORI codes were not readily available through this source. ORI codes were assigned to each of the 434 cities in a two-step process: 1) ORIs available

through DGSS/EEO matches (N = approximately 180) were carried over into the *EEO Master File*; 2) a code crosswalk file (National Archive of Criminal Justice Data, 2005) provided codes for the remaining 254 cities.

<sup>66</sup>Black, Latino, and female officers and managers are the focus of the present study for two main reasons: 1) these groups form the largest minority presences in policing today; and 2) this approach allows for a more manageable analysis. Counts of “other race” officers (American Indian/Alaskan Native, Asian, Native Hawaiian/other Pacific Islander, Black and White, American Indian/Alaskan Native and White, American Indian/Alaskan Native and Black, Asian and White, and two or more races) were quite small comparatively (particularly for management figures), presenting challenges to the integrity of analytic models. While it is possible to combine these groups into categories, this research seeks to explore whether the external and institutional variables of interest impact the hiring rates of different minority groups in different ways or combinations.

<sup>67</sup>Counts are utilized for managerial models due to the relative rarity of minority managers. African American, Latino, and female manager percentage variables were not evenly distributed and tended toward zero. The limited nature of these dependent measures made the use of count data models (Poisson, Negative Binomial regression) more appropriate (see “Analytical techniques”). Ordinary Least Squares (OLS) regression procedures were appropriate for line models (using percent minority as the dependent measure). Line-level minority representation was more common (and thus, normally distributed) and could be more readily transformed to fit OLS normality assumptions.

<sup>68</sup>Total line diversity was computed by summing percent African American, Latino, and White female officers; total managerial diversity was computed by summing counts of African American, Latino, and White female managers.

<sup>69</sup>Worksite geography (and not residence geography) is used; respondents to Census may not necessarily have lived where they worked.

<sup>70</sup>Unless otherwise noted, “minority” represents the combination of Black and Latino figures: minority population equals percent Black plus percent Latino citizen proportions; minority mayors reflect the presence of either a Black or Latino mayor; minority council reflects the sum of percent Black and Latino city councilors; minority chiefs reflect the presence of either a Black or Latino police chief, etc.

<sup>71</sup>Total sworn officers was retained (and not city size) because this variable was necessary to construct a bureaucracy scale, to be discussed in “control variables” section.

<sup>72</sup>These results indicate that budget and slack resources are mere proxies for department size and are already reflected in this variable. They also indicate that these two measures may be removed from models without the loss of explanatory power.

<sup>73</sup>When entered into preliminary models, region was found insignificant.

<sup>74</sup>This variable allows for an examination of whether or not the impact of a minority mayor takes time to manifest in patterns of minority representation.

<sup>75</sup>Z-scores were used because each of the variables in the scale were originally measured on different metrics.

<sup>76</sup>Given the limitations of this measure, caution is warranted in the interpretation of results. Any observed impacts of the political power constructs may not be comparable between race/ethnic and gender models. While both mayors and councilors indicate political representation, it is not clear if these politicians exercise influence in different ways. Mayors and councilors, for example, might vary in their power to make executive decisions that might affect personnel expenditures. Also, given the fact that race and ethnic political power constructs combine the influence of both mayors and councilors, a weaker relationship may prevail when only councilors are considered in female hiring models. An exploratory analysis noted a moderate correlation between Black and Latino mayoral representation and council representation ( $r = .475$  and  $.648$ , respectively). This suggests that both measures are to some degree measuring a similar concept. If this correlation exists between female mayors and female councilors too, there is a chance that the female political power construct may retain a significant portion of its validity.

<sup>77</sup>Affirmative action policies were separated into “formal” and “informal” categories because this practice has been customary in most prior research. While informal policies have predicted minority police officer hiring in certain studies (cf. Zhao, Herbst, & Lovrich, 2001; Zhao, He, & Lovrich, 2006a), but formal programs have been shown to have the strongest and most consistent impact on representation (cf. Martin, 1991; Steel & Lovrich, 1987; Warner, Steel, & Lovrich, 1989; Stokes & Scott, 1996). Both types of policies are hypothesized to increase minority hiring, with formal programs exerting a stronger effect than informal ones.

<sup>78</sup>Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they performed the following 18 tasks: homicide, arson, other crimes, crime prevention, drug law enforcement, first response, patrol services, responding to citizen calls, traffic law enforcement, court security, serving civil process, operating jails, executing arrest warrants, participating in a drug task force, operating a training academy, dispatching service calls, search and rescue operations, and tactical (SWAT) operations. Scores were summed, with higher numbers indicating a context with greater task scope. Organizations that perform a broader scope of tasks should exhibit more complex structures (Maguire, 2003).

<sup>79</sup>Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they had the following 19 specialized units: bias or hate crime, child abuse, community crime prevention, community policing, crime analysis, cybercrime, domestic violence, drug education in schools, drunk drivers, environmental crime, gangs, internal affairs, juvenile crime, missing children, prosecutor relations, repeat offenders, research and planning, victim assistance, and youth outreach. Scores were summed, with higher numbers indicating greater functional differentiation. More functions mean more complexity and complex organizations tend to require formal rules and regulations and a larger administrative component, both characteristics of bureaucracies (Maguire, 2003).

<sup>80</sup>Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they had written policy directives regarding: use of deadly force, use of less-than-lethal force, conduct and appearance, off-duty employment, maximum work hours, pursuit driving, protection order violation, and domestic assault. Scores were summed, with higher numbers indicating greater formalization. Large bureaucracies tend to rely on the use of formal, written rules to control agency functions (Maguire, 2003).

<sup>81</sup>Disparities in economic rewards produce an unstable social order that must be maintained by force or its threat (Jacobs & O’Brien, 1998; cf. Chambliss & Seidman, 1980), often in the form of official social control. More inequality, then, should be associated with greater police strength.

<sup>82</sup>The U.S. Census Data Ferrett tool was used to collect necessary data for many of the calculations. *U.S. Census Bureau, DataFerrett, Census 2000 Summary Files 1, 3*

<sup>83</sup>Economic inequality was calculated using 2000 Census household income figures. Gini coefficients can range from 0 to 1. Smaller coefficients represent a more even distribution of wealth; larger ones represent the concentration of wealth within a smaller proportion of the population. All ratios were calculated with a Gini program provided by Census.

<sup>84</sup>Data on police chiefs were more difficult to find online due to the lower visibility of this position and its more frequent rate of turnover, compared to city mayors. In a few cases, names, but not photographs of chiefs were available, making categorization impossible.

<sup>85</sup>Respondents were asked who their chief of police was in the year 2000.

<sup>86</sup>Respondents were presented with the DGSS survey’s item on affirmative action. This question read as follows:

In the area of affirmative action, how would you characterize your department’s program in the year 2000?

- A) No formal program
- B) Informal voluntary program with specific goals and timetables for hiring minorities and women
- C) Formal voluntary program with specific goals and timetables for hiring minorities and women

- D) Formal program reflecting consent decree or court-ordered system of preferential consideration for minorities and/or women
- E) Other (please specify)

Respondents were reminded to ensure that their answer reflected 2000 policy. Coding was identical to the DGSS survey: answer B = informal program; answer C or D = formal program.

<sup>87</sup>Departments for which data were obtained through telephone and email surveys were coded as not missing.

<sup>88</sup>The term “minority” should be interpreted as either African American or Latino for the purposes of this discussion. Methodologically speaking, models of Latino representation will consider percent Latino, percent Latino city councilors, Latino mayors, and Latino mayor tenure; models of African American representation will consider percent Black, percent Black city councilors, Black mayors, and Black mayor tenure. It is expected that each minority group’s political influence will be mobilized toward the hiring or promotion of individuals belonging to that group.

<sup>89</sup>Recall that not all affirmative action policies or consent decrees are designed to increase line representation; some intend to balance disparities in managerial representation as well (e.g., *United States v. Paradise, 1987*)

<sup>90</sup>The DGSS survey data available to the author include percent female city council as a variable, but not female mayor presence; further, the female population size measure is not likely to vary tremendously from city to city as racial and ethnic minority population size does.

<sup>91</sup>The dependent variable examined in Hypothesis 1c (total female officers) is comprised of counts of White, African American, and Latino female officers. By way of an example, of all female officers in the present study’s sample, nearly 30 percent are Black. Even if Black chiefs’ influence serves to benefit only Black female officers (and not White or Latina female officers), the fact that Black women comprise the largest minority race/gender combination proportion could mean that increases in this subgroup might cause the total aggregated count of all women officers to increase.

<sup>92</sup>These control measures are excluded from managerial representation models for theoretical reasons. They have been empirically related to fluctuations in police personnel (hiring, or department size) because they indirectly influence crime, and therefore, demand. It is not necessarily expected that increases in crime and its correlates will result in the promotion of officers to managerial positions as a response. Preliminary analyses indicated that the controls explained no additional variance in managerial models.

<sup>93</sup>OLS was still used to conduct multicollinearity diagnostics where count data models were employed.

<sup>94</sup>To smooth out and normalize the distribution of percent minority line variables, a log10 transformation was performed. One was added to each percentage to avoid occasional undefined results. This transformation brought skewness and kurtosis figures within acceptable ranges. The percentage female officer was evenly distributed to begin with, but this variable was still log transformed to maintain consistency across hiring models.

<sup>95</sup>A portion of the explanatory power observed is likely attributable to the city/agency unit of analysis, so this result should be interpreted with caution.

<sup>96</sup>This significant drop in explained variance may have something to do with the specification of the female political power construct. Recall that data limitations precluded the creation of a more comprehensive composite measure like the ones entered into Black and Latino models. Given the centrality of this concept to those models, it is not surprising that a weaker political power construct brings down the overall explanatory power of the female line representation model.

<sup>97</sup>Accidental on-duty deaths were not included in this analysis, as these did not reflect the theoretical concept of police-citizen conflict.

<sup>98</sup>The felonious killing of a police officer is a rare and high profile event, and one that is unlikely to go unreported to the FBI for its LEOKA publication.

<sup>99</sup>Assaults with and without injury were summed to maximize incident counts. Data were reported for all cities in the sample.

<sup>100</sup>Both variables represent the construct of police-citizen conflict. Felonious killings of police are very accurately reported, but the rarity of these events could nevertheless place undue importance on a few idiosyncratic events. For this reason, total assaults on officers, a far more common, yet less accurately reported count, is also examined (Jacobs & Carmichael, 2002). Results from studies that employ many hypotheses through an inclusive approach are most accurate (Jacobs & Carmichael, 2002; Johnston, 1984).

<sup>101</sup>Data limitations precluded an analysis beyond the comparison of Black to White arrest rates. Latino arrest rates for drug offenses were not available.

<sup>102</sup>Some of the major limitations of official data should be reiterated here. Drug arrests, as specified for this analysis, represent only those drug crimes of which the police are aware. Not all departments report and there can be tremendous variation in the accuracy and completeness of data submitted.

<sup>103</sup>A five year average was used because it provides a more reliable estimate of the average volume of arrests around 2000 (see Ousey & Lee, 2008).

<sup>104</sup>“Total minority” figures consist of a sum of African American, Latino, Other race, and White female officers and managers.

<sup>105</sup>“Total minority” figures are defined as the sum of percent African American and percent Latino populations for this portion of the analysis.

<sup>106</sup>In creating the diversity perspective variable, some cases were lost. A preliminary examination of these ratios revealed that a significant proportion of departments employed neither minority line nor minority managerial officers. Simply adding one to each side of the ratio in this case would yield a significant number of ratios showing parity ( $1/1 = 1$ ) between managerial and line diversity in agencies where diversity did not exist. Theoretically, this could indicate that a department with 0 percent minority managers and 0 percent line represented an integration-and-learning agency because it was staffed by minorities in equal proportions at both levels; this would be misleading and therefore create misleading results.

To ensure that the diversity perspective variable was meaningful, the following steps were taken: 1) the “pure” ratio of managers to line officers was taken (without adding 1 to each side), allowing for occasional undefined results due to divisions by zero; departments having no minority managers or line officers were identified and these cases were deleted from analyses; 2) for departments with no minority managers but a given percentage of minority line, ratios were created by adding one to both sides; a department with 25 minority officers and no minority managers, for example would still indicate an access-and-legitimacy organization, despite the fact that a ratio calculation would yield a score of zero.

For African American management /line ratios, 129 departments had no Blacks; 159 had zeroes as their numerators and for these cases, one was added to create a ratio. In total, 305 departments had the necessary data to calculate this ratio. For Latino ratios, 127 departments had no Latinos; 203 had zeroes in their numerators and for these cases, one was added to create a ratio. In total, 307 ratios were ultimately calculated. Females were not present in either rank in 50 departments; 173 agencies reported zeroes in the numerator of this ratio and in these cases, one was added to both sides. Female ratios were calculated for 261 agencies. Finally, total minority ratios had the lowest case attrition levels similar to Latinos. Nineteen cities had no minorities at all; 127 had zero numerators. In total, 415 cities had the data necessary to calculate diversity perspective for this category.

One major limitation of this approach that should be acknowledged is that a city with one (or a very small number) of minority manager(s) and minority line officer(s) can appear well integrated, even though minority officers could essentially be tokens in these organizations. This limitation should inform the interpretation of results.

<sup>107</sup> A preliminary examination of the political representation ratios revealed that several departments employed no African American, no Latino, or neither African American nor Latino officers or managers. All cities did, however, have African American and Latino citizens. Cities with no minority officers (a numerator of zero) were thus assigned a ratio of 0. Since theoretically, just how underrepresented a minority group is on its police force remains an important consideration, the following adjustments were made to this variable to ensure a meaningful analysis and accurate interpretations of results: 1) the “pure” ratio of Black, Latino, and total minority police to corresponding minority citizens was taken (without adding 1 to each side), resulting in multiple zero scores in those agencies with no Blacks, Latinos, or both; 2) for these departments with no minority police, but a given percentage of minority citizens (all cities), ratios were created by adding one to both sides. For African American police/citizen ratios, 117 departments had no Blacks, and thus, zeroes as their numerators. One was added to each side to impute these ratios. This procedure was repeated for 119 departments with no Latinos and 45 with no Blacks or Latinos. All non-zero numerator ratios remained in the form of their “true” unadjusted ratios.

<sup>108</sup> Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they performed the following 18 tasks: homicide, arson, other crimes, crime prevention, drug law enforcement, first response, patrol services, responding to citizen calls, traffic law enforcement, court security, serving civil process, operating jails, executing arrest warrants, participating in a drug task force, operating a training academy, dispatching service calls, search and rescue operations, and tactical (SWAT) operations. Scores were summed, with higher numbers indicating a context with greater task scope. Organizations that perform a broader scope of tasks should exhibit more complex structures (Maguire, 2003).

<sup>109</sup> Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they had the following 19 specialized units: bias or hate crime, child abuse, community crime prevention, community policing, crime analysis, cybercrime, domestic violence, drug education in schools, drunk drivers, environmental crime, gangs, internal affairs, juvenile crime, missing children, prosecutor relations, repeat offenders, research and planning, victim assistance, and youth outreach. Scores were summed, with higher numbers indicating greater functional differentiation. More functions mean more complexity and complex organizations tend to require formal rules and regulations and a larger administrative component, both characteristics of bureaucracies (Maguire, 2003).

<sup>110</sup> Agencies reported to LEMAS whether or not (0 = no, 1 = yes) they had written policy directives regarding: use of deadly force, use of less-than-lethal force, conduct and appearance, off-duty employment, maximum work hours, pursuit driving, protection order violation, and domestic assault. Scores were summed, with higher numbers indicating greater formalization. Large bureaucracies tend to rely on the use of formal, written rules to control agency functions (Maguire, 2003).

<sup>111</sup> Z-scores were used because each of the variables in the scale was originally measured on different metrics.

<sup>112</sup> The bureaucracy scale may also tap city size. The variables that comprise this scale could essentially be said to represent department size: larger departments are more complex, and therefore bureaucratic. Preliminary analyses indicated that department size is very highly correlated with city population ( $r = .962$ ). City size is important to consider because large urban areas more often rely on formal social control than smaller ones, where informal controls exist (e.g., Jacob, 1971). Large populations could be more likely to react to variations in police personnel composition because police play a larger role in the regulation of their social life. Population size also reflects the level of anonymity in a given city; crime and police-citizen violence is more common in larger cities where the difficulty of identifying offenders facilitates these acts (Jacobs & Carmichael, 2002).

<sup>113</sup> The most common quantitative measure of segregation, the index of dissimilarity captures the degree to which Blacks and Whites are evenly spread among neighborhoods (here, Census tracts) in a city. It gives the percentage of one group who would have to move to achieve an even residential pattern where every neighborhood’s racial composition replicates the racial composition of the entire city (Massey & Denton, 1993, p. 20).

<sup>114</sup>Readers familiar with the minority group threat literature are likely aware that another common measure of threat is the rate of growth in the minority population over time (cf. Heitgerd & Bursik, 1987; Green, Strolovich, & Wong, 1998; see also Suttles, 1972 discussion of the “defended neighborhood”). A figure was calculated for the rate of change in Black and Latino population sizes from 1990 to 2000 based on Census data. When constructing the threat scale, however, inclusion of this variable decreased internal consistency substantially, from an alpha of .718 without the measure to an alpha of .448 when it was included. To ensure that scale reliability remained within acceptable limits (see Nunnally, 1978; Spector, 1992), the rate of minority group growth was excluded from the final composite measure.

<sup>115</sup>The index of dissimilarity was associated with less violence against the police for Jacobs and O’Brien (1998) but greater disparity in the Black to White arrest ratio for drug crimes for Ousey and Lee (2008); these results make it unclear how this measure will impact the dependent measures in the present study.

<sup>116</sup>The additive index summed z-scored versions of each component variable to account for the fact that many were measured using different metrics. A summative scale helped reduce redundancy and multicollinearity among variables.

<sup>117</sup>Gini ratios were calculated with a Gini program provided by Census.

<sup>118</sup>Another common social disorganization indicator, residential turnover – the proportion of residents who reported not living in the same residence for the past five years (cf. Parker & Maggard, 2005) – brought down scale reliability and was thus excluded.

<sup>119</sup>The U.S. Census Data Ferrett tool was used to collect necessary data for many of the calculations. *U.S. Census Bureau, DataFerrett, Census 2000 Summary Files 1, 3*

<sup>120</sup>Black mayors have also been used as indicators of minority group political threat, as these public figures present a potential challenge to White control over the political machine and therefore, decisions regarding public resources, institutions, and services (Ousey & Lee, 2008; Parker et al., 2005).

<sup>121</sup>Waddington (1999), for example, argues that police officers are capable of treating minorities equitably, even when they hold personal racist views.

<sup>122</sup>It is possible, however, that the mere appearance of representativeness has benefits (cf. Gilliam, 1996). This set of hypotheses expects that only sincere, complete commitments to diversity will allow the benefits of cultural variety to influence police outcomes.

<sup>123</sup>Results for this section of the present study are presented according to whose behavior is reflected: citizens’ or police officers’. Killings and assaults against the police are citizen initiated and reflect the effect diversity has on public perceptions of the police. Police use of deadly force and arrest rates, as configured, are police initiated and reflect the effect diversity has on how police approach citizens.

<sup>124</sup>For complete felonious officer killing models, see Appendix (models 1x through 11x).

<sup>125</sup>For complete police assault models, see Appendix (models 12x through 22x).

<sup>126</sup>For complete police use of deadly force models, see Appendix (models 23x through 33x).

<sup>127</sup>Given the race-specific nature of this dependent variable, only African American diversity indicators are examined.

<sup>128</sup>For complete disparate drug arrest rate models, see Appendix (models 34x through 36x).

<sup>129</sup>Police work might also be more attractive to minorities because it has been shown that these groups consistently earn more in the public sector than they do in the private sector (Blank, 1985). Government employers tend to place greater weight on social welfare commitments like affirmative action. As a result, protected groups like race, ethnic, and gender minorities are more likely to be hired, promoted, and better paid if they opt for a government career (Blank, 1985). Studies have shown that the gap between White male and minority incomes is smaller in government (as opposed to private) industry (cf. Asher & Popkin, 1984; Perloff & Wachter, 1984; Smith, 1977) and that Blacks are twice as likely as Whites to desire a government job (Lewis & Frank, 2002).

<sup>130</sup>See note 129 above

<sup>131</sup>Follow-up analyses (not shown) were conducted for select models that substituted city size for the bureaucracy measure; no significant differences in results were observed.

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## Figures and Tables

Table 1. Minority police representation literature review matrix

Variable	Studies	Description	Interpretation of aggregated results
Percent minority population	6	percentage of a city's population that is African American or Latino	<b>very consistent</b> ; strongest correlate of Black, Latino, and female hiring across 6 studies
Minority mayor	9	presence of an African American or Latino mayor	<b>mixed</b> ; highly significant for some races and race/gender combinations in certain studies, wholly insignificant in other cases
Minority city council	5	percentage African American, Latino, or female city councilors	<b>mixed</b> ; for females, 3 of 4 studies found no effect, one found a strong effect; the one study including male officers found an indirect effect
Minority chief	3	presence of an African American or Latino police chief	<b>very consistent</b> ; strong correlate of Black and Latino male hiring across 3 studies
Affirmative action	10	presence of a formal (written or court-ordered) or informal affirmative action policy	<b>mixed</b> ; both policies sometimes significant for some races and race/gender combinations, wholly insignificant in other cases
Minority competition	3	multiple minority groups vying for police jobs	<b>mixed</b> ; one study found this significant while 2 others found no such relationship
Slack resources	7	change in the number of police officers or departmental budget between two time points	<b>mixed</b> ; budget increase related to fewer Black and Latino but more female officers; open positions significant for some races/genders
City size	9	total city population	<b>very consistent</b> ; strong correlate of Black, Latino, and female hiring across multiple studies
Region	6	geographic region	<b>mixed</b> ; when region is significant, there is variation in which regions have an impact; region is often wholly insignificant
Percent minority employed	3	percentage of minority police officers already working for the department	<b>very consistent</b> ; strong correlate of minority female hiring only across 3 studies; no identified studies considered males
Union	3	presence of a police union	<b>mixed</b> ; limited to no impact in 2 studies; two contradictory findings in a third

Table 2. Comparing DGSS and EEO Master files on select variables

T-tests comparing sample means

Variable	n = 180	n = 434	sig.*
Population	263452	195455	0.03
Percent Black population	19.55	16.05	0.01
Percent Latino population	15.93	16.58	0.57
Northeast	15.56	18.89	0.22
South	27.22	29.26	0.54
Midwest	26.11	22.58	0.28
West	31.11	29.26	0.59
Department size	898.49	667.65	0.04
Percent Black officers	11.92	9.75	0.01
Percent Latino officers	8.14	8.07	0.93
Percent female officers	13.14	12.61	0.26

\*p < .05

Part I – The Determinants of Police Diversity: Minority Hiring and Promotion

Table 1a. Dependent variables

Diversity variables

Line officers	n	min	max	mean	s.d.
Percent Black	180	0	70.6%	12.3%	0.121
Percent Latino	180	0	66.1%	8.6%	0.115
Percent female	180	0	27.0%	13.2%	0.068
Managers (counts)	n	min	max	mean	s.d.
Black	180	0	404	18.5	43.982
Latino	180	0	246	9.4	27.231
Female	180	0	339	20.9	52.721

Table 2a. Principal components analyses of minority political power variables

	AA Component 1	Latino Component 1	Total minority Component 1
Percent minority population	.880	.767	.830
Percent minority council	.842	.871	.845
Minority mayor presence	.828	.880	.827
Minority mayor tenure	.877	.866	.865
Scale alpha (z-scored measures)	.880	.868	.863

One component extracted for each minority category

Table 3a. Independent variables

Independent variables

External	Expected sign	n	min	max	mean	s.d.
Percent Black	+	180	0.4%	89.5%	19.5%	18.590
Black mayor	+	180	0	1	0.144	0.353
Percent Black council	+	180	0	100%	19.8%	21.221
Percent Latino	+	180	1.1%	76.6%	15.9%	15.604
Latino mayor	+	180	0	1	0.073	0.260
Percent Latino council	+	180	0	77.8%	6.4%	12.316
Percent female council	+	180	0	88.9%	28.6%	16.635
Institutional	Expected sign	n	min	max	mean	s.d.
Black chief	+	180	0	1	0.188	0.391
Latino chief	+	180	0	1	0.085	0.280
Formal AA program	+	180	0	1	0.301	0.460
Informal AA program	+	180	0	1	0.205	0.405
Officer salary	-	180	23,203	70,061	41,453	8481.125
Manager salary	-	180	29,844	84,164	54,692	11205.704
Police unions	-	180	0	1	0.778	0.417
Percent minority line	+	180				
Percent minority managers	+	180			See Table 1a	
Other minority groups	-	180				

Table 4a. Principal components analysis of bureaucracy variables

	Component		
	1	2	3
Department size	.878	-.087	-.009
Task scope	.482	.134	.310
Functional differentiation	.491	.570	-.096
Civilianization	-.054	.866	-.116
Formalization	.090	.096	.896
Spatial differentiation	.880	-.196	.028
Height	.594	-.096	-.346

Scale alpha (z-scored measures) .700

Three components extracted

Table 5a. Control variables

Control variables

Degree of bureaucratization	Expected sign	n	min	max	mean	s.d.
Department size	+ or -	180	93	16466	865.444	1738.376
Task Scope	+ or -	180	9	18	14.106	1.544
Height	+ or -	180	0.6	5.1	2.071	0.755
Functional differentiation	+ or -	180	0	19	9.490	3.652
Spatial differentiation	+ or -	180	0	25	2.139	3.729
Formalization	+ or -	180	4	8	7.533	0.688
Civilianization	+ or -	180	0	1	0.319	0.149
Economic deprivation	Expected sign	n	min	max	mean	s.d.
% HHs in poverty	+	180	3.30%	29.40%	14.372	5.810
% HHs receiving public assistance	+	180	0.60%	15.70%	4.699	2.783
Unemployment rate	+	180	2.30%	16.11%	7.189	2.857
Economic inequality (Gini index)	+	180	0.37	0.56	0.452	0.039
Crime rates	Expected sign	n	min	max	mean	s.d.
Violent crime rate per 100k	+	180	10.1	8213.3	2406.640	1483.952

Figure 1a. Line and managerial representation model diagram

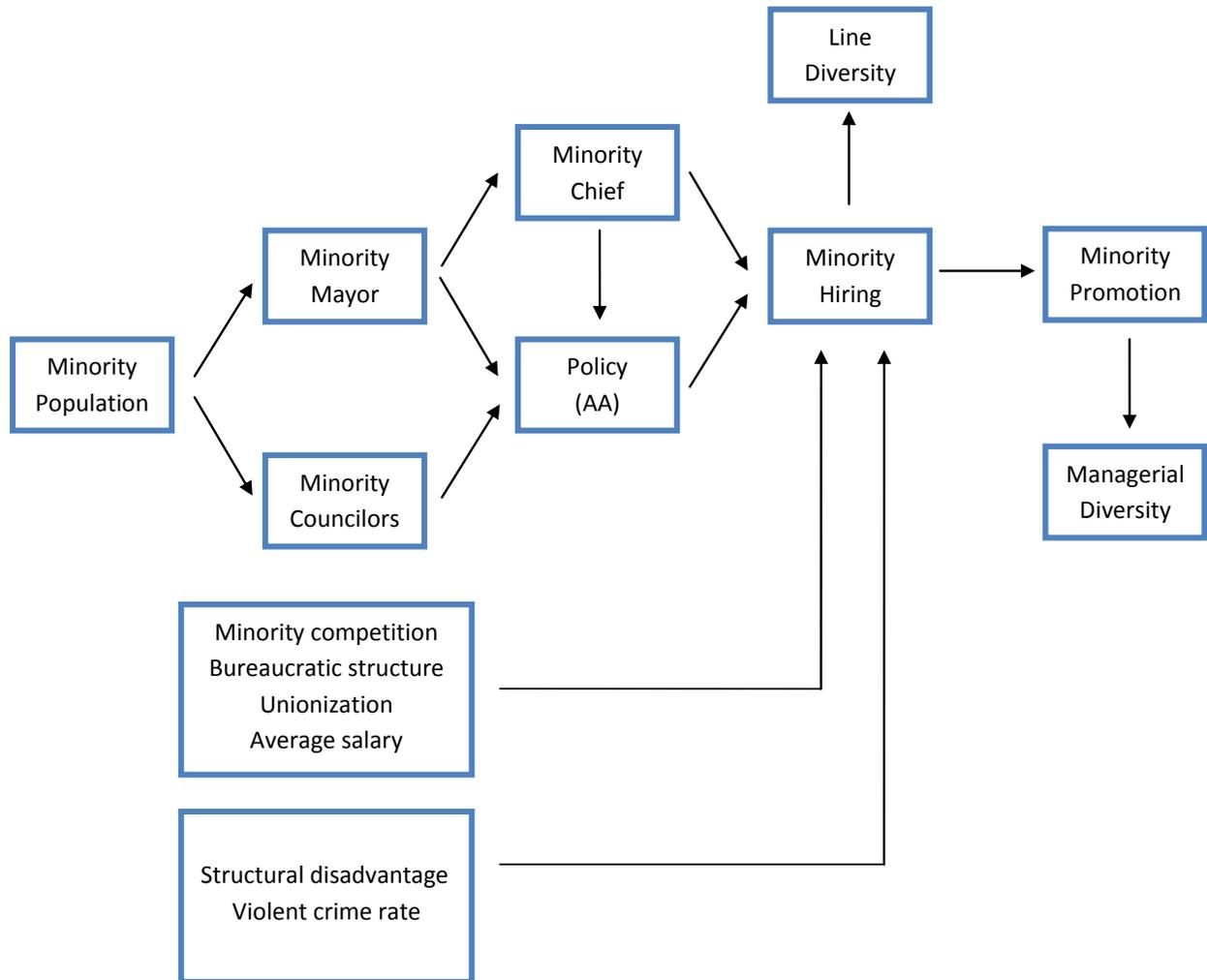


Table 6a. African American line representation model

Variable	B	S.E.	Beta	t	Sig.	Tolerance	VIF
(Constant)	.027	.012		2.174	.031		
AA political power	.007	.001	.591	9.723	.000	.572	1.748
Formal AA program	-.008	.005	-.089	-1.790	.075	.851	1.175
Informal AA program	4.39E-005	.006	.000	.008	.994	.828	1.208
AA chief	.015	.006	.139	2.707	.007	.799	1.252
% Latino line	.025	.020	.065	1.242	.216	.763	1.310
% AA management	.070	.017	.216	4.116	.000	.766	1.305
Bureaucracy	.000	.001	.035	.680	.497	.792	1.262
Union	-.014	.005	-.133	-2.666	.008	.852	1.174
Average salary (line)	3.75E-007	.000	.073	1.346	.180	.717	1.394
Economic deprivation	.000	.001	.013	.213	.832	.535	1.871
Violent crime rate	3.01E-006	.000	.103	1.873	.063	.702	1.425

R<sup>2</sup> = .645

Table 7a. Latino line representation model

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.016	.012		-1.348	.179		
Latino political power	.007	.001	.525	9.438	.000	.629	1.590
Formal AA program	.004	.004	.045	.934	.352	.853	1.172
Informal AA program	.005	.005	.044	.916	.361	.825	1.213
Latino chief	.017	.007	.111	2.315	.022	.850	1.176
% AA line	.008	.019	.023	.430	.667	.672	1.487
% Latino management	.090	.019	.247	4.710	.000	.708	1.413
Bureaucracy	.001	.001	.077	1.621	.107	.862	1.160
Union	.009	.005	.084	1.712	.089	.800	1.250
Average salary (line)	9.19E-007	.000	.185	3.583	.000	.727	1.376
Economic deprivation	.000	.001	.035	.592	.554	.562	1.780
Violent crime rate	-2.04E-006	.000	-.072	-1.373	.172	.711	1.406

$R^2 = .673$

Table 8a. Female line representation model

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	.014	.012		1.172	.243		
Female political power	.000	.000	.166	2.314	.022	.943	1.060
Formal AA program	.001	.004	.020	.264	.792	.852	1.174
Informal AA program	-.005	.005	-.077	-1.013	.312	.827	1.209
AA chief	.005	.005	.070	.879	.381	.767	1.303
% AA male line	-.029	.023	-.106	-1.250	.213	.668	1.498
%Latino male line	-.014	.020	-.052	-.680	.498	.809	1.236
% Female management	-.001	.015	-.003	-.035	.972	.849	1.178
Bureaucracy	.001	.001	.191	2.413	.017	.772	1.295
Union	-.004	.005	-.070	-.910	.364	.807	1.239
Average salary (line)	8.23E-007	.000	.264	3.220	.002	.716	1.397
Economic deprivation	.002	.001	.198	2.213	.028	.604	1.656
Violent crime rate	1.77E-006	.000	.099	1.206	.229	.714	1.401

$R^2 = .194$

Table 9a. Total minority line representation model

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	.029	.017		1.720	.087		
Min. political power	.008	.001	.507	7.580	.000	.598	1.673
Formal AA program	.001	.006	.009	.154	.878	.868	1.152
Informal AA program	.004	.007	.030	.538	.591	.838	1.193
Minority chief	.016	.006	.139	2.398	.018	.800	1.249
% Min. management	.047	.015	.179	3.084	.002	.793	1.262
Bureaucracy	.002	.001	.103	1.800	.074	.818	1.222
Union	-.001	.007	-.008	-.134	.893	.857	1.167
Average salary (line)	1.50E-006	.000	.252	4.322	.000	.789	1.267
Economic deprivation	.001	.001	.050	.687	.493	.506	1.976
Violent crime rate	1.15E-006	.000	.034	.559	.577	.738	1.356

$R^2 = .547$

Table 10a. African American managerial representation model

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-3.887	1.186	-3.278	0.001
AA political power	0.059	0.119	0.495	0.621
Formal AA program	1.091	0.473	2.306	0.021
Informal AA program	-0.813	0.402	-2.021	0.043
AA chief	-0.272	0.506	-0.537	0.591
%Latino management	-4.721	1.853	-2.548	0.011
%AA line	4.877	1.990	2.451	0.014
Bureaucracy	0.203	0.098	2.071	0.038
Union	0.960	0.508	1.888	0.059
Average salary (manager)	<.001	<.001	3.189	0.001
Dispersion parameter for count data model				
Alpha	6.038	0.902	6.690	0.000

McFadden Pseudo  $R^2 = .623$

Table 11a. Latino managerial representation model

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-5.797	1.726	-3.359	0.001
Latino political power	0.073	0.093	0.786	0.432
Formal AA program	0.218	0.453	0.483	0.629
Informal AA program	0.453	0.473	0.956	0.339
Latino chief	0.414	0.748	0.554	0.580
%AA management	-1.029	2.345	-0.439	0.661
%Latino line	4.254	3.654	1.164	0.244
Bureaucracy	0.273	0.082	3.344	0.001
Union	0.570	0.478	1.192	0.233
Average salary (manager)	<.001	<.001	3.100	0.002
Dispersion parameter for count data model				
Alpha	5.859	1.084	5.407	0.000

McFadden Pseudo  $R^2 = .649$

Table 12a. Female managerial representation model

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	2.293	1.085	2.114	0.035
Female political power	0.014	0.007	1.870	0.061
Formal AA program	1.265	0.373	3.393	0.001
Informal AA program	-1.306	0.288	-4.537	0.000
AA chief	0.355	0.617	0.576	0.565
%AA male management	-5.527	1.970	-2.806	0.005
%Latino male management	1.290	0.714	1.806	0.071
%Female line	-0.881	2.139	-0.412	0.680
Bureaucracy	0.400	0.054	7.389	0.000
Union	-3.878	0.743	-5.218	0.000
Average salary (manager)	<.001	<.001	3.447	0.001
Dispersion parameter for count data model				
Alpha	4.128	0.544	7.584	0.000

McFadden Pseudo  $R^2 = .665$

Table 13a. Total minority managerial representation model

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	3.376	0.516	6.537	0.000
Minority political power	-0.024	0.032	-0.762	0.446
Formal AA program	0.442	0.213	2.073	0.038
Informal AA program	-0.134	0.229	-0.588	0.557
Minority chief	0.028	0.226	0.125	0.901
%Minority line	2.569	0.801	3.207	0.001
Bureaucracy	0.219	0.032	6.749	0.000
Union	-0.029	0.213	-0.136	0.892
Average salary (manager)	<-.001	<.001	-0.395	0.693
Dispersion parameter for count data model				
Alpha	0.829	0.084	9.933	0.000

McFadden Pseudo  $R^2 = .768$

Table 14a. Minority line and managerial representation model summaries

Part I results summary

Independent variables	Black		Latino		Female		Minority	
	Line	Mgmt	Line	Mgmt	Line	Mgmt	Line	Mgmt
Political power	+		+		+		+	
Formal AA program		+				+		+
Informal AA program		-				-		
Minority chief	+		+				+	
Minority competition		-				-	N/A	N/A
Minority line/managers	+	+	+				+	+
Bureaucracy		+		+	+	+		+
Union	-					-		
Line/manager salary		+	+	+	+	+	+	
Economic deprivation		N/A		N/A	+	N/A		N/A
Violent crime		N/A		N/A		N/A		N/A

Part II – The Effects of Police Diversity: Minority Representation and Police Outcomes

Table 1b. Dependent variables

Variables	n	min	max	mean	s.d
Felonious killings of police*	434	0	6	0.145	.522
Assaults against police*	434	0	5405	250.829	504.628
Police deadly force incidents*	434	0	90	3.134	8.588
Drug arrest rate disparities**	403	0	21	1.094	1.764

\*Five-year totals (2000-2004)

\*\*Five-year average (2000-2004)

Table 2b. Independent variables

Diversity variables

Line officers	Expected sign	n	min	max	mean	s.d
%AA	none	434	0	70.6%	10.1%	0.115
%Latino	none	434	0	76.1%	8.6%	0.121
%Female	none	434	0	37.8%	12.8%	0.077
%Minority	none	434	0	80.2%	27.6%	0.155
Managers	Expected sign	n	min	max	mean	s.d
%AA	-	434	0	100.0%	8.2%	0.154
%Latino	-	434	0	100.0%	5.8%	0.144
%Female	-	434	0	100.0%	11.2%	0.149
%Minority	-	434	0	100.0%	21.8%	0.226
Diversity perspective	Expected sign	n	min	max	mean	s.d
AA manager/line	-	305	0.035	11.364	1.077	1.298
Latino manager/line	-	307	0.044	30.964	1.246	2.606
Female manager/line	-	384	0.050	30.779	1.473	2.781
Min. manager/line	-	415	0.029	29.944	1.063	1.889
Political power	Expected sign	n	min	max	mean	s.d
AA police/citizens	-	434	0.037	36.550	1.045	2.224
Latino police/citizens	-	434	0.026	8.480	0.619	0.762
Min. police/citizens	-	434	0.019	6.708	0.633	0.642

Table 3b. Principal components analysis of bureaucracy variables

	Component		
	1	2	3
Department size	.908	-.281	-.117
Task scope	.350	.273	.309
Functional differentiation	.419	.570	-.079
Civilianization	-.008	.612	-.630
Formalization	.176	.428	.699
Spatial differentiation	.925	-.279	-.080
Height	.520	.209	-.043

Scale alpha (z-scored measures) .651

Three components extracted

Table 4b. Control variables

Control variables

Bureaucracy	Expected sign	n	min	max	mean	s.d
Department size	+ or -	434	57	53029	666.217	2805.294
Task scope	+ or -	434	9	18	13.938	1.582
Height	+ or -	434	0.464	5.06	1.972	0.683
Funct. differentiation	+ or -	434	0	19	8.455	3.757
Spat. differentiation	+ or -	434	0	97	1.553	5.436
Formalization	+ or -	434	4	8	7.509	0.684
Civilianization	+ or -	434	0	0.85	0.322	0.151
Minority threat	Expected sign	n	min	max	mean	s.d
%AA population	+	434	0.4	89.5	16.055	17.252
Racial inequality	+	434	0.559	3.164	1.389	0.312
Racial segregation	+	434	0.084	0.838	0.388	0.165
Struct. disadvantage	Expected sign	n	min	max	mean	s.d
Economic inequality	+	434	0.314	0.593	0.439	0.047
%HHs in poverty	+	434	1.30%	39.20%	12.945%	6.396
%HHs public assist.	+	434	0.40%	16.30%	4.110%	2.637
Unemployment rate	+	434	1.86%	16.11%	6.643%	2.764
Divorce rate	+	434	3.40%	16.90%	10.521%	2.225
%Female-headed HHs	+	434	4.20%	17.70%	9.321%	2.656
	Expected sign	n	min	max	mean	s.d
Violent crime rate (per 100k)	+	434	10.1	8213.3	2213.423	1553.571
	Expected sign	n	min	max	mean	s.d
AA mayor presence	-	434	0	1	0.099	0.299

Figure 1b. Diversity's impact on police outcomes model diagram

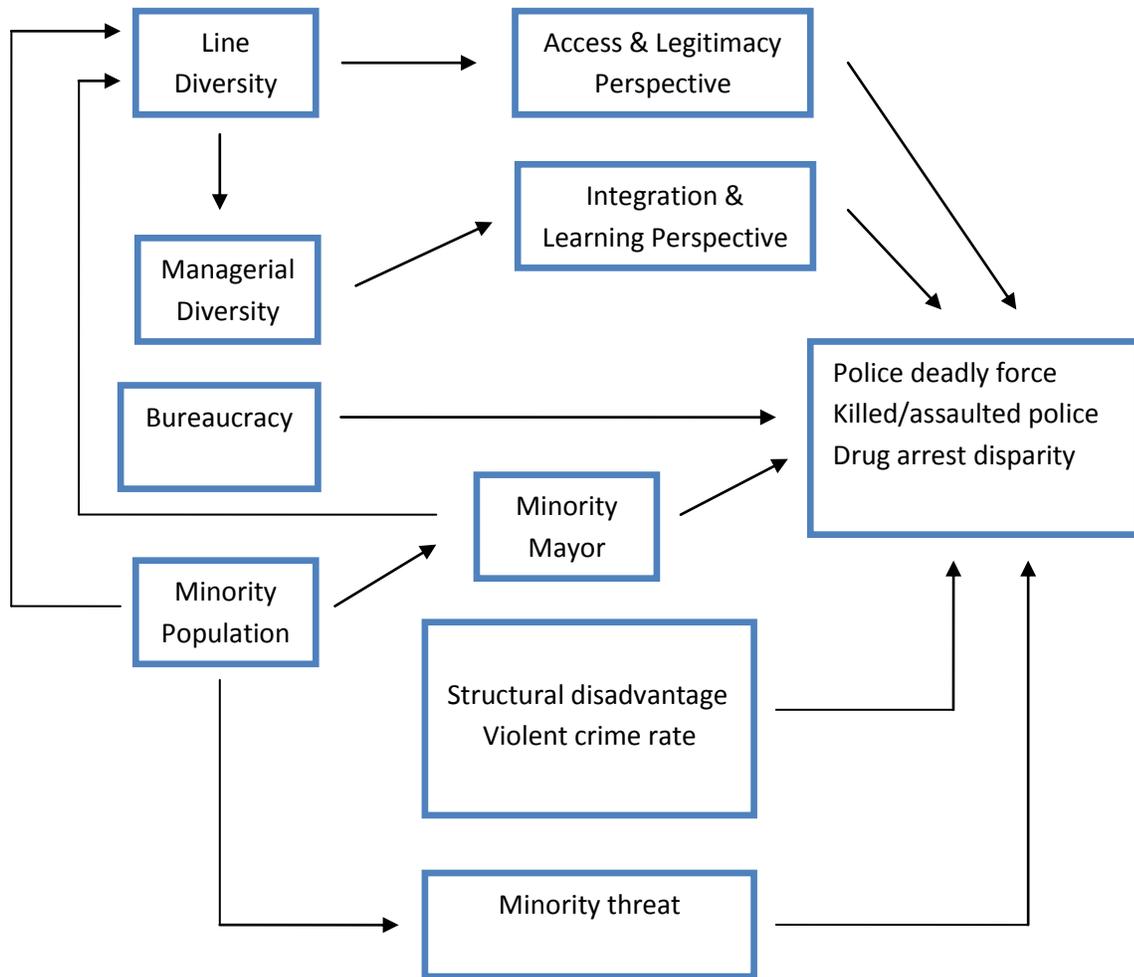


Table 5b. Diversity measures and felonious officer killings

Part II results summary Independent variables	Felonious killings of police												
	Relative proportions				Diversity perspective				Political representation				
	B	L	F	M	B	L	F	M	B	L	F	M	
Minority line												N/A	
Minority managers												N/A	
Diversity perspective												N/A	
Political representation												N/A	
Bureaucracy	+	+	+		+	+	+	+	+	+		N/A	+
Minority threat												N/A	
Structural disadvantage												N/A	
Violent crime												N/A	
AA mayor												N/A	

Table 6b. Diversity measures and assaults against police

Part II results summary Independent variables	Assaults on police											
	Relative proportions				Diversity perspective				Political representation			
	B	L	F	M	B	L	F	M	B	L	F	M
Minority line			+	+								N/A
Minority managers												N/A
Diversity perspective							-					N/A
Political representation												N/A
Bureaucracy	+	+	+	+	+	+	+	+	+	+		N/A +
Minority threat		+	+	+		+	+	+	+	+		N/A +
Structural disadvantage	+		+				+	+	+	+		N/A +
Violent crime												N/A
Black mayor												N/A

Table 7b. Diversity measures and police use of deadly force

Part II results summary Independent variables	Police use of deadly force												
	Relative proportions				Diversity perspective				Political representation				
	B	L	F	M	B	L	F	M	B	L	F	M	
Minority line		+	+	+								N/A	
Minority managers			+	+								N/A	
Diversity perspective						-						N/A	
Political representation												N/A	
Bureaucracy	+	+	+	+	+	+	+	+	+	+		N/A	+
Minority threat	+	+	+	+		+	+	+	+	+		N/A	+
Structural disadvantage	+				+			+	+	+		N/A	+
Violent crime	+	+	+	+		-	-	-	-	-		N/A	-
AA mayor		+	+				+	+	+	+		N/A	+

Table 8b. Diversity measures and disparate rates of arrest

Part II results summary Independent variables	Black to White arrest ratios		
	Relative proportions	Diversity perspective	Political representation
AA line	+		
AA managers			
AA diversity perspective		-	
AA political represent.			
Bureaucracy			
Minority threat	+	+	+
Structural disadvantage			
Violent crime	+		+
AA mayor		+	+

Appendix: complete listing of Part II analytic models

Models 1x through 11x. Felonious officer killings

1x. Percent African American line and management and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.435	0.522	-4.668	0.000
%AA line	1.275	2.287	0.558	0.577
%AA management	0.184	1.982	0.093	0.926
Bureaucracy	0.116	0.042	2.756	0.006
Minority threat	0.095	0.114	0.837	0.403
Structural disadvantage	0.031	0.071	0.439	0.661
Violent crime rate	<-.001	0.000	-0.016	0.987
AA mayor	0.281	0.571	0.492	0.623
Dispersion parameter for count data model				
Alpha	1.796	0.831	2.160	0.031

McFadden Pseudo  $R^2 = .041$

2x. Percent Latino line and management and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.375	0.497	-4.776	0.000
%Latino line	0.541	2.355	0.230	0.818
%Latino management	0.476	2.799	0.170	0.865
Bureaucracy	0.117	0.047	2.492	0.013
Minority threat	0.158	0.117	1.355	0.175
Structural disadvantage	0.035	0.067	0.515	0.607
Violent crime rate	<-.001	0.000	-0.065	0.948
AA mayor	0.425	0.515	0.824	0.410
Dispersion parameter for count data model				
Alpha	1.950	0.831	2.347	0.019

McFadden Pseudo  $R^2 = .054$

3x. Percent female line and management and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.529	0.585	-4.322	0.000
%Female line	0.987	3.206	0.308	0.758
%Female management	0.886	1.743	0.509	0.611
Bureaucracy	0.113	0.042	2.687	0.007
Minority threat	0.126	0.102	1.243	0.214
Structural disadvantage	0.039	0.068	0.576	0.564
Violent crime rate	<-.001	0.000	-0.049	0.961
AA mayor	0.398	0.523	0.762	0.446
Dispersion parameter for count data model				
Alpha	1.876	0.804	2.333	0.020

McFadden Pseudo  $R^2 = .047$

4x. Percent total minority line and management and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-3.050	0.590	-5.172	0.000
%Minority line	1.903	1.449	1.313	0.189
%Minority management	0.404	1.226	0.329	0.742
Bureaucracy	0.077	0.041	1.861	0.063
Minority threat	0.160	0.099	1.605	0.109
Structural disadvantage	0.012	0.066	0.183	0.855
Violent crime rate	<.001	0.000	0.006	0.995
AA mayor	0.305	0.494	0.618	0.537
Dispersion parameter for count data model				
Alpha	1.560	0.784	1.989	0.047

McFadden Pseudo  $R^2 = .040$

5x. African American diversity perspectives and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.002	0.634	-3.156	0.002
AA manager/line ratio	-0.099	0.292	-0.340	0.734
Bureaucracy	0.137	0.048	2.864	0.004
Minority threat	0.090	0.110	0.814	0.416
Structural disadvantage	0.058	0.074	0.780	0.436
Violent crime rate	<-.001	0.000	-0.119	0.905
AA mayor	0.169	0.589	0.287	0.774
Dispersion parameter for count data model				
Alpha	2.002	0.820	2.442	0.015

McFadden Pseudo  $R^2 = .063$

6x. Latino diversity perspectives and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.280	0.588	-3.875	0.000
Latino manager/line ratio	-0.149	0.220	-0.678	0.498
Bureaucracy	0.152	0.052	2.920	0.004
Minority threat	0.169	0.116	1.457	0.145
Structural disadvantage	0.025	0.075	0.333	0.739
Violent crime rate	<.001	0.000	0.357	0.721
AA mayor	0.066	0.665	0.100	0.921
Dispersion parameter for count data model				
Alpha	1.982	0.789	2.512	0.012

McFadden Pseudo  $R^2 = .068$

7x. Female diversity perspectives and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.402	0.618	-3.889	0.000
Female manager/line ratio	-0.008	0.115	-0.070	0.944
Bureaucracy	0.161	0.052	3.078	0.002
Minority threat	0.134	0.107	1.244	0.214
Structural disadvantage	0.043	0.072	0.594	0.552
Violent crime rate	<.001	0.000	0.100	0.921
AA mayor	0.183	0.606	0.302	0.763
Dispersion parameter for count data model				
Alpha	2.152	0.845	2.548	0.011

McFadden Pseudo  $R^2 = .065$

8x. Total minority diversity perspectives and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.336	0.649	-3.599	0.000
Minority manager/line ratio	-0.072	0.237	-0.303	0.762
Bureaucracy	0.158	0.050	3.149	0.002
Minority threat	0.133	0.105	1.260	0.208
Structural disadvantage	0.048	0.072	0.674	0.500
Violent crime rate	<.001	0.000	0.039	0.969
AA mayor	0.172	0.604	0.285	0.776
Dispersion parameter for count data model				
Alpha	2.166	0.841	2.574	0.010

McFadden Pseudo  $R^2 = .064$

9x. African American political representation and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.087	0.558	-3.739	0.000
AA political power	-0.243	0.413	-0.589	0.556
Bureaucracy	0.136	0.045	3.006	0.003
Minority threat	0.118	0.103	1.140	0.255
Structural disadvantage	0.037	0.068	0.547	0.584
Violent crime rate	<-.001	0.000	-0.089	0.929
AA mayor	0.415	0.525	0.790	0.429
Dispersion parameter for count data model				
Alpha	2.030	0.816	2.487	0.013

McFadden Pseudo  $R^2 = .056$

10x. Latino political representation and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.242	0.493	-4.553	0.000
Latino political power	-0.086	0.260	-0.331	0.741
Bureaucracy	0.126	0.044	2.867	0.004
Minority threat	0.130	0.102	1.274	0.203
Structural disadvantage	0.041	0.070	0.589	0.556
Violent crime rate	<-.001	0.000	-0.056	0.955
AA mayor	0.414	0.523	0.793	0.428
Dispersion parameter for count data model				
Alpha	1.965	0.812	2.419	0.016

McFadden Pseudo  $R^2 = .053$

11x. Total minority political representation and felonious officer killings

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-2.248	0.521	-4.317	0.000
Minority political power	-0.070	0.461	-0.151	0.880
Bureaucracy	0.129	0.046	2.817	0.005
Minority threat	0.129	0.102	1.264	0.206
Structural disadvantage	0.041	0.068	0.599	0.549
Violent crime rate	<-.001	0.000	-0.063	0.949
AA mayor	0.412	0.523	0.788	0.431
Dispersion parameter for count data model				
Alpha	1.990	0.817	2.436	0.015

McFadden Pseudo  $R^2 = .054$

Models 12x through 22x. Assaults against police

12x. Percent African American line and management and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.217	0.252	20.736	0.000
%AA line	0.202	1.574	0.128	0.898
%AA management	-0.331	0.876	-0.377	0.706
Bureaucracy	<.001	<.001	11.689	0.000
Minority threat	0.111	0.058	1.897	0.058
Structural disadvantage	0.087	0.029	2.995	0.003
Violent crime rate	<-.001	<.001	-1.862	0.063
AA mayor	0.011	0.538	0.020	0.984
Dispersion parameter for count data model				
Alpha	2.193	0.123	17.887	0.000

McFadden Pseudo  $R^2 = .969$

13x. Percent Latino line and management and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	4.929	0.213	23.139	0.000
%Latino line	2.119	1.189	1.781	0.075
%Latino management	0.451	0.937	0.481	0.630
Bureaucracy	<.001	<.001	10.217	0.000
Minority threat	0.186	0.057	3.295	0.001
Structural disadvantage	0.053	0.030	1.768	0.077
Violent crime rate	<-.001	<.001	-1.302	0.193
AA mayor	0.007	0.460	0.014	0.989
Dispersion parameter for count data model				
Alpha	2.027	0.110	18.368	0.000

McFadden Pseudo  $R^2 = .967$

14x. Percent female line and management and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	4.652	0.285	16.329	0.000
%Female line	3.367	1.515	2.223	0.026
%Female management	0.856	0.827	1.036	0.300
Bureaucracy	<.001	<.001	11.059	0.000
Minority threat	0.099	0.047	2.110	0.035
Structural disadvantage	0.067	0.030	2.212	0.027
Violent crime rate	<-.001	<.001	-1.373	0.170
AA mayor	-0.015	0.435	-0.034	0.973
Dispersion parameter for count data model				
Alpha	2.092	0.114	18.293	0.000

McFadden Pseudo  $R^2 = .968$

15x. Percent total minority line and management and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	4.403	0.253	17.437	0.000
%Minority line	1.910	0.701	2.724	0.006
%Minority management	0.484	0.503	0.962	0.336
Bureaucracy	<.001	<.001	9.797	0.000
Minority threat	0.124	0.047	2.607	0.009
Structural disadvantage	0.037	0.028	1.289	0.198
Violent crime rate	<-.001	<.001	-0.871	0.384
AA mayor	-0.181	0.418	-0.434	0.664
Dispersion parameter for count data model				
Alpha	1.947	0.103	18.827	0.000

McFadden Pseudo  $R^2 = .967$

16x. African American diversity perspectives and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.435	0.309	17.607	0.000
AA manager/line ratio	-0.028	0.088	-0.320	0.749
Bureaucracy	<.001	<.001	8.836	0.000
Minority threat	0.082	0.061	1.351	0.177
Structural disadvantage	0.060	0.035	1.687	0.092
Violent crime rate	<-.001	<.001	-1.225	0.221
AA mayor	0.028	0.559	0.051	0.960
Dispersion parameter for count data model				
Alpha	2.253	0.159	14.138	0.000

McFadden Pseudo  $R^2 = .974$

17x. Latino diversity perspectives and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.303	0.258	20.544	0.000
Latino manager/line ratio	-0.007	0.027	-0.262	0.793
Bureaucracy	<.001	<.001	8.794	0.000
Minority threat	0.138	0.051	2.700	0.007
Structural disadvantage	0.044	0.031	1.402	0.161
Violent crime rate	<-.001	<.001	-0.320	0.749
AA mayor	-0.107	0.501	-0.213	0.832
Dispersion parameter for count data model				
Alpha	1.910	0.120	15.856	0.000

McFadden Pseudo  $R^2 = .972$

18x. Female diversity perspectives and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.337	0.259	20.602	0.000
Female manager/line ratio	-0.058	0.019	-3.086	0.002
Bureaucracy	<.001	<.001	10.295	0.000
Minority threat	0.107	0.052	2.043	0.041
Structural disadvantage	0.064	0.031	2.048	0.041
Violent crime rate	<-.001	<.001	-1.290	0.197
AA mayor	<.001	0.534	0.000	1.000
Dispersion parameter for count data model				
Alpha	2.218	0.134	16.573	0.000

McFadden Pseudo  $R^2 = .970$

19x. Total minority diversity perspectives and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.282	0.253	20.856	0.000
Minority manager/line ratio	-0.056	0.064	-0.881	0.378
Bureaucracy	<.001	<.001	10.929	0.000
Minority threat	0.108	0.053	2.059	0.040
Structural disadvantage	0.066	0.032	2.071	0.038
Violent crime rate	<-.001	<.001	-1.337	0.181
AA mayor	0.003	0.536	0.006	0.995
Dispersion parameter for count data model				
Alpha	2.285	0.135	16.900	0.000

McFadden Pseudo  $R^2 = .970$

20x. African American political representation and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.203	0.246	21.191	0.000
AA political power	0.008	0.063	0.132	0.895
Bureaucracy	<.001	<.001	10.996	0.000
Minority threat	0.110	0.051	2.147	0.032
Structural disadvantage	0.071	0.030	2.352	0.019
Violent crime rate	<-.001	<.001	-1.598	0.110
AA mayor	0.020	0.525	0.038	0.970
Dispersion parameter for count data model				
Alpha	2.305	0.132	17.463	0.000

McFadden Pseudo  $R^2 = .969$

21x. Latino political representation and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.271	0.250	21.094	0.000
Latino political power	-0.106	0.156	-0.676	0.499
Bureaucracy	<.001	<.001	10.975	0.000
Minority threat	0.110	0.051	2.164	0.031
Structural disadvantage	0.070	0.030	2.338	0.019
Violent crime rate	<-.001	<.001	-1.559	0.119
AA mayor	0.024	0.521	0.045	0.964
Dispersion parameter for count data model				
Alpha	2.298	0.132	17.470	0.000

McFadden Pseudo  $R^2 = .969$

22x. Total minority political representation and police assaults

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	5.128	0.264	19.398	0.000
Minority political power	0.128	0.229	0.560	0.576
Bureaucracy	<.001	<.001	10.954	0.000
Minority threat	0.109	0.051	2.141	0.032
Structural disadvantage	0.074	0.031	2.425	0.015
Violent crime rate	<-.001	<.001	-1.575	0.115
AA mayor	0.009	0.519	0.017	0.986
Dispersion parameter for count data model				
Alpha	2.287	0.131	17.490	0.000

McFadden Pseudo  $R^2 = .969$

Models 23x through 33x. Police use of deadly force

23x. Percent African American line and management and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.028	0.170	6.051	0.000
% AA line	0.337	0.940	0.359	0.720
% AA management	0.316	0.565	0.559	0.576
Bureaucracy	0.001	<.001	25.223	0.000
Minority threat	0.087	0.038	2.256	0.024
Structural disadvantage	0.047	0.022	2.086	0.037
Violent crime rate	<-.001	<.001	-5.541	0.000
AA mayor	0.588	0.321	1.835	0.067
Dispersion parameter for count data model				
Alpha	1.436	0.130	11.038	0.000

McFadden Pseudo  $R^2 = .602$

24x. Percent Latino line and management and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	0.809	0.171	4.726	0.000
%Latino line	2.159	0.780	2.767	0.006
%Latino management	0.364	0.624	0.584	0.559
Bureaucracy	0.001	<.001	22.812	0.000
Minority threat	0.179	0.043	4.113	0.000
Structural disadvantage	0.016	0.023	0.699	0.484
Violent crime rate	<-.001	<.001	-4.979	0.000
AA mayor	0.624	0.282	2.210	0.027
Dispersion parameter for count data model				
Alpha	1.411	0.123	11.453	0.000

McFadden Pseudo  $R^2 = .592$

25x. Percent female line and management and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	0.352	0.211	1.667	0.096
%Female line	4.081	0.978	4.172	0.000
%Female management	1.295	0.444	2.920	0.004
Bureaucracy	0.001	<.001	23.734	0.000
Minority threat	0.090	0.034	2.610	0.009
Structural disadvantage	0.042	0.023	1.855	0.064
Violent crime rate	<-.001	<.001	-5.150	0.000
AA mayor	0.592	0.285	2.076	0.038
Dispersion parameter for count data model				
Alpha	1.364	0.121	11.303	0.000

McFadden Pseudo  $R^2 = .588$

26x. Percent total minority line and management and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	-0.094	0.213	-0.442	0.659
%Minority line	2.605	0.533	4.890	0.000
%Minority management	0.756	0.364	2.077	0.038
Bureaucracy	0.001	<.001	23.458	0.000
Minority threat	0.128	0.035	3.624	0.000
Structural disadvantage	-0.006	0.022	-0.280	0.779
Violent crime rate	<-.001	<.001	-4.472	0.000
AA mayor	0.364	0.253	1.439	0.150
Dispersion parameter for count data model				
Alpha	1.285	0.108	11.884	0.000

McFadden Pseudo  $R^2 = .571$

27x. African American diversity perspectives and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	0.550	0.337	1.635	0.102
AA manager/line ratio	0.036	0.104	0.349	0.727
Bureaucracy	0.001	<.001	14.208	0.000
Minority threat	-0.113	0.082	-1.377	0.169
Structural disadvantage	0.110	0.055	1.987	0.047
Violent crime rate	<-.001	<.001	-1.456	0.145
AA mayor	0.125	0.534	0.233	0.816
Dispersion parameter for count data model				
Alpha	3.171	0.426	7.445	0.000

McFadden Pseudo  $R^2 = .656$

28x. Latino diversity perspectives and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.366	0.199	6.854	0.000
Latino manager/line ratio	-0.117	0.055	-2.129	0.033
Bureaucracy	<.001	<.001	19.211	0.000
Minority threat	0.119	0.040	3.008	0.003
Structural disadvantage	0.018	0.025	0.708	0.479
Violent crime rate	<-.001	<.001	-3.507	0.001
AA mayor	0.536	0.332	1.617	0.106
Dispersion parameter for count data model				
Alpha	1.335	0.126	10.621	0.000

McFadden Pseudo  $R^2 = .604$

29x. Female diversity perspectives and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.272	0.189	6.728	0.000
Female manager/line ratio	-0.045	0.035	-1.266	0.205
Bureaucracy	0.001	<.001	23.113	0.000
Minority threat	0.096	0.036	2.624	0.009
Structural disadvantage	0.044	0.024	1.864	0.062
Violent crime rate	<-.001	<.001	-5.407	0.000
AA mayor	0.640	0.307	2.083	0.037
Dispersion parameter for count data model				
Alpha	1.418	0.130	10.882	0.000

McFadden Pseudo  $R^2 = .605$

30x. Total minority diversity perspectives and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.181	0.199	5.948	0.000
Minority manager/line ratio	-0.061	0.085	-0.724	0.469
Bureaucracy	0.001	<.001	24.532	0.000
Minority threat	0.101	0.036	2.817	0.005
Structural disadvantage	0.047	0.023	2.041	0.041
Violent crime rate	<-.001	<.001	-5.465	0.000
AA mayor	0.612	0.303	2.024	0.043
Dispersion parameter for count data model				
Alpha	1.443	0.132	10.940	0.000

McFadden Pseudo  $R^2 = .606$

31x. African American minority political representation and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.086	0.172	6.311	0.000
AA political power	0.005	0.040	0.126	0.900
Bureaucracy	0.001	<.001	25.083	0.000
Minority threat	0.104	0.036	2.873	0.004
Structural disadvantage	0.050	0.023	2.198	0.028
Violent crime rate	<-.001	<.001	-5.616	0.000
AA mayor	0.637	0.302	2.112	0.035
Dispersion parameter for count data model				
Alpha	1.446	0.131	11.073	0.000

McFadden Pseudo  $R^2 = .603$

32x. Latino political representation and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.195	0.172	6.957	0.000
Latino political power	-0.179	0.125	-1.434	0.152
Bureaucracy	0.001	<.001	25.146	0.000
Minority threat	0.106	0.036	2.915	0.004
Structural disadvantage	0.049	0.023	2.117	0.034
Violent crime rate	<-.001	<.001	-5.462	0.000
AA mayor	0.638	0.302	2.114	0.035
Dispersion parameter for count data model				
Alpha	1.443	0.131	11.022	0.000

McFadden Pseudo  $R^2 = .602$

33x. Total minority political representation and police use of deadly force

Variable	Coefficient	S.E.	b/S.E.	Sig.
(Constant)	1.049	0.176	5.955	0.000
Minority political power	0.066	0.135	0.491	0.624
Bureaucracy	0.001	<.001	24.864	0.000
Minority threat	0.103	0.036	2.896	0.004
Structural disadvantage	0.051	0.023	2.233	0.026
Violent crime rate	<-.001	<.001	-5.513	0.000
AA mayor	0.634	0.302	2.099	0.036
Dispersion parameter for count data model				
Alpha	1.444	0.130	11.134	0.000

McFadden Pseudo  $R^2 = .602$

Models 34x through 36x. Disparate rates of arrest for drug offenses

34x. Percent African American minority line and management and disparate rates of arrest

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.629	.047		-13.447	.000		
Percent AA line	1.479	.226	.253	6.558	.000	.509	1.965
Percent AA management	-.120	.130	-.028	-.924	.356	.800	1.250
Bureaucracy	-.012	.006	-.058	-1.947	.052	.853	1.172
Minority threat	.168	.011	.619	14.748	.000	.429	2.329
Structural disadvantage	-.005	.006	-.032	-.775	.439	.445	2.247
Violent crime rate	6.07E-005	.000	.126	3.237	.001	.502	1.994
AA mayor presence	.046	.068	.021	.678	.498	.759	1.318

$R^2 = .701$

35x. African American diversity perspectives and disparate rates of arrest

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.347	.048		-7.246	.000		
AA manager/line ratio	-.039	.017	-.077	-2.261	.025	.965	1.036
Bureaucracy	-.010	.006	-.063	-1.746	.082	.860	1.163
Minority threat	.170	.012	.699	14.482	.000	.481	2.080
Structural disadvantage	.009	.007	.066	1.320	.188	.454	2.202
Violent crime rate	3.49E-005	.000	.083	1.802	.073	.524	1.909
AA mayor presence	.194	.063	.114	3.077	.002	.814	1.229

R<sup>2</sup> = .693

36x. African American political representation and disparate rates of arrest

Variable	B	S.E	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.495	.046		-10.678	.000		
AA political power	-.012	.008	-.043	-1.465	.144	.964	1.037
Bureaucracy	-.010	.006	-.048	-1.539	.125	.856	1.168
Minority threat	.194	.011	.716	17.630	.000	.506	1.975
Structural disadvantage	-.002	.006	-.011	-.248	.805	.448	2.233
Violent crime rate	6.10E-005	.000	.127	3.100	.002	.501	1.998
AA mayor presence	.185	.068	.085	2.704	.007	.837	1.195

$R^2 = .670$