A Tale of Force: Examining Factors that Influence Police Officer Use of Force

Kayla Preito-Hodge

University of Massachusetts Amherst

Follow this and additional works at: https://scholarworks.umass.edu/masters_theses_2

Part of the Criminology Commons

Recommended Citation
https://scholarworks.umass.edu/masters_theses_2/612

This Open Access Thesis is brought to you for free and open access by the Dissertations and Theses at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Masters Theses by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.
A TALE OF FORCE: EXAMINING FACTORS THAT LEAD TO POLICE OFFICER USE OF FORCE

A Thesis Presented

by

KAYLA PREITO-HODGE

Submitted to the Graduate School of the University of Massachusetts-Amherst in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

February 2018

Sociology
A TALE OF FORCE: EXAMINING FACTORS THAT LEAD TO POLICE OFFICER USE OF FORCE

A Thesis Presented

by

KAYLA PREITO-HODGE

Approved as to style and Content by:

_______________________
Anthony Paik, Chair

_______________________
David Cort, Member

_______________________
Donald Tomaskovic-Devey, Member

_______________________
Michelle Budig, Department Chair
Sociology
ABSTRACT

A TALE OF FORCE: EXAMINING FACTORS THAT LEAD TO POLICE OFFICERS’ USE OF FORCE

FEBRUARY 2018

KAYLA PREITO-HODGE, B.A., BOSTON COLLEGE
M.A. UNIVERSITY OF MASSACHUSETTS, AMHERST

Directed by: Prof. Anthony Paik

Police officer use of force in the United States is a growing concern to the American people. Although not based on solid empirical evidence, President Obama’s Task Force on 21st Century Policing proposed several policies that address violent policing and the use of excessive force. In this study, I examine the relationship between policy recommendations and variations across police departments in their reported use of force. This study draws on measures of use of force, community policing, education, and officer demographics from the 2013 Law Enforcement Management and Administrative Statistics (LEMAS) survey, combined with county-level demographic information from the American Community Survey, and information on local crime rates from the FBI’s Uniform Crime Report. Cross-sectional findings reveal that more college-educated officers are associated with lower counts of use of force, that officer diversity is not strongly related to use of force, and that most community policing indicators are associated with higher counts in use of force.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
</tr>
<tr>
<td>2. THEORETICAL BACKGROUND AND LITERATURE REVIEW</td>
</tr>
<tr>
<td>Background on Policing</td>
</tr>
<tr>
<td>Developing a Baseline Model</td>
</tr>
<tr>
<td>President’s Task Force Recommendation #1: Increased Police Diversity</td>
</tr>
<tr>
<td>President’s Task Force Recommendation #2: Education and Training</td>
</tr>
<tr>
<td>President’s Task Force Recommendation #3: Increased Community Policing</td>
</tr>
<tr>
<td>3. METHODS</td>
</tr>
<tr>
<td>Data</td>
</tr>
<tr>
<td>Models</td>
</tr>
<tr>
<td>Sample Selection</td>
</tr>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>4. RESULTS</td>
</tr>
<tr>
<td>Use of Force Per Incident</td>
</tr>
<tr>
<td>Use of Force Per Officer Involved</td>
</tr>
<tr>
<td>5. DISCUSSION</td>
</tr>
<tr>
<td>Increasing Diversity in Policing</td>
</tr>
</tbody>
</table>
6. CONCLUSION ................................................................................................................33

Validity Concerns ........................................................................................................33

Calls for the Future ........................................................................................................33

BIBLIOGRAPHY .............................................................................................................39
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summary Statistics</td>
<td>37</td>
</tr>
<tr>
<td>2. NBR Models for Documented Use of Force</td>
<td>38</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Violent policing in the United States is among the most contentious social issues of the 21st century. Recent high-profile murder cases of unarmed Black citizens at the hands of police have prompted a nationwide outcry against the racialized nature of violent policing. The very public unveiling of these violent limitations to racial civil rights has sparked heated conversations around representation, accountability, and policies on the employment of various levels of force in police departments across the country. While only a small fraction of all use of force incidents, approximately 1,093 people were recorded in the Guardian’s *The Counted* to be killed by police in 2016, down by only 42 persons from the previous year. Of those killed in 2015 and 2016, young Black males between the ages of 15-34 accounted for approximately 15% and 15.8% of those killed by police respectively, despite comprising only 2% of the total U.S. population.

In response to the Black Lives Matter Movement, the ongoing tensions between Black communities and the police, and the emergence of visceral audio/video footage of police involved deaths, The President’s Task Force on 21st Century Policing and the Department of Justice (DOJ) produced policy recommendations that aimed to reduce force among police officers (President’s Task Force on 21st Century Policing, 2015; Department of Justice Civil Rights Division, 2015). These recommendations centered on expanding community policing initiatives—especially in communities where tensions were high—as well as increasing diversity and inclusion within the overall policing organization. In spite of good intention, these recommendations have often been met with
skepticism—even by the DOJ itself. Skepticism has focused on whether these recommendations will actually improve relations between communities of color and local police departments or merely change the face of violent policing in hyper-segregated communities. The murder of Freddie Gray, where three out of the six officers involved were Black, exemplifies and supports this skepticism; ultimately locating the issue of violent policing in the structure of the profession, rather than the race of individual police officer. Limited empirical evidence examining the impact of officer demographics on use of force exists. Studies that have examined the issue are often limited in scope, and rely on individual department level data (Wilkins and Williams, 2008; Fryer, 2016; Hoffman and Hickey, 2005; Bratton, 2014; Brown and Frank, 2006; Skogan, 2013; White and Klinger, 2008).

In what follows, I examine the recommendations put forth by the Department of Justice and the President’s Task Force that suggest increasing the number of Black officers and intensifying community policing efforts in local police departments will help to reduce instances of use of force. Use of Force is broadly defined here to include all levels of force recorded by agencies. Utilizing data collected by the Bureau of Justice Statistics (BJS) in the 2013 Law Enforcement Management and Administrative Statistics (LEMAS) survey, I examine the effects community policing, officer education, and racial representation in police departments have on police reported measures of use of force. While I include a measure for female representation in departments and the findings are discussed, I am primarily interested in analyzing the racial effects on use of force.

Data for the race of the victim and the level of force used in an interaction are not included in this analysis. However, the present study aims to provide a platform on which
one may begin to critique policy recommendations and their authenticity in the quest for viable solutions that aim to reduce racialized police violence.
CHAPTER 2
THEORETICAL BACKGROUND AND LITERATURE REVIEW

Background on Policing

During the late 19th and early 20th centuries, officer job security was inextricably linked to the political party they chose to endorse on election day. According to Fogelson (1977), “whoever dominated the police could assign to the polls hundreds of tough, well-armed, if not necessarily well-disciplined men, whose jobs, the politicians reminded them, depended on the outcome [of the elections].” Aggressive politically motivated policing tactics continued well throughout the 20th and 21st centuries, and have helped to inform the relationships that exist between communities of color and law enforcement (Trujilo, 1980; Rios, 2011). These relationships have been subject to public scrutiny, especially in the aftermath of publically visible examples of officers’ employment of excessive force.

Scholars have drawn on a number of explanations and theories about the nature of these relations, however findings have often produced mixed and inconsistent conclusions. In this paper, I examine President Obama’s Task Force policy recommendations’ that aim to reduce use of force across police departments. This paper does not develop a general causal model, but more modestly asks if these recommendations are likely to be useful solutions to the problem of violent policing. I use the social scientific literature to develop a baseline model of communal and departmental aspects that may encourage or discourage use of force by police. In the next section, I highlight the importance of social disorganization theory to develop a baseline model.
Developing a Baseline Model

Black (1968) posits that the “quantity of law” increases as informal social control decreases. In other words, as social disorganization increases, so does the use of extralegal forces. Conventional criminological perspectives often theorize that police violence should be viewed as reactionary to the violence police encounter within high crime areas (Jacobs, 1998; Sorsen et al. 1993; Goldman, 1976; Lee et al. 2010; Klinger et al. 2015; MacDonald, Fagan, Geller, 2016). Other scholars have found that when officers encounter suspects in more economically disadvantage communities, they are significantly more likely to use higher levels of force (Terrill and Reisig, 2006; Sun et al. 2008; Klinger et al. 2015). Klinger et al. (2015) find a curvilinear relationship between police shootings and violent crime, with police shootings occurring less frequent in the most violent neighborhoods in St. Louis than in those with moderate levels of violence (Klinger et al. 2015). They suggest that this curvilinear relationship may derive from local circumstances in St. Louis. My baseline model incorporates measures of the ratio of officers to the local community population and average crime rates as measures of the quantity of law and disorganization respectively.

Social scientists have also found evidence of racial bias in police use of force (Fryer, 2016; Ross, 2015). Fryer (2016) argues that Blacks and Hispanics are more than 50 percent more likely to experience some level of force during a police interaction relative to whites. This finding is consistent with the literature on racial profiling and the now infamous practice of stop and frisk, both of which are associated with higher rates of Black and Latino stops (Meares, 2015.). Gelman, Fagan, and Kiss (2005) find that even
when controlling for racial group participation in crime, Blacks and Latinos were more likely to be stopped than Whites.

Additional studies using implicit bias simulations have found that officers more readily shoot Black suspects even when no crime related object is detected (Correll et al., 2007; Kange and Lane, 2010). Using a multi-level Bayesian analysis, Ross (2015) finds significant racial bias in the killing of unarmed Blacks by police compared to unarmed whites. Data collected specifically on persons killed by police reveal that Blacks were 24.3% of those killed in 2016 alone, despite comprising only 12% of the national population. My models incorporate county-level controls for the Black population where police districts are located. Below I outline the policy recommendations that seek to reduce police violence in cities across the United States and introduce variables for my baseline models.

**President’s Task Force Recommendation #1: Increased Police Diversity**

“Law enforcement agencies should strive to create a workforce that encompasses a broad range of diversity including race, gender, language, life experience, and cultural background to improve understanding and effectiveness in dealing with all communities.” (pg.2)

In attempt to mitigate the issue of racialized police violence, some scholars, public figures, police administrators, and policy makers have argued that increasing racial diversity in police forces throughout the country will help in reducing instances of racialized police violence. However, there has been very little empirical evidence to back this claim, and even less on the generality of violent policing. By and large, most of the recent research on race and officer behavior has focused on the race of the suspect, and not the race of the officer (McElvain and Kposowa, 2008; Brown and Frank, 2006). This may be due in part to scholars’ fixation on researching the underclass and the erotization
of Blackness and violence within many inner-city communities (Kelley, 1998). Absence of empirical research may also be attributed to the insular nature of police departments across the country, their protection by police unions, and the resultant lack of reliable data sources to make causal arguments (Moskos, 2008).

For whatever reason, literature examining the impact of officer race on behavior is sparse. However, a few studies that have examined these characteristics have found officer race has little or no significant impact on police use of force (Smith, 2003; McElvain and Kposowa, 2008). Findings from the present study aim to add to the existing literature on officer race and use of force. Though racial data specific to each incident is absent, my goal is to examine if the representation of Black officers in police departments across the country influences overall use of force outcomes.

Some scholars have argued that Blacks are better able to police hyper-segregated Black communities because of the social and cultural capital they bring to the field. It is believed that these forms of capital allow officers to approach the community with an awareness and cultural sensitivity that enables them to cater to the needs, wants, and expectations of members in these communities (Sun and Payne, 2004; Dodge and Pogrebin, 2001; Pogrebin, Dodge, and Chatman, 2000). Specifically, scholars have observed that Black officers are often more coercive and less sensitive to the needs of Blacks (Sun and Payne, 2004; Brown and Frank, 2006, Leinen, 1984; Alex, 1969; Palmer, 1973; Wilkins and Williams, 2008) and are not likely to speak out against discrimination imposed on citizens by white officers (Kohler-Hausmann, 2016; Wilkins and Williams, 2008), which may in turn affect reporting decisions. Further, Sharp (2014) argues that Black bureaucratic representation in police departments does not mitigate the
rate at which Blacks are arrested (e.g. order maintenance arrests), while Black political representation in cities does.

Identity formation theory contends that identities are a by-product of how we see, experience, and interpret the world around us. Helms (2007) asserts that our “racial group defines the type of life experiences to which a person is exposed and that are available for internalizing (i.e., group oppression or privilege)” (pg. 236). Through the process of socialization and internalization, we come to understand ourselves in relation to the world. For Blacks, these processes are complicated further by the web of identities entangled in oppression and societal participation. DuBois (1903) describes Blacks as developing a veil of double consciousness in which Blacks not only see themselves through their own eyes, but also through the eyes of whites. Erik Erikson (1968) describes the process of identity formation as forever changing and as a process that increases differentiation. He expounds on both identity formation theory and DuBois’ conception of double consciousness, locating identity formation in psychology stating,

Identity formation employs a process of simultaneous reflection and observation, a process taking place on all levels of mental functioning, by which the individual judges himself in the light of what he perceives to be the way in which others judge him in comparison to themselves and to a typology significant to them; while he judges their way of judging him in the light of how he perceives himself in comparison to them and to types that have become relevant to him. This process is […] for the most part unconscious except where inner conditions and outer circumstances combine to aggravate a painful, or elated, “identity consciousness.” (p. 23)

The strong sense of occupational identity required by those sworn to protect and serve complicates the multidimensional personhood of Blacks who choose policing as a career. Social scientists examining identity formation have placed much salience on adulthood socialization and organizational socialization. According to Manning (1970),
“Organizational socialization is the process by which an individual, from both the individual and the organizational perspective, becomes a part of the organization” (p. 239). For this socialization to occur, the individual, in many ways, becomes divorced from the self for entrance and acceptance into the larger organizational structure. In policing, this divorce becomes essential for the development of the “Blue” identity and is often described as mechanism of survival in the field (Moskos, 2008; Dodge and Pogrebin, 2001). Thus, it is, reasonable to think about Black police officers as having both a “Black” and “Blue” identity, and also to expect officer identity to be particularly salient when they are on the job.

Wilkins and Williams (2008) take up the theory of a representative bureaucracy and outline the importance of distinguishing active versus passive racial representation in policing. Active racial representation “is concerned with how representation influences policy making and implementation…[it] assumes that bureaucrats will act purposely on behalf of their counterparts in the general population” (p. 656). Passive racial representation on the other hand, describes “whether a bureaucracy has the same demographic origins […] as the population it serves” (p.655). In other words, passive representation relates to the physical presence of Black officers in a department, while active representation is concerned with whether those who are present have a vested interest and the power to use their positioning to leverage socio-political change within the institution of policing and in the communities in which they serve—are officers actively Black or actively Blue?

Identity politics in policing are filled with ambiguity. Moskos (2008) describes the Blue identity as “not so much a unifying force as a tool that allows effective
functioning in spite of differences” (p. 2) However, by establishing organizational values that adopt color-blind ideologies and undertones (Bonilla-Silva, 2006), police agencies only come to resemble the larger social structures that exists within America. Because police are charged with the responsibility of crime control, and racial stereotypes over-exaggerate Black criminality, one might expect more racial behavioral bias in the policing of those suspected of criminal activity and the Black officers who control it. Studies have shown that Black officers are not exempt from discrimination within departments or in the field (Moskos, 2008; Conti and Doreian, 2014; Price, 1996), and resources to report or address such instances are often limited, if not completely unavailable—especially in departments where Black officers are underrepresented or do not hold positions in the ranks.

Thus, there are good reasons to expect that the presence of Black officers in positions of power will do little to assuage the historical legacy of institutionalized racism. But the presence of discrimination within police organization suggests that, at least, in some circumstances, the Black identity may take precedence. At the same time, there are few definitive reasons to expect that Black officers will be, on average, more or less violent than other officers.

The recommendation put forth by the Department of Justice and the President’s Task Force assumes that all Black officers have the best interests of Black citizens at hand or share some commonality when making decisions about everyday policing practices. This analysis falls short of practical application and discounts a potentially useful theoretical framework (i.e. Theory of a Representative Bureaucracy) for understanding the issue of violent policing in America. Like other marginalized groups in
police departments, Blacks are subject to a very intricate process of socialization. Unlike other marginalized groups, Blackness and policing are commonly understood as polarized opposites, ultimately exacerbating the crisis of identity reconciliation. Research on this reconciliation is limited and research on Black officers’ decision to use force is scant. While the current study does little to resolve the former issue, the latter is explored.

In addition to race, researchers have located the issue of use of force within the composition of police departments (Rabe-Hemp, 2008; Dodge and Pogrebin, 2001; McElvain and Kposowa, 2008; Lonsway et al., 2002). For instance, Lonsway et al. (2002) argue that female officers are significantly less likely to use excessive force than the average male officer. However, Hoffman and Hickey (2005) utilizing data from the Montgomery County Police Department, find that there was no statistically significant difference in the overall rate of non-lethal force employed by female and male officers. Other studies comparing the use of extreme control tactics (e.g. threats, physical restraints, and arrests) between male and female officers, conclude that female officers were less likely to resort to these tactics, yet were no more likely than male officers to show supportive behaviors during citizen encounters (Rabe-Hemp, 2008).

Arguments centralizing the benefits of female representation in police departments oftentimes diverge from traditional feminist rhetoric by drawing on conventional notions of femininity (Richards, 1998). In doing so, scholars ultimately negate the fact that female officers are also subject to an intense process of socialization in an overwhelmingly male dominated field. These processes are intensified further for female officers belonging to non-white, and historically marginalized groups. This discourse ultimately discredits the existence of what many identify as stereotype threat
and the possibility of overcompensation (Steele and Arson, 1995) of female officers. This study uses measures to account for gender representation on the police force.

**President’s Task Force Recommendation #2: Education and Training**

“The Federal Government, as well as state and local agencies, should encourage and incentivize higher education for law enforcement officers.” (pg. 59)

Calls for a more educated and trained police force have surfaced in response to the patterns of violent policing in the United States. Scholars have theorized the connection between educational achievement, communication, force, and the police. Paoline and Terrill (2007) found that officers who attained more education were significantly less likely to engage in verbal force than officers who held just a high school diploma. However, when it came to physical force, only officers with a bachelor’s degree or higher were significantly less likely to result to the use of physical force. Likewise, scholars have concluded that officers with a four-year college degree were less likely to be named in formal complaints versus those who had not achieved a degree (Manis, Archbold, and Hassell, 2008).

At a first glimpse, these conclusions seem convincing, and may lead one to equate higher education with the reduction of use of force. However, little is often said about the workings and realities of implicit bias and racism in the everyday lives of individuals—whether college educated or not. For instance, Rydberg and Terrill (2010) found that educational attainment had no impact on the probability of arrests or searches conducted by officers.

While the present study does little to eradicate this issue completely, it is my hope that with the information included here, one can begin to critique policy
recommendations and their authenticity in the quest for viable solutions that aim to reduce racialized police violence. This study includes the representation of college educated officers within police forces throughout country as a potential explanatory mechanism driving police use of force.

**President’s Task Force Recommendation #3: Increased Community Policing**

"The Federal Government, as well as state and local agencies, should encourage and incentivize higher education for law enforcement officers."(pg.93)

In efforts to ameliorate the historical legacy of violent policing in America and as to soften the brute image and increase the legitimacy of law enforcement in the eyes of citizens; politicians, police departments, and community leaders across the country, worked jointly to establish the office of Community Oriented Policing Services (COPS). The concept of community policing is derived from reforms and innovations developed during the 1970s (Williams, 2015). Reformers of the COPS era favored the “team policing” model, which sought to decentralize police powers by designating foot patrol officers or beat cops to specified areas. In addition, community policing as a model often incorporates practices such as: neighborhood liaisons, door-to-door surveys, crime prevention trainings, meetings with religious and civic leaders, bike patrols, police-sponsored community activities, focus on minor offenses, citizen volunteer opportunities, public forms, and other various community outreach efforts (Williams, 2015). According to the Community Oriented Policing Services office, community policing is a,

[...]philosophy that promotes organizational strategies that support the systematic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime. (COPS, 2014)

A common misconception of community policing is that there is a uniform model that departments implement—in fact, nothing could be further from the truth. Because the
concept of community policing is posed as a philosophy, departments interpret it as they see fit. Some scholars argue that the guise of community policing is often utilized to promote the overall policing agenda and is therefore divorced from legitimate community concerns (Liederbach et al. 2007; Williams, 2015; Platt, 1982).

One underlying consensus though, central to the concept, is the need for community partnerships. These partnerships work twofold: members of the community are used as resources to identify problems and help solve crime, while at the same time, departments are better able to increase police legitimacy by allowing community members to collaborate in official police work. Therefore, the presence and visibility of officers in the community are perceived as integral to the development and success of community partnerships specifically, and community policing more broadly. The S.A.R.A model (Scanning, Analysis, Response, and Evaluation) was developed with exactly this in mind. S.A.R.A is a proactive problem-solving technique that aims to identify and solve continuous crime control issues and community disorder. The community is said to be heavily involved in the response to develop action plans and solutions to reinforce social order and relationship building between law enforcement and the community. However, incongruities often exist in the quest to foster positive relationship building between the police and the community members they serve. As Smith (1994) highlights, “with respect to police, the root of this [community] distrust lies in the power of the police to use physical force” (p. 2). On the one hand, there are expectations for officers to perform their jobs and use force to the extent of which they believe necessary, and on the other, community members are expected to welcome officers while fully acknowledging the fact that at any point, physical force can be
lawfully used against them. This bipolarity and the abuse of power are some of the very factors that led to the birth of the Black Lives Matter Movement.

In practice, community policing is far from monolithic. Wilson and Kelling (1982) developed the Broken Windows Theory, which maintains that if small infractions (e.g. Broken Windows, loitering, vandalism, public drinking) were addressed and punished by the community officer, then larger crimes could be prevented and social order could be established within a disorganized community. Proponents of the Broken Windows Theory and Community Policing philosophy have sometimes worked to reinforce the differentiation between the two concepts, even though they generally operate in tandem. According to Scheider, “Situating broken windows within the broader community policing philosophy can help to advance the organizational changes necessary to make broken windows interventions […] successful and sustainable” (Scheider, 2009).

Today community policing and Broken Windows strategies closely mirror the strategies carried out in the traditional forms of policing (i.e. use of force). For example, after the Rodney King beating, in efforts to reduce tension between the Black and Latino communities and the police, Operation Cul-de-sac was implemented throughout the country—most famously in Los Angeles. This community initiative focused on high crime areas, where police erected blockades that prevented motorist from driving in or out of the community, and officers were sent to patrol on foot, horse, and bike. Signs

---

1 Scheider also cautions against confusing community policing with the broken windows strategy, suggesting that while they complement one another, they are in no way the same.
were posted that restricted entrance in the area to residents only and the community was regarded as an “armed camp” (Williams, 2014, 340). Operation Cul-de-sac provides a clear illustration of how community policing, broken windows, and the para-military organization of policing and coercion can operate and function simultaneously.

The present study examines the intersection between practices associated with community policing and use of force. I construct measures for department stated community policing efforts including: department mission statements, the representation of beat officers, community surveys designed to measure community-police relationships, and a community policing technique called S.A.R.A (the Scanning, Analysis, Response, and Evaluation model) that aims to proactively address issues within a community. These measurements aim to move beyond the theoretical and philosophical rhetoric and into department’s practical engagement with the communities they serve and the impact these factors have on use of force outcomes.
CHAPTER 3
METHODS

Data

Variables in this study were constructed and measured using four publically available data sources. The main dependent variable, Use of Force, was drawn directly from the 2013 Law Enforcement Management and Administrative Statistics (LEMAS) survey. LEMAS is the only nationally representative sample that captures agency reported information on officer demographics, budget, weaponry, community policing activities, and use of force—among many other variables. Collected periodically since 1987 by the Bureau of Justice Statistics, LEMAS has provided important, though often contested, insight into law enforcement agencies practices, policies, and behaviors (Hickman and Poore, 2015; Uchida and King, 2005; Maguire, Snipes, Uchida, and Townsend 1998). The 2013 data, used here, includes a final sample size of (N=2,822) state, sheriff, and local law enforcement agencies. The response rate of this sample is very high (86%) and missing data low. Measures for key independent and control variables including Community Policing practices and department composition were also drawn from the LEMAS survey. Additional datasets including the 2013 American Community Survey (ACS), providing measures of community demographic composition, the 2013 Uniform Crime Report to measure local crime rates. The 2012 Law Enforcement Agencies Identifiers Crosswalk were used to merge the LEMAS with the ACS and UCR datasets. Descriptive statistics for the variables included in this study are presented in Table 1.
Models

Most empirical studies on police use of force and its potential impacts have drawn on institutional, social, and individual characteristics of the officer and victim to explain and predict the phenomena. Consistent with the policy recommendations put forth by the Department of Justice, this analysis estimates two models that includes measurements for community policing activities, as well as community and department characteristics. My models incorporate two measures of use of force. Model 1 theoretically measures the individual acts of police violence, while Model 2 measures the number of officers involved in violent encounters with citizens. Departments were directed to answer only one use of force question in the LEMAS survey, and these dependent variables, seemingly different, tell a unique story about the ways use of force is documented in departments across the country, as well as the intensity of the issue at hand.

Because the data are cross-sectional, I incorporate all three recommendations within the same models. While I recognize that these variables do not account for the scope of the LEMAS study, and that there may be unmeasured variables that influence use of force, it is the matter of this study to investigate the potential impact of specific variables as they relate to the President’s Task Force and DOJs recommendations.

The following analysis includes results from Negative Binomial Regression Models. The Negative Binomial Regression Model, unlike the Poisson Regression Model, includes an alpha measure of unobserved heterogeneity. Both models are more appropriately fit for positively skewed count models versus traditional Ordinary Least Square regression models. The Poisson Regression Model is rarely used in statistical
analysis because it often underestimates the dispersion of an outcome. The Negative Binomial Regression Model is often preferred and incorporates an alpha parameter of unobserved heterogeneity (Long and Freese, 2001). The test for over dispersion indicates a preference for the Negative Binomial Model for both dependent variables.

**Sample Selection**

The organization of policing includes a division of labor in terms of jurisdiction. For instance, there are policing agencies at the university, local, state, and federal levels. To establish uniformity within this analysis and to be sure all departments are being judged in terms of jurisdiction, I limit the scope of this study exclusively to local policing agencies. Further, I include departments that employ 10 or more sworn full-time officers. The final sample consisted of 1,378 departments, Model 1 includes (N=804) departments measuring use of force per incident and Model 2 includes (N=574) departments measuring use of force per officer involved.

**Variables**

**Dependent Variable**

*Use of Force:* The first two rows of Table 1 contain summary information for our dependent variables of interest (i.e. Use of Force). The dependent variables were measured by the question ‘During the 12-month period ending December 31, 2012, how many total use of force incidents did your agency record?’ The LEMAS survey allowed departments to respond in two ways: Use of Force reported per Incident, and Use of Force reported per officer. Use of Force reported per incident refers to the documentation of force using only one report per incident for all officers involved. On the other hand,
Use of Force reported per Officer refers to the documentation of force reported per incident for each officer involved. For instance, for the first measure of use of force, if there were 10 officers involved in one incident there would only be one Use of Force report. For the second measure, if there were also 10 officers involved, there would be a total of 10 Use of Force reports documented. Across both measures of use of force, departments reported 484,753 total Use of Force incidents in LEMAS. On average, the reported coefficients for the second measure of Use of Force are three-times larger than those reported for the first measure of Use of Force. This finding ultimately suggests that, the mean officers present was three officers for each use of force encounter.

**Independent Variables**

**Black Officer Representation.** The main independent variable of interest, measuring racial representation, was derived from the Equal Employment Opportunity Compliance Index (EEOCI) (Walker, 1983). This index measures the representation of Black officers in a department relative to their population size in the surrounding county:

$$Black \, Representation = \frac{Percent \, of \, full-time \, sworn \, Black \, officers \, in \, department}{Percent \, of \, Black \, citizens \, in \, county}$$

**Female Officers Representation** The measure for female officer representation was constructed using the simple percentage of the total number of sworn female officers over the total number of sworn officers recorded in the LEMAS.

**College Educated Officer Representation:** This variable is expressed as the percentage of college educated officers documented in a department over the total number of full-time sworn officers.

**S.A.R.A (Scan Analysis Response Assessment) Training:** Measured dichotomously (1=yes 0=no), this variable provides information on whether departments reported
actively encouraging officers to engage in the S.A.R.A techniques. These include proactive policing and communication between the police and the public to address concerns and recurring issues within a community, but in practice is often connected to zero-tolerance policies.

**Community officer Representation**: Community officers are measured as a percentage of the total number of beat or patrol officers routinely assigned to the same communities to the total number of sworn officers in a department.

\[
\text{Community Officers: } \frac{\# \text{ of community or beat officers}}{\text{Total } \# \text{ of sworn officers in department}}
\]

**Community Policing in Mission**: A dummy variable was constructed to include information for departments that reported having a written mission statement with the integration of the community policing philosophy. Responses were coded as (0=No written mission statement with community policing) (1=Yes, written mission statement with community policing).

**Community Survey Distributed**: This measure includes information on whether departments distributed a community satisfaction survey. These surveys typically focus on community satisfaction with law enforcement and fear of crime within a community. This variable is dichotomous (0= No survey distributed, 1= yes survey distributed).

**Controls Variables**

**Crime Rate (2013)**: Data used in constructing the crime rate for the 2013 calendar year was pulled from the 2013 Uniform Crime Report’s data on Offenses Known and Clearances by Arrest. This study uses the total number of offenses known to police to construct a rate of crime per 100,000 inhabitants:
Crime Rate = \( \frac{\text{Total Crimes (2013)}}{\text{Population (2012)}} \times 100,000 \)

**Black Population:** Measures for the Black population were drawn directly from the American Community Survey (ACS) and are presented as the simple percentage of the total number of Blacks in the county over the county’s total population. The expectation, from the literature on racially biased policing is that use of force will be more common in hyper-segregated minority communities.

**Population:** Measures for population estimates were provided in the LEMAS survey. These estimates provide information for each department's population served, and was logged to normalize the distribution.

**Quantity of Law:** This variable measures the total number of full-time sworn officers to the respective county population estimates.

**Union Status:** Union Status is measured dichotomously and was drawn directly from the LEMAS survey. This measure accounts for whether a department’s sworn personnel are represented by a collective bargaining organization or a union.
CHAPTER 4

RESULTS

Use of Force Per Incident

Table 2 reports results from the Negative Binomial Regression Models (NBRM) for documented Use of Force. Coefficients are reported as the percent and factor change in the count of the variable, unless otherwise noted. As expected, findings from Model 1 suggest that reported use of force is more common in departments serving larger populations. Somewhat surprising though, use of force was shown to be marginally lower in predominantly Black counties.

Results in the first model suggests a positive relationship between the first measure of use of force and variables measuring diversity. Black representation and female representation accounted for approximately a 5% and a .7% respective increase in the expected counts of use of force, though these results were not statistically significant (p=.05). This suggests that the physical presence of Black and female officers on the force, controlling for other factors, will not serve to decrease violent policing in departments that report force per incident—ultimately showing no support for the recommendations presented by the President’s Task Force and the Department of Justice.

Weak support was also shown for the second recommendation taken from the President’s Task Force’s final report. Results here illustrate a negative relationship between use of force outcomes and education. Among the representation of college-educated officers, we see a marginal .6% reduction in counts of use of force, this result was not statistically significant.
The third recommendation was tested using four measures that typically fall under the community policing philosophy. Results here indicate that, with the exception of community officer representation, community policing activities actually increased the expected counts in use of force incidents. Departments reporting that their mission statements integrated some component of the community policing philosophy increased expected counts in reported use of force by a factor of 1.23 or 22.6%. The distribution of community satisfaction surveys also promoted the expected count of use of force incidents by 18.3%. Finally, departments reporting actively encouraging the S.A.R.A problem-solving technique increased the expected count in use of force incidents by 1.8%, however, this finding was statistically insignificant. With regards to the physical presence of community officers, expected counts in use of force reveal a slight .4% reduction. Ultimately, these somewhat mixed findings expose a flaw in the philosophical framework of community policing: the lack of uniformity of what it entails and a common consensus on the amount of community engagement needed to affect change. Findings also further suggest a relationship between community policing and the para-military organization of policing.

**Use of Force per Officer Involved**

The second measure of use of force is also reported in Table 2. As highlighted in earlier sections, use of force here provides a measure for the number of officers involved in forceful encounters with citizens. Results from this model indicate that the type of reporting behavior matters in predicting use of force outcomes. Findings also reveal that reported use of force is more common in larger and unionized departments serving larger populations. The variation in the models may result from departments deployment
strategies of officers. This variation may also reflect the number of officer’s present during each encounter.

Measures highlighting diversity indicate that Black officer representation in police departments will reduce the expected counts in reported use of force by 28.8%, compared to the 4.9% increase exhibited in the first model. The percentage of female officers in this model show an increase in the expected counts by approximately 3.9%. This result was statistically significant, and marginally higher than in the first model, which showed a .7% increase in the expected counts of use of force. Consistent with results for the first measure of use of force, the representation of college educated officers marginally reduces use of force outcomes. Their representation, as it increases from 0-100% decreases expected counts in use of force by 2.2%, compared to a .6% reduction in the first model.

All indicator variables measuring the impact of community policing on use of force outcome in the second model were statistically significant (p=.01), and provided slightly different results than those presented in the first model. The representation of community officers reduced the expected counts in reported use of force by a factor of .98 or 1.2%. This result is almost three times larger than the coefficient presented the first model (.4%) and may provide some indication that the variation present in the models may indeed result from the number of officers involved in use of force incidents. Departments that reported distributing community surveys and encouraging officers to act with the S.A.R.A problem-solving technique significantly increased the expected count in use of force by a factor of 1.8 (80.1%) and 1.53 (53.4%), respectively. These statistics produce a far greater difference than those presented in the first model, which
increased expected counts by a factor of 1.18 (18.3%) and 1.02 (1.8%) respectively. This type of reporting behavior also altered the impact and direction of the variable measuring the effect of community policing in department written mission statements. Recall from the first model, that expected counts in use of force increased by 22.6%. According to second model, expected counts in use of force decrease by a factor of .13 or 86.7%.

Taken together, findings suggest that the type of reporting practices make for a slight difference in use of force outcomes. Further readings into the data show that, on average, coefficients in the second model were three times larger than those in the first model. This reading may suggest, that on average, there were about three reports of use of force or three officers present for every use of force incident. How then do we reconcile these results and make predictions about use of force? And what can be said about the ways that departments are documenting use of force?
CHAPTER 5

DISCUSSION

To combat racialized tensions resulting from the murders of unarmed Blacks by police, various governmental agencies (e.g. The Department of Justice, The Equal Employment Opportunity Commission, The President’s Task Force on 21st Century Policing, etc.) were tasked with the responsibility of producing viable solutions that addressed the issue of racialized police violence. This study centered three of the most common recommendations that were presented in the final report of President Obama’s Task Force on 21st Century Policing. Evidence lends minimal support to the practical application of such recommendations, and casts further doubts on hopes for racial justice in the United States.

Increasing Diversity in Policing

According to Reaves (2015), the representation of officers from racially marginalized groups has increased since the 1980s. In 1987, Blacks were approximately 9% of the police force throughout the country. Almost 30 years later, at the time the LEMAS survey was distributed, Black officer representation in police departments increased to approximately 12 percent, staying almost stagnant between the years 2007-2013. In 2015, the Census reported that Blacks were roughly 13.3 percent of the U.S population. In relation to their relative population size, Blacks don’t appear to be lagging too far behind in racial representation in police departments. This statistic, taken at face value, can be rather misleading and dangerous for advocates who seek to increase diversity in law enforcement. Extreme concentrations of Black officers are often present
in larger cities with higher Black populations (e.g. New York City, Philadelphia, Chicago etc.), and even in these cities, the demographics aren’t always reflected on the force.

Much of the conversations surrounding the issue of racialized police violence have honed on the fact that Black officers are underrepresented in departments throughout the country. In Ferguson, this was a key finding and recommendation made by the Department of Justice’s investigation into the murder of unarmed Black teen, Mike Brown. This recommendation was distributed beyond the Ferguson Police Department, and departments across the country came under scrutiny for their lack of racial representation. Results from this study lend limited support to this recommendation, suggesting that the type of reporting behavior matters when accounting for the differences in use of force outcomes.

While police departments will undoubtedly benefit from increasing Black representation, the long-term impacts of these recommendations as they relate to violent policing remains unclear. Previous scholarship focusing on Black officers have found mixed results when it comes to representation in police departments (Dodge and Pogrebin, 2003; Moskos, 2008; Brown and Frank, 2006; Alex, 1969; Leinen, 1984). What is clear though, is that officers, regardless of race, undergo a process of socialization when transforming from a civilian to an agent of law enforcement. This intense socialization mirrors that of many secret societies, and requires a code of ethics and unrelenting loyalty that differs from many other occupations. The Blue identity is used to promote a sense of unity in spite of racial and cultural differences among officers (Moskos, 2008). Thus, the recommendation of increasing representation becomes convoluted within the context of Blue.
Consequently, the theoretical framework of a representative bureaucracy is best fitted to draw conclusions about how Black officers’ representation will impact violent policing in the United States. Major considerations should be taken in terms of the types of representation (i.e. passive or active) officers exhibit. As previously stated, active representation refers to the idea of officers approaching situations with a certain cultural and social sensitivity. This type of representation is used to promote socio-political change within the organization of policing and the wider society. On the flip side, passive representation refers to the mere demographic representation of Black officers, and does not focus on their intentions to create socio-political change in as much as inclusivity. Officers that are passive do not approach situations with the same cultural and social understanding, and can be said to be actively enacting their occupational “Blue” identity (Wilkins and Williams, 2008).

Arguably, racial representation has been the goal since before the start of the Civil Rights Movement, and continues to be the goal with the Black Lives Matters Movement. However, by disregarding the reality and impact of internalized racism, police socialization, and the manifestation of believed Black criminality, these suggestions of increasing diversity ignore the social location in which many Black officers find themselves. It also reinforces a white supremacist ideology by transferring guilt and accountability to Blacks for issues that have been perpetuated throughout history to sustain the social fabrics of America. If departments reach racial representation, violent policing then becomes an issue of “Black on Black” crime, and by and large, a much less potent argument. Again, this is not a dispute or entirely discredit the recommendation, rather it is a critique of the proposed Band-Aid solutions. Long term change is most
impacted by being critical of the policing culture and organizational structure that has given way to the current circumstances and conditions. In policing, like many other areas in this country, this task becomes quite difficult, and in many ways, impossible.

Feminist scholarship promoting the inclusion of female participation in law enforcement has traditionally drawn on stereotypical female traits (e.g. nurturing, less aggressive, etc.) to describe female officers and support their arguments of inclusion (Lonsway et al. 2002). Research on the comparative performances of the genders in using force has produced mixed results (Lonsway et al, 2002; Hoffman and Hickey, 2005). Findings from this study reveal consistency in the models and highlight that the impact of effect sizes is best explained by reporting behavior. These findings show weak support for the recommendation presented by the Task Force and calls for a greater interrogation of what it means to have a diverse police force. Female officers, like their male counterparts, are subject to an intense process of socialization, which ultimately permits them to become a part of the “Blue” family. While some scholars (Britz, 1997) argue that female officers are often locked-out of the police sub-culture, this does not absolve the issue of stereotype threat and the possibility of over-compensation. Furthermore, findings from this study may suggest that women being recruited to departments are not those who fully ascribe to traditional gender roles (Britz, 1997; Paoline, Myers, and Worden, 2000). Future research should explore the impact of female officer race and sexuality on use of force outcomes to provide a more comprehensive view of possible intervention strategies.

Education

Scholars have argued that as the demographic composition of police departments shifts, so would the cultural attitudes of the organization. (Paoline, Myers, and Worden,
Evidence from this study shows that educational achievement has a relatively small impact on use of force outcomes. As the percentage of college educated officers increases from 0-100%, the expected counts in use of force decrease marginally. Rydberg and Terrill (2010) found that college education had no impact on arrest and search rates, however, college-education significantly reduced the likelihood of force occurring in the departments they studied. Findings from this study show minimal support for the recommendation that incentivizes recruiting officers with greater educational achievement. Further research is warranted to examine the effects of the level of educational attainment as well as how the type of university one attends may impact use of force outcomes. One would expect that the type of educational institution matters greatly in shaping the ideologies of its students. For example, an officer attending a social-justice oriented institution may hold different values and perspectives on race, class, and gender, than those attending non-social-justice oriented schools.

Community Policing

Findings from the models reveal that slight differences in effects may be explained by the type of reporting behavior a department elects to use in reporting encounters involving force. Results from both models cautions against firmly accepting the promotion of community policing as a driving force that will help to reduce violent policing in the United States. Regardless of reporting style, departments show decreases in expected counts of use of force when the representation of community officers present increases. On the contrary, use of force is expected to increase when departments report active community engagement by employing other techniques and measures traditionally unique to the community policing philosophy. The only difference in effects that can be
seen in either of the models is for the variable measuring whether an agency included community policing in department written mission statements: departments reporting force per incident increased expected counts of use of force, while departments reporting force per officer decreased expected counts.

Consistency in the models warn of larger conceptual issues with the community policing philosophy. As a philosophy, community policing is theoretically and strategically flawed. The failure to explicitly define community policing has allowed departments to lay claim to the philosophy, even if their efforts are in direct conflict with the interests of the community. This study has shown that programs designed to foster trust from the community are, in many cases, inadequate in building more harmonious relationships. Questions challenging the legitimacy of community policing and policies geared towards reducing violent policing should focus on departments motivations for becoming or integrating the community policing philosophy within the department. Namely, are departments crime prevention oriented or crime fighting oriented? I believe that these questions are central to understanding how the culture of violent policing is perpetuated within departments across the country.
CHAPTER 6

CONCLUSION

Validity Concerns

Variation in the models may also result from larger validity issues present in the Law Enforcement Management and Administrative Statistic survey. LEMAS is not subject to federal or state mandates, therefore there is no way to ensure quality control. Previous studies have found gaps and discrepancies in the numbers reported in the LEMAS survey versus those found in department level-data (Hickman and Poore, 2015). The cross-sectional nature of the data also makes it difficult to draw conclusions about causality. Further research that includes time-series data is warranted to determine the causal relationships between officer race, gender, community policing, and educational requirements on use of force outcomes.

Calls for the Future

Findings from the present study suggest that the recommendations presented by President Obama’s Task Force on 21st Century Policing are not the most effective in reducing police violence in the United States. To begin understanding the reality of police violence more generally, and racialized police violence more specifically, one must first examine the foundation and sub-cultures embedded within the organization of policing. Though some scholars, policy makers, and police alike argue that violent policing is an adverse reaction to violent crime in the United States, this argument was not supported in either of the models. However, even at a first glance, this analysis may seem legitimate, but falls short of capturing the full complex history of policing in America—namely its roots in chattel slavery. So how are the issues of violent policing rectified? What can be
done to increase active representation among officers? And, how do we build equally beneficial, long-lasting relationships between the police and the communities they serve? There are no short answers to these questions, and even scratching the surface would require much more length than the confines of this paper would allow. Even with this in mind, I still believe it viable to highlight a few suggestions in moving the conversation forward.

To begin, a plan should be executed that would allow for a more copious view of the phenomenon. This calls for more efficient means of data collection for measuring officer use of force—capturing information on the type of force utilized, demographic information of the citizen and officer involved, and the outcome of the incident. Data should be heavily monitored by citizens and appointed officials and scholars to ensure quality. The Guardians’ *The Counted*, is the best example of the type of data collection necessary in ensuring not only that data is collected, but also that the information is relayed to an audience beyond the academy and police administrations. Calls for data accuracy necessitates calls for an improved and more thorough accountability structure for officers. Because officers have the lawful power to take away life, they should be held at a much higher standard than the average citizen when using force. The lack of accountability ultimately leads to the devaluation of life. In instances where cops are killed by citizens, extreme judgements come down, and citizens are usually granted the harshest sentences possible (e.g. Mumia Abu Jamal, Assata Shakur, Ricky Ray Rector). However, because state violence is the only justified form of violence, this leaves questions of improved accountability in the muck.
In considering either of these recommendations, one must consider the more macro issues that impact the policing organization and culture in its entirety. Strides to move the country forward have focused wholly on citizens’ avoidance of interactions with the police. For instance, the state of New Jersey recently passed a bill that requires children, grades K-12, to be taught about how to interact with the police. The bill passed in the New Jersey Assembly with a 76-0 vote. While this bill will undoubtedly reinforce what many Black children are already taught within the home, it does nothing to recognize the issue of violent policing as a structural issue of racism or a cultural issue within policing. This lack of accountability will ultimately perpetuate the issue of police violence in the United States, and will necessitate more policies to be drafted teaching Black children how not to be killed or abused by the police rather than teaching the police how not to kill and abuse Black children.

Additionally, I call for a more thorough interrogation of state imposed violence. In other words, the para-military organization of policing is in and of itself, a threat to the American people. Roots (2001) argues, “The advent of modern policing has greatly altered the balance of power between the citizen and the state in a way that would have been seen as constitutionally invalid by the Framers [of The Constitution]” (p. 757). The organizational and institutional cultures of policing are ultimately rooted in the abuse of power and a form of authoritarian governance, especially in historically marginalized communities. Undoubtedly, the evolution of modern policing has safeguarded the very privileges that white Americans enjoy so fruitfully. However, by relegating police violence as exclusively relevant to communities of color, white Americans ultimately miss the infringement upon some of the most important inalienable rights outlined within
the constitution. Whether racialized or not, violent policing poses a threat to the stability of American society. By militarizing police forces, the United States has actively engaged in an act of systematic genocide and terrorism against the American people.
Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Force Per Incident</td>
<td>923</td>
<td>96.14301</td>
<td>266.2388</td>
<td>0</td>
<td>4383</td>
</tr>
<tr>
<td>Use of Force Per Officer</td>
<td>657</td>
<td>317.3014</td>
<td>2710.827</td>
<td>0</td>
<td>57000</td>
</tr>
<tr>
<td>Black Officer Representation</td>
<td>1673</td>
<td>0.4722497</td>
<td>0.6589258</td>
<td>0</td>
<td>4.846622</td>
</tr>
<tr>
<td>Percent of Female Officers</td>
<td>1669</td>
<td>8.871955</td>
<td>6.109383</td>
<td>0</td>
<td>47.61905</td>
</tr>
<tr>
<td>Representation of College-Educated Officers</td>
<td>1523</td>
<td>5.497623</td>
<td>11.44219</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Community Officer Representation</td>
<td>1562</td>
<td>28.39894</td>
<td>36.89271</td>
<td>0</td>
<td>550</td>
</tr>
<tr>
<td>S.A.R.A technique actively encouraged</td>
<td>1639</td>
<td>0.5125076</td>
<td>0.4999961</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Community Policing in Mission Statement</td>
<td>1647</td>
<td>0.8348512</td>
<td>0.3714275</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Community Survey Distributed</td>
<td>1643</td>
<td>0.3554474</td>
<td>0.4787944</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Crime Rate (per 100,000)</td>
<td>1673</td>
<td>4420.33</td>
<td>3300.959</td>
<td>0</td>
<td>47061.35</td>
</tr>
<tr>
<td>Black Population</td>
<td>1673</td>
<td>11.99142</td>
<td>12.35027</td>
<td>0.0102114</td>
<td>79.51654</td>
</tr>
<tr>
<td>Police Representation</td>
<td>1673</td>
<td>14.36465</td>
<td>64.38979</td>
<td>1.114316</td>
<td>2161.999</td>
</tr>
<tr>
<td>Unionized Department</td>
<td>1659</td>
<td>0.8872815</td>
<td>0.3163437</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 2: NBR Models for Documented Use of Force

<table>
<thead>
<tr>
<th>Variables</th>
<th>Use of Force Per Incident</th>
<th>Use of Force Per Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>P&gt;z</td>
</tr>
<tr>
<td>Black Officer Representation</td>
<td>0.04869</td>
<td>0.421</td>
</tr>
<tr>
<td>Percent of Female Officers</td>
<td>0.00685</td>
<td>0.309</td>
</tr>
<tr>
<td>Representation of College-Educated Officers</td>
<td>-0.00583</td>
<td>0.111</td>
</tr>
<tr>
<td>Community Officer Representation</td>
<td>-0.00351</td>
<td>**</td>
</tr>
<tr>
<td>S.A.R.A technique actively encouraged</td>
<td>0.01776</td>
<td>0.823</td>
</tr>
<tr>
<td>Community Policing in Mission Statement</td>
<td>0.20404</td>
<td>*</td>
</tr>
<tr>
<td>Community Survey Distributed</td>
<td>0.16767</td>
<td>*</td>
</tr>
<tr>
<td>Crime Rate (per 100,000)</td>
<td>0.00014</td>
<td>***</td>
</tr>
<tr>
<td>Black Population</td>
<td>-0.00628</td>
<td>*</td>
</tr>
<tr>
<td>Log of Population (2012)</td>
<td>0.88767</td>
<td>***</td>
</tr>
<tr>
<td>Unionized Department</td>
<td>-0.00093</td>
<td>0.747</td>
</tr>
<tr>
<td>Police Representation</td>
<td>-0.14903</td>
<td>0.159</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

New York, NY.


