PUTTING INTERSECTIONALITY INTO CONTEXT: EXTENDING OUR UNDERSTANDING OF GENDER, RACE, AND PLACE TO INVESTIGATIVE POLICE STOPS

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By

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ABSTRACT OF DISSERTATION

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Abstract

Prior criminological research has demonstrated the importance of examining the role of gender, race, and place on a number of different criminal justice outcomes, but this line of inquiry has not been applied to proactive policing tactics like investigative police stops. Literature on race and policing as well as place and policing has often neglected the role of gender. This is unfortunate given that feminist intersectional theory has shown how assessing the crosscutting influence of inequalities is critical for understanding different people’s unique experiences within the criminal justice system, including police encounters. With an intersectional and ecological perspective in mind, this dissertation examines how gender, race, and place simultaneously impact investigative police stops and the actions that occur during these stops (i.e., frisk, search, summons, or arrest). Results indicate that investigate police stops are not gender-blind, not uniformly experienced by all women, and do not operate identically across place. Rather, important distinctive variations across gender, race, and place exist. These variations suggest that future research on policing practices should incorporate multiple characteristics of identity and police departments can learn more about how to equitably serve the public by considering how officers’ actions vary across subsets of the population. Moreover, this dissertation supports recent work aimed at expanding the definition and general understanding of profiling beyond race to incorporate other important sources of identity like gender and place.
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Chapter 1: Introduction

Scholars have documented the critical role that gender (see e.g., Chesney-Lind & Belknap; Daly, 1992; Heimer, 1995; Miller, 1998; Steffensmeier, Schwartz, Zhong, & Ackerman, 2005), race (see e.g., Alpert et al., 2005; Browning et al., 1994; Gase et al., 2016), and place (see e.g., Anderson, 1999; Kane, 2002; Smith & Holmes 2003) play in shaping criminal justice processes (i.e., arrests, convictions, sentencing). Evidence also indicates that race (Browning et al., 1994; Fagan et al., 2016; Gelman et al., 2007) and place (Fagan & Davies, 2000; Kane, 2002) impact police-citizen interactions specifically. More recently, a small number of qualitative studies have started to assess the role of gender on proactive police-citizen interactions like investigative stops (Brunson & Miller, 2006a; Fine et al., 2003; Rengifo & Pater, 2017). But, neither theory nor research on police-citizen interactions has adequately addressed gender, race, and place simultaneously. Research on intersectionality has demonstrated that navigating the criminal justice system is a nuanced process and varies across individuals from different places and different intersections of identity (e.g., women of color) (Crenshaw, 1991; Collins, 2000, Potter, 2015). Intersectional research needs to be utilized to more fully to understand how police-citizen interactions operate.

This dissertation contributes to the existing literature in three main ways. First, it theoretically considers race, place, and gender concurrently, using both an intersectional and ecological framework, to understand investigative police stops (i.e., stop, question, and frisk; Terry stops). Existing theory and research on race and place in relation to proactive policing, and investigative police encounters specifically, is valuable and pertinent to this dissertation; however, it does not jointly incorporate and evaluate the role of gender. Research has shown that intersectionality, or the perspective that identities (e.g., race, gender, class) cannot be understood separately from one another, is key for understanding how the criminal justice process operates.
for different types of people (Crenshaw, 1989; Chesney-Lind & Jones, 2010; Brunson & Miller, 2006a; Ritchie, 2017). But this theoretical perspective has not yet been incorporated into understanding stop, question, and frisks (hereafter SQFs). The rising number of women overall, and young women of color specifically, in detention and prison warrants a closer look at this early stage of the criminal justice process (i.e., interactions with police).

If certain women are more likely to be arrested and incarcerated than others, just as certain men are, it is reasonable to suspect that investigative encounters with the police are not gender-blind, and not uniformly experienced by all women across race or place. According to feminist scholars, young women of color are viewed by state actors, such as the police, in ways that make them particularly at risk for unwarranted police contact and violence or harassment at the hands of officers (Ritchie, 2017). Intersectionality and Black feminist research demonstrates that narratives of Black womanhood are rooted in racialized, gendered, and classist historical stereotypes (Collins, 2000), which facilitate the maintenance of power structures. These narratives also influence women’s interactions with the criminal justice system and the police (Jones, 2010; Kwate & Threadcraft, 2015; Ritchie, 2017); however, we know very little about whether or not, and to what extent, factors like gender, race, and place impact proactive policing tactics in general, or investigate stops specifically. Focusing on investigative stops is important given the regularity of their occurrence and the fact that reasonable suspicion of criminal behavior is the threshold used to warrant them. The current study will address this gap by incorporating both an ecological and intersectional framework to understand how these three key factors simultaneously shape investigative police stops.

The second contribution of this dissertation is the focus on the first stage of the criminal justice process. Specifically, this dissertation will examine the role of gender, race, and place on:
being stopped by the police for investigative purposes, prior to the commission of a crime; and
the outcomes of these stops, such as whether a stop results in being questioned, frisked, searched,
summoned, or arrested. A large body of literature has already examined the role of each of these
factors on later stages of the criminal justice process, indicating that gender, race, and place
shape criminal justice outcomes (see e.g., Alpert et al., 2005; Browning et al., 1994; Crenshaw,
1989; Chesney-Lind & Belknap; Smith & Holmes, 2003; Steffensmeier et al., 2005). Similarly,
research using traffic stop data has found that race and gender influence the likelihood of being
stopped for a traffic violation (Lundman & Kaufman, 2003). However, we know less about what
shapes investigative police stops overall and even less for police street stops involving women.

Early police-citizen encounters are important to understand because they can influence
later stages in the criminal justice process as well as shape citizens’ attitudes toward the police
(Brunson & Weitzer, 2011; Hurst, Frank, & Browning, 2000; Rengifo & McCallin, 2017;
Weitzer & Tuch, 2002). Additionally, investigative police stops are one tactic under a person-
focused approach (and arguably placed-based approach) to proactive policing that has received a
significant amount of controversy over its implementation (National Academies of Sciences,
Engineering, and Medicine, 2017). The history of investigative police stops and their legality has
been a source of contention across the country including major cities like New York City.

Following the *Terry v. Ohio* case in 1968 (392 U.S. 1) the use of SQFs increased dramatically
(Fagan, Zimring, & Kim, 1998). The Terry case ruled that police stops of a person based on
“reasonable suspicion” of current, passed, or future criminal actions were not a violation of the
Fourth Amendment that protects against unreasonable searches and seizures. Police departments
were motivated to use investigative stops to reduce crime and remove illegal guns from the
street; however, concern grew about potential disparities in the use of investigative stops across
different communities (Fagan & Davies, 2000; Spitzer, 1999). These concerns manifested into a number of federal lawsuits against police departments in different cities (e.g., Los Angeles, Cincinnati, New York City) under the 1994 Violent Crime Control and Law Enforcement Act. One influential example of this took place in 2013 when the federal court ruled that the NYPD’s use of SQF was unconstitutional in *Floyd, et al. v. City of New York, et al.* (959 F. Supp. 2d 540).

Although the legality of investigative police stops in practice has continued to be challenged, a recent report on proactive policing indicates that “the empirical evidence is insufficient…to support any conclusion about whether proactive policing strategies [like aggressive stops, searches, and arrests] systematically promote or reduce constitutional violations” (NASEM, 2017:21). This evidence is important; however, it is primarily based on studies that do not take an intersectional approach, nor aim to understand the experiences of women. This is likely because few studies adopt an intersectional approach to examine this topic; however, it is critical to recognize that conclusions from this report may or may not extend to interactions women have with the police. To avoid uniformly extending conclusions it is important to investigate how the intersections of gender, race, and place may shape one of the earliest possible encounters with the criminal justice system via investigative police stops.

Lastly, this study adds to the literature and our understanding of police-citizen interactions by utilizing both survey data and official data from a police department to examine what factors shape investigative police stops. The majority of research on proactive police stops either uses: (1) official police records, typically traffic stop data (see e.g., Lundman & Kaufman, 2003; Petrocelli, Piquero, & Smith, 2003), to examine the role of race on police-citizen interactions; or (2) qualitative data (Brunson & Miller, 2006a; Fine et al., 2003; Rengifo & Pater, 2017) to examine how race and place, and sometimes gender (see Ritchie, 2017), shape police-
citizen interactions. Although the former can tap into who gets stopped by the police, it is difficult to establish an accurate baseline of the total number of potential stops in the general population, making it challenging to determine if inequities exist across police stops (see Farrell & McDevitt, 2010; MacDonald & Braga, 2018). The latter seeks to uncover the details of what takes place during investigative police encounters for individuals, but is limited to small samples (e.g., young minority males from one disadvantaged community) (Brunson & Miller, 2006a; Fine et al., 2003; Rengifo & Pater, 2017). To alleviate some of these issues, this study will rely on two distinct sources of data: (1) a city-based, governmental data set – New York City Police Department’s Stop, Question, and Frisk reports (SQFs); and (2) a national, self-report data set – The National Longitudinal Study of Adolescent to Adult Health. Together, these data sources will be used to capture who in terms of gender, race, and place is at risk for being stopped by the police (Add Health) and who is more likely to be frisked, searched, summoned, or arrested during an investigative police stop (NYPD SQF data). Using these two data sources also allows for a comparison between findings from a single city (NYPD SQF data) and findings from a national sample (Add Health). Importantly, the national data source includes individuals who were not stopped by the police making comparisons across gender, race, and place feasible.

In short, this dissertation examines whether the intersections of gender, race, and place influence investigative police stops. Using an intersectional and ecological theoretical framework, along with two distinct data sources, allows for a more comprehensive examination of factors that may play a critical role in shaping the earliest stage in the criminal justice process, specifically, whether or not someone is stopped by the police for investigative purposes and whether that stop results in a frisk, search, summons, or arrest. Moreover, this study aims to quantitatively reveal the experiences of “invisible” populations, in particular women of color.
from disadvantaged areas, who are far from immune from police contact but under-examined in this area of research (Ritchie, 2017). This will be accomplished by exploring who in terms of gender, race, and place is likely to experience an investigative police encounter and what tactics are used during these encounters. Before discussing the theoretical and empirical literature that frames the current study, a brief historical background on investigative police stops in general and in New York City specifically is provided.

Chapter 2: Literature Review

Historical Background

Investigative police stops or SQFs are one policing tactic that falls within the person-focused branch of proactive policing (NASEM, 2017). Proactive policing has been used to refer to “all policing strategies that have as one of their goals the prevention or reduction of crime and disorder and that are not reactive in terms of focusing primarily on uncovering ongoing crime or on investigating or responding to crimes once they have occurred” (NASEM, 2017:30). Person-focused approaches within proactive policing are aimed at targeting high-rate offenders in order to prevent as well as deter crime (NASEM, 2017). Historically the police were mainly responsible for apprehending offenders after the commission of a crime, but research in the 1970s indicated that a small number of offenders were responsible for a large share of all criminal behavior (Wolfgang, Figlio, & Sellin, 1972) and that the police could reduce crime by focusing on these high-rate offenders (Pate, Bowers, & Parks, 1976).

With this knowledge in mind, as well as concern over rising crime rates, police departments began to take a more proactive approach to reducing crime by utilizing a variety of tools, including investigative police stops. SQFs can be used reactively after a crime has been committed or reported as well as proactively as a preventative measure (NASEM, 2017). The
*Terry v. Ohio* case (392 U.S. 1 [1968]) established that a police officer must have evidence of reasonable suspicion of criminal behavior that is in process or criminal behavior that has recently occurred or is about to occur. Additionally, this case (*Terry v. Ohio*, 92 U.S. 1 [1968]) established that there must be reasonable suspicion that the suspect is armed and dangerous to warrant a frisk. It is difficult to determine the overall use and impact of investigative police stops on a national scale over time, but estimates indicate that approximately 2.5 million U.S. residents over the age of 16 experienced a street stop in 2015 (Davis, Whyde, & Langton, 2018). This estimate is likely much lower than it was in the late 1990s and early 2000s when police departments in major U.S. cities were increasingly using SQFs as a crime control strategy.

New York City provides a useful example for demonstrating the evolution of investigative police stops, the challenges associated with limiting racial disparities when implementing proactive policing techniques, and the ways research can impact police departments. A closer look at the city of New York reiterates some of the information discussed so far and highlights one of the data sets used in the current study. Following the *Terry v. Ohio* case in 1968 (392 U.S. 1) and the appointment of NYPD Commissioner Bratton, the use of SQFs increased dramatically (Fagan, Zimring, & Kim, 1998). In the mid-1990s the NYPD Commissioner emphasized the increased use of order maintenance policing to address quality of life crimes in hopes of reducing violent crime. Simultaneously the use of SQFs was encouraged to increase the number of illegal guns seized by the police (Davis & Meta-Gelabert, 1999). From a crime control perspective these strategies were considered to effective. But, while crime was decreasing, the number of citizen complaints filed against the NYPD increased significantly (Davis & Meta-Gelabert, 1999). Additionally, there was concern that the number of SQFs
conducted by an officer was being used as an indicator of performance through the Compstat management system (Eterno & Silverman, 2012).

City officials in New York argued that the significant decrease in crime from the 1990s through the late 2000s was a direct result of the increased use of SQFs (Bloomberg, 2013). The increased usage was substantial. In the early 2000s less than 100,000 SQFs occurred annually and in 2012 over half a million took place (NYPD Stop, Question, and Frisk data archive, 2019). However, research indicated that SQFs had a much smaller, albeit significant, impact on the reduction in crime seen in the city of New York (MacDonald, Fagan, & Geller, 2015; Weisburd, Wooditch, Weisburd, & Yang, 2016). Regardless of the effectiveness of these stops, concern about racial disparities in their use came into focus. As mentioned earlier, a major lawsuit against the NYPD (Floyd, et al. v. City of New York) argued that the use of SQFs amounted to racial profiling by the police. Research using the NYPD’s SQF data indicated that SQFs disproportionality impacted people from communities color, controlling for socioeconomic factors and crime statistics (Fagan, 2010). These results were used in the Floyd, et al. (959 F. Supp. 2d 540) decision which found the use of SQF by the NYPD to be unconstitutional. Since this ruling, a federal monitor and monitoring committee has been established to ensure that the agreed upon remedies, such as changes to police training and performance evaluation, are being followed.

A recent study examined the impact of the Floyd, et al. case on SQFs in New York City and found that racial disparities were significantly reduced (MacDonald & Braga, 2018). More specifically, MacDonald and Braga (2018) found that census tract-level racial composition did not act as a significant predictor of stop rate anymore, net of socioeconomic, crime, and police precinct factors. Although the result of this decision appears to have had a positive impact on
racial disparities, it is limited in scope to race and racial composition of place. Taking an
intersectional approach to understand the potential nuances in experiences across different
segments of the population (e.g., women of color vs. men of color) is an important piece of the
puzzle to fill in next. This dissertation aims to begin this process. Before discussing the empirical
literature that informs the current study, the theoretical foundation for understanding the role of
race, place, gender, and intersectionality within policing is provided.

Theoretical Background

Race and Policing

Scholars have developed a large body of theory and research aimed at understanding if
and how race impacts policing (see Piquero, 2008 for a review). This theoretical background
section begins with a discussion of the role of race in the criminal justice system, followed by a
focus on the impact race has on policing more specifically. The foundation of this area of
research started with W.E.B. Du Bois’ seminal works (1899; 1999). His findings indicated that
Black respondents, including students as well as police chiefs, county officials, and regular
citizens, were more likely to perceive racial discrimination in the criminal justice system when
compared to white counterparts. Early scholars in this field followed Du Bois in pursuit of an
understanding of race, crime, and the criminal justice system and attributed the racial
disproportionality in their findings to both official bias and social factors like poverty (Johnson,
1941; Sellin, 1928). Myrdal (1944) began to highlight racial differences in the criminal justice
system at multiple stages of the process including arrests, emphasizing the strong role of
prejudice as opposed to differences in criminality as the source of racial disproportionality.

The role of race in policing can be traced historically back to the creation of slave patrols
that were established to monitor the whereabouts of slaves (Bass, 2001). After slavery was
abolished the regulation of Black people continued though the enforcement of the Black Codes. As these codes became scrutinized, Jim Crow laws were established to once again “continually reaffirm and remind the Black population of their lesser status or “place” in the larger society” (Bass, 2001:161). The migration of much of the Black population to major cities bolstered discriminatory treatment at the hands of the state through segregation and spatially divided neighborhoods. The distinct spatial segregation created an easy way for public services, such as the police, to be distributed and utilized unevenly (Bass, 2001; Myrdall, 1944). The war on drugs represented a new set of tools to be used in a discriminatory fashion again the Black population. For example, the Drug Enforcement Agency incorporated race as an actual variable for officials to create drug courier profiles (Glasser, 2000). The war on drugs, fear of rising crime, and the publication of Wilson and Kelling’s article in 1982 catalyzed a new focus on order maintenance or quality of life policing strategies (Kelling & Coles, 1996). Although Wilson and Kelling warned of the potential for inappropriate enforcement that could arise from cracking down on lower level offenses, quality of life policing disproportionality impacted communities of color. The result of such practices and their “success” at reducing crime supported the use of zero tolerance policies across the country and the use of SQFs (Bass, 2001).

The war on drugs and later use of zero tolerance strategies sparked further debate about why racial disproportionality was present in the criminal justice system. Some theorized and argued the differences in behavior across race, not race itself, was the cause (Hindelang 1978; Petersilia, 1985; Wilbanks, 1987); while others argued that racial bias was indeed pervasive in the criminal justice system and the cause of racial disproportionality (Hawkins, 1987; McNeely & Pope, 1981). These scholars, as mentioned above, often attributed racial bias in the criminal justice system to the history of race in the United States and the use of stricter policing as a way
to maintain the status quo established during slavery (Myrdall, 1944). There were also scholars that theorized that race had some influence, but that overall the criminal justice system was not racially biased (Gottfredson & Gottfredson, 1988; Wilson, 1987). These perspectives formed through a series of papers and responses. McNeely and Pope (1981) rejected Hindelang’s (1978) findings, which compared victim and arrest data to conclude that Blacks were simply more involved in criminal activity, by demonstrating racial bias in arrests, convictions, and sentencing.

As evidence grew to support the theory that racial bias in the criminal justice system exists because of race-based prejudice, so did evidence to support opposing theorists. For example, Petersilia (1985) and Wilbanks (1987) argued that there was insufficient evidence to suggest the criminal justice system was racially biased at any stage from policing through sentencing. However, scholars discredited them because of their reliance on formal stages of the criminal justice system and failure to consider the experienced reality of those within the system (Georges-Abeyie, 1989). The back and forth between scholars examining race and the criminal justice system created the two main theoretical perspectives that remain useful today for understanding the role of race during police-citizen encounters and other forms of proactive policing.

Specifically, one perspective indicates that policing is reactionary (Gottfredson & Gottfredson, 1988; Hindelang, 1978; Petersilia, 1985) and police behavior is determined by the seriousness of the offense only, rather than extra-legal factors (Wilbanks, 1987). This perspective posits that the criminal justice system is not discriminatory (Petersilia, 1985; Wilbanks, 1987). However, another perspective theorizes that extra-legal factors, particularly race, do play a critical role in all stages of the criminal justice system, including policing (George-Abeyie, 1989; Hawkins, 1987; McNeely & Pope, 1981). In this case, the criminal justice system and the various
stages within it are considered discriminatory both individually and cumulatively (Hawkins, 1987; McNeely & Pope, 1981). Discriminatory action may be the result of individual officer behavior or institutional racism which stems from how institutions like police agencies function either intentionally or not (Lea, 1986). Police officers perform their job within the context of their agency which may result in differential enforcement by officers, but not as a result of individual intentions (Crank & Langworthy, 1992; Lea, 1986). These perspectives align with three hypotheses used to explain disproportionate minority contact.

The first is differential involvement, which follows the reactionary perspective (Petersilia, 1985; Wilbanks, 1987), arguing that minorities are overrepresented in all stages of the criminal justice system because they commit more crime, commit crimes for longer periods of time during their lifetime, and commit more serious crime (Piquero, 2008; Hindelang, Hirschi, & Weis, 1981). Second, and in line with the role of extra-legal factors, is the differential selection and processing perspective which posits that factors like police presence, profiling, and discrimination during processing (e.g., courts, corrections) create disproportionate minority contact (Hawkins, 1987; Mitchell, 2005; Pope, Lovell, & Hsia, 2002). As with institutional racism, individual bias may be intentional or unintentional. Research in psychology has demonstrated how officers, like all people, when under time constraints (Payne, 2001) or facing complex situations (Robinson et al., 2010) are more likely to act on implicit biases (Correll, Park, Judd, & Wittenbrink, 2002). Last, Piquero (2008) and others (see e.g., Bishop, 2000) have suggested that it is the combination of both differential involvement and differential selection and processing that contributes to the disproportionate number of minorities involved in the criminal justice system. This perspective suggests that the criminal justice system is not systematically biased; however, it is not free from bias completely either.
It is important to note that assessing and understanding the causes of disproportionate minority contact has focused primarily on criminal justice stages from arrest to placement following conviction, but not police-citizen encounters. More recent research (see section “Research Examining the Role of Race on Policing”) has indeed focused on proactive policing tactics like the person-focused strategies similar to investigative police stops and has utilized the theories discussed above to understand the role of race in “new policing” strategies. “New policing” grew out of social unrest and rising crime rates in the 1960s and 70s as well as scholarly consensus that reactive policing strategies were no longer effective (Bayley, 1994; Gottfredson & Hirschi, 1990; NASEM, 2017; Weisburd & Braga, 2006). For example, empirical assessments of reactive policing strategies found that increasing the number of officer vehicles in an area, reducing police response time, nor emphasizing follow-up investigations had an impact on crime (Greenwood, Petersilia, & Chaiken, 1977; Sherman & Weisburd, 1995; Skogan & Antunes, 1979; Spelman & Brown, 1984).

To address increasing crime rates and replace traditional reactive policing practices, police agencies adopted proactive policing. Rather than waiting for crime to be reported by citizens, proactive policing is designed with initiative stemming from the police (Fagan et al., 2016; NASEM, 2017). This does not mean that individual officers did not engage in proactive behavior prior to the adoption of proactive policing, but that traditional reactive policing did not use proactive strategies as a means of crime control (Fagan et al., 2016; NASEM, 2017). According to a recent report from the National Academies of Sciences, Engineering, and Medicine (2017) proactive policing has four main, but often overlapping, approaches: problem-solving, place-based, person-focused, and community-based. Within these approaches are specific goals and associated tactics to reach these goals. Investigative police encounters (e.g.,
SQF) are one tactic used within the person-focused approach aimed at preventing crime by focusing on known, high-rate offenders (NASEM, 2017). This tactic, however, also overlaps with place-based approaches that are designed to reduce crime in micro-places or hot-spots. Both approaches have been examined with critical attention toward their implementation across race because differential involvement may play a role in determining which areas to focus on and differential selection and processing may play a role in determining which people to focus on. Although police agencies are using crime (not race) to determine the areas and people to focus on, high crime areas are continually and inextricably linked to poor, minority communities which makes it particularly relevant to examine proactive strategies like investigative police encounters across race (and place).

Based on theory and the empirical literature that follows in the “Empirical Background” section, which demonstrates that minorities are more likely to have investigative encounters with the police, this study investigates the role that race plays on investigative police encounters. Before discussing how gender may impact police-citizen encounters, it is necessary to recognize that the aforementioned studies neglect the role of gender in their theories on the influence of race in the criminal justice system. Scholars assessing race and criminal justice have been largely concerned with the experiences of men and young men of color. This is not surprising given the disproportionate number of minority men present in all stages of the criminal justice system; however, instances involving police and women of color warrant equal attention (Brunson & Miller, 2006a; Kwate & Threadcraft, 2015; Ritchie, 2017). “We learn so much more about the system as a whole than we would if we look exclusively at men…” (Davis, 2013/2016:105).

**Gender and Policing**
The current section discusses the following: (1) the historical gap of criminological theory that intentionally focuses on women; (2) theories that focus on gender and the criminal justice system broadly; and (3) theories related to women and policing more specifically. Early foundational criminological theory was developed using primarily male samples and aimed at understanding male delinquency and crime (Burgess-Proctor, 2006). This male-centered trajectory became particularly apparent when scholars were forming general theories of crime that excluded the role of gender, even though studies had already shown that gender is a significant predictor of offending and criminal justice outcomes (see e.g., Daly, 1994; Chesney-Lind & Pasko, 2004; Steffensmeier et al., 1993). In the 1960s and 70s feminist scholars challenged these theories and argued that feminist theory needed to be incorporated into criminology because general theories of crime could not simply be applied to women and assumed to operate the same (Smart, 1976). This issue was not only apparent in theories used to explain criminal behavior, but also theories to explain responses to criminal behavior. Meaning, gender was not a focus of scholarship aimed at understanding criminal justice processes.

More recently, a number of scholars started to adapt gender-specific theories related to criminal justice responses because of the rising number of young girls and women, specifically of color, in detention centers and prisons despite the fact that self-reported offending among girls and women has not been increasing (Steffensmeier, 2005; Stevens, Morash, & Chesney-Lind, 2011; Winfree & DeJong, 2015). Feminist scholars theorized that each stage of the criminal justice process is gendered (Bush-Baskette, 1998; MacDonald & Chesney-Lind, 2001; Miller, 1998) and therefore theories to explain criminal justice responses to males could, again, not be uniformly applied across gender.
However, contrary to popular belief and early theorists (Anderson, 1976; Pollak, 1950) regarding chivalry and the criminal justice system, women have not been shown to “benefit” from their gender in the criminal justice system, especially not uniformly across all women (Britton, 2000; Visher, 1983). In fact, scholars have attributed the harsher treatment of young women for status offenses and increased sentences for Black women to not conforming to gender norms (Daly, 1987). Women and young women who “act out” even in more minor ways are viewed by court actors (Britton, 2000) and police (Jones, 2010; Ritchie, 2017) as problematic and in need of intervention, even when the same behavior may be tolerated or overlooked for men and young men, because the behavior is seen as not “lady-like” and does not conform to the traditional norms our society places on women (MacDonald & Chesney-Lind, 2001; Miller, 1998; Visher, 1983).

Gender and sexual nonconformity have been shown to play important roles in determining which women are targeted by the police (Himmelstein & Bruckner, 2011; Ritchie, 2017). This stems from traditional gender norms that our rooted in the historical oppression of women who do not demonstrate purity, submission, and domestication (Collins, 2000). Women who do not perform traditional gender and sexuality norms are viewed with a suspicion of criminality and this is elevated for women of color (Brunson & Miller, 2006a; Jones, 2010; Ritchie, 2017). Gender performance, as opposed to actual gender, is what people use to make judgements about women, but the “standard” performance is based in white women’s behavior and does not take into account racial and neighborhood context which can shape how women and girls need to “perform” gender to navigate their daily lives (Jones, 2010). As will be seen in the following section, gender roles and expectations operate differently for women of different races and these intersections are critical for a better understanding of gender in relation to police
contact. While this perspective has been examined in formal aspects of the criminal justice process during later stages like conviction and sentencing, we know much less about women’s experiences with the police and even less about investigative police stops in particular (Brunson & Miller, 2006a; Jones, 2010).

**Intersectionality and Policing – Race, Class, and Gender and Policing**

Although feminist scholars made great strides by incorporating a gender-specific lens into criminology, they needed to recognize sources of power and privilege, not only across gender but also across race and class¹ (Barak et al., 2001; Chesney-Lind & Pasko, 2004; Crenshaw, 1991). In 1998 Daly and Maher incorporated Crenshaw’s (1989; 1991) intersectional approach into the second phase of feminist criminology (Potter, 2015). Intersectionality, which is based in Black feminist theory and critical race theory, is the practice of understanding the impact of interconnected social identities (Crenshaw, 1991; Collins, 2000). This framework was adopted into second phase feminist criminological theory because earlier feminist criminology was challenged for being race and class-blind (Chesney-Lind & Pasko, 2004; Daly, 1998).

Incorporating intersectionality into feminist criminology allowed for the inclusion of multiple sources of identity (e.g., race, class, and gender), and formed a perspective that emphasizes that identities and statuses are social constructs that shape crime as well as the criminal justice system’s responses to crime (Potter, 2015).

Different identities are critical to examine because citizens and criminal justice actors use (intentionally or not) historically embedded stereotypes to form narratives about different “types” of people and these narratives shape how they view and interact with others (Collins, 2000; Ritchie, 2017). Objectification fosters the maintenance of these narratives because it

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¹ Other sources of identity are also important to consider, such as sexual orientation and nativity, but are beyond the scope of the current study.
allows others, rather than subjects, to define who they are by where they are perceived to fit within gender and race binaries (male/female; white/Black). Those who are perceived to fit the “inferior position” of these binaries (i.e., Black female) are forced to fit into the historical narratives of “mammy,” “jezebel,” “sapphire,” or “welfare queen” (Collins, 2000:71).

The “mammy” is rooted in the domestic work and childcare that Black women performed in white homes (Collins, 2000). This narrative enforced the ideal that Black women should be submissive, maternal, and domestic. The “mammy” narrative is seen as the only positive role for a Black woman (Collins, 2000; Ritchie, 2017). The “jezebel” narrative is of an uncontrollable and overly sexual woman that is viewed as not needing protection, while the “sapphire” represents an intimidating, masculine, and aggressive woman who needs to be forced into submission (Collins, 2000). Another common, more modern, narrative is that of the “welfare queen” who is seen as lazy and taking advantage of governmental resources. This narrative is viewed negatively in comparison to the “mammy” because rather than offering cheap labor, the “welfare queen” is seen as costly. The “jezebel” and “sapphire” roles are juxtaposed to the ideal “mammy” because they represent “animalistic” and aggressive women of color (Collins, 2000). These narratives are relevant for police-citizen contacts because scholars argue that officer perceptions, like other citizens’, are informed by these narratives and when Black women behave in ways contrary to the “mammy” they are viewed as dangerous and not in need of protection (Ritchie, 2017). Although white women have to face gender-based stereotypes, women of color face racialized and gendered narratives that denote their level of criminality before their behavior is able to speak for itself. This further bolsters the need to examine sources of identity in conjunction with one another, rather than separately, by taking an intersectional approach.

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2 Scholars have also used other subsets or extensions of these narratives such as the “welfare mother” and the “black lady” (Collins, 2000).
More recent work on gender and the criminal justice system has been framed around intersectionality (Brunson & Miller, 2006a; Chesney-Lind, 1997; Daly, 1992; 1994; Heimer, 1995; Jones, 2010; Kwate & Threadcraft, 2015; Miller, 1998; Morash & Chesney-Lind, 2009; Ritchie, 2017; Wattanaporn & Holtfreter, 2014) because it recognizes that crime and its responses are not gender-blind nor uniformly experienced across other sources of inequality (e.g., race, class). Meaning, not only does gender influence pathways toward criminal behavior (see e.g., Daly, 1994) and the likelihood of victimization (Crenshaw, 1991), but so does the interaction between gender and race (see e.g., Heimer, 1995; Kwate & Threadcraft, 2015; Ritchie, 2017) and simultaneously between place (i.e., gender x race x place) (Jones, 2010; Molnar et al., 2005). Additionally, these intersections also play a role in how men and women are processed through the criminal justice system (Chesney-Lind & Belknap, 2004; Miller, 1999; Steffensmeier, et al., 2005) and how they are treated by the police (Jones, 2010; Kwate & Threadcraft, 2015; Rengifo & Pater, 2017; Ritchie, 2017). For example, in her recent book Andrea Ritchie (2017) uses incidents of police violence toward women of color to draw both striking similarities to the use of force against men of color, as well as point out the unique ways that incidents between the police and women of color are gendered. One way that police violence varies across gender and race is the form that violence takes. Ritchie (2017) outlines the number of cases of sexual violence by police against women of color and the little attention that these cases received in comparison to cases of police violence against Black men. Although recent work has helped make these cases “visible,” scholars still lack information pertaining to how specific proactive policing tactics operate for women across race and place. However, the

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3 For example, Oklahoma officer Holtzclaw was convicted in 2015 for 263 years after sexually assaulting thirteen Black women under the initial guise of searching for drugs.
existing evidence stands to reason that the role of gender, and its interaction with race and place, may be operating within investigative police-citizen encounters as well.

**Place and Policing**

Criminological research has continued to emphasize the need to examine the role of place or ecological context on a variety of criminal justice related outcomes (Anderson, 1999; Kubrin & Weitzer, 2003; Sampson, 2006; Sampson et al., 1997; Shaw & McKay, 1942; Stark, 1987). This line of inquiry suggests that both micro-level as well as macro-level factors influence behavior and to gain a more complete understanding of a phenomenon, both levels are needed (Wikstrom, 2004). There are different ways to examine how place impacts policing specifically. Three of the dominant frameworks are based on broken windows theory, social disorganization theory, and racial threat theory.

Broken windows theory has been used to understand specific policing techniques that target quality of life offenses that were implemented by police departments in direct reference to Wilson and Kelling’s (1982) theory. Wilson and Kelling (1982) posited that physical and social disorder, such as graffiti and public drunkenness, are precursors to more serious forms of crime. The presence of disorder signals to other law-abiding residents that the neighborhood is unsafe leading them to move elsewhere and decreasing the number of residents that can help sustain informal social control in the neighborhood. Given the contagious and escalating effect Wilson and Kelling theorized disorder has on a community and its eventual crime rate, policing strategies such as order maintenance policing have been adopted in many cities (Fagan & Davies, 2000). However, places marked by disorder tend to be areas that also experience concentrated disadvantage and are home to primarily residents of color. The overlap between neighborhoods with “disorder” and poor, neighborhoods of color has led many to suggest that
order maintenance and later zero tolerance policing techniques are really strategies that use racial profiling in poor communities (Fagan & Davies, 2000). As noted earlier, broken windows theory was not necessarily meant to be extended to what zero-tolerance practices have come to be. In fact, community oriented policing techniques to reduce disorder can be seen as a positive strategy that has also been drawn from Wilson and Kelling’s (1982) work.

The second ecological model of crime stems from social disorganization theory. This ecological framework has found support in research assessing the influence of a variety of macro/structural characteristics of communities on crime (e.g., Bursick & Grasmick, 1993; Sampson & Groves, 1989) and related concepts like fear of crime (e.g., Taylor & Covington, 1993). This perspective emphasizes that “kinds of places” are central to theorizing about criminal behavior and responses to crime, rather than only “kinds of people” (Kubrin & Weitzer, 2003: 374; Stark, 1987). Structural conditions of the city, such as poverty, residential instability, and ethnic heterogeneity (Park & Burgess, 1925; Shaw & McKay, 1942) are seen as key determinants of criminal behavior and responses to criminal behavior within the ecological framework. Later, this line of inquiry was expanded to include a focus on the mechanisms that operate between structure and crime, beginning with social disorganization and later social ties (Warner & Rountree, 1997), collective efficacy (Sampson et al., 1997), and culture (Anderson, 1999).

This ecological framework was not used to understand policing dynamics until the 1990s (Klinger, 1997). For policing specifically, structural characteristics of places (e.g., precincts, neighborhoods) may matter because disadvantaged communities draw more police attention (e.g., via placed-based proactive policing tactics like hot-spot strategies), are less able to combat police misconduct, and may differ overall from the police force in terms of race and class which
could increase police-citizen conflict (Engel, 2003). Disadvantaged structural factors may increase or modify police-citizen encounters for a number of reasons including higher crime rates and perceived disorder due to a lack of informal social control mechanisms (e.g., order maintenance policing) (Fagan & Davies, 2000) and the inability to challenge police practices such as delayed response times (Bass, 2001) or misconduct due to a lack of collective efficacy (Sampson et al., 1997).

Also, neighborhood racial composition specifically, has been shown to be related to the size of the police force and police officer action (Parker et al., 2005; Petrocelli et al., 2003; Renauer, 2012). Another related (but often tested independently) contextual theoretical perspective used to understand the racial inequity across criminal justice outcomes is racial threat theory (Blalock, 1967). Racial threat theory posits that racial minorities threaten the existing social hierarchy and in order to maintain their dominance, more severe social control mechanisms are used against racial minorities (Smith & Holmes, 2003). Such social control mechanisms may include over policing or excessive use of force by the police (Holmes, 2000). Based in conflict theory where crime control tools are used to maintain the interest of those in power (e.g., Chambliss, 2001), the racial threat perspective proposes that proactive policing tactics would be used more frequently in minority neighborhoods (Liska, 1992). This theoretical perspective is dependent on existing tensions in society more broadly between the non-white and white populations. Stereotypes and narratives about the relationship between people of color and dangerousness or criminality may find their way into police perceptions of citizens. For example, scholars have argued that authorities and residents perceive Black groups of residents as prone to disrupting social order (Chambliss, 2001; Liska & Yu, 1992). The result may be increased police funding in areas with more non-white and differential use of certain policing strategies (Dollar,
To empirically test this perspective aggregate measures of minority threat are used, such as percent of the population that is non-white, making this an ecological theory about the intersection of race and place, rather than race at an individual level (Smith & Holmes, 2003).

Interestingly, there is evidence to suggest that external pressures resonating from public awareness of racially biased policing can shape police officer behavior (Mas 2006; Warren & Farrell, 2009). In cities where the public scrutinizes police behavior and the media replays instances of bias, police departments may change their behavior as a result of state actors attempting to resolve the public’s concern. For example, Warren and Farrell (2009) found that increased public scrutiny generated by the media in tandem with local legislative and organizational shifts resulted in reduced racial disparities in searches during traffic stops. This may suggest that external pressures from the public and policymakers in particular places may similarly influence proactive policing strategies like investigative police stops.

All of these theoretical perspectives tap into an aspect of place and indicate that communities with higher levels of disadvantage and more minority residents are at an increased risk for coming into contact with the police. Ecological theories are also important to an intersectional framework because together they can help inform why place may modify how identities like gender and race operate. Ecological attribution bias provides a theoretical perspective that taps into how individual race operates within the context of neighborhood racial composition (Smith, 1986). This perspective suggests that police may be more likely to stop or search Black individuals based on general perceptions of the place in which the interaction takes place. Meaning, police may utilize and apply perceptions of the neighborhood, based on racial composition and/or crime history, to the individual (Petrocelli, Piquero, & Smith, 2002). Similar to literature on implicit bias based on race, the use of place to inform whether the police view
someone as suspicious or not is likely an unintentional consequence of territorial learning (Manning, 1977; Meehan & Ponder, 2002; Van Maanen, 1974). For example, Meehan and Ponder (2002:402) indicate that “racial profiling is inextricably tied not only to race, but to officers’ conception of place, of what should typically occur in an area and who belongs as well as where they belong.” The use of place-based assumptions not only impacts suspects of color, but also white suspects who may appear “out of place” in the context of neighborhoods with a higher proportion of residents of color (as well as Black suspects in predominately white neighborhoods) (Carroll & Gonzalez, 2014; Smith & Alpert, 2007). The result is a guilty by association perception made by the police.

Theorizing about how gender operates within ecological context can be seen through place-specific “codes” that dictate how young men and women need to act in order to ensure survival. For example, Anderson’s (1999) code of the street and its application to young women (Jones, 2008/2010; Miller, 2001) informs how young, poor minorities navigate their lives depending on where they live. The code is critical for young Black men to establish status and maintain respect in a poor, urban environment which offer fewer prosocial ways for young men to demonstrate hegemonic masculinity. Young women and girls in these same contexts are also faced with violence and a need to survive that does not apply to people living in more financially secure neighborhoods (Jones, 2008). Therefore, how young Black women “do gender” changes within the context of disadvantaged neighborhoods because they are forced to simultaneously embrace aspects of hegemonic femininity and demonstrate strength as an “able fighter” (Jones, 2008/2010). Because safety comes first, young Black women need to violate typical feminine standards and navigate their lives on a spectrum from “good” to “ghetto” (Jones, 2010). The use of the code of the street is placed-based and helps to explain why understanding crime and
responses to crime requires an ecological perspective, but the code also varies across gender even if the motivation to maintain respect is at the root of interpersonal violence for both young Black women and young Black men (Jones, 2008; Miller, 2001). Research related to the application of these theoretical perspectives is provided in the following sections.

**Empirical Background**

**Research Examining the Role of Race on Policing**

Two forms of inquiry dominate the race and policing research. The first utilizes official data such as crime reports (Piquero & Brame, 2008) and the second emphasizes the lived experiences of minorities using both self-reports (Hawkins, Laub, & Lauritsen, 1998; Morenoff, 2005; Pope & Feyerherm, 1990) and qualitative interview data focused on how offenders or suspects feel they were treated by police (Lovell & Pope, 1991). What these two types of studies have in common is their focus on interactions that occur after a crime has been allegedly committed. We know less about interactions between the police and citizens when an offense has not been committed such as through proactive police stops and surveillance (i.e., SQF; field interrogation and observation reports); however, this area of research continues to grow (NASEM, 2017:7-29).

Studies have consistently shown that Black youth and adults are more likely to be arrested than their white counterparts (Gase et al., 2016; Puzzanchera & Hockenberry, 2015; Stevens and Morash, 2015). In terms of overall contact with police, measured as the combination of investigative stops without an offense taking place and arrests, Crutchfield and colleagues (2012) found that Black youth are more likely to have contact with the police than their white counterparts, even after taking into account self-reported delinquency, differential income, delinquent peers, neighborhood quality, and family characteristics. These findings led
Crutchfield and colleagues (2012:197) to conclude that, “there exists a dominant narrative in the Black community that police, and the criminal justice system more broadly, discriminate against African Americans.”

Similarly, studies aimed at assessing whether proactive police tactics result in the same disproportionality have found that minorities are more likely to be surveilled or stopped by the police. Browning and colleagues (1994) examined how race impacts getting “hassled” by the police in Cincinnati. The authors define getting “hassled” as being “stopped or watched by the police when they have done nothing wrong” (Browning et al., 1994:3). Results indicated that African Americans were more likely than whites to report being hassled by the police, even after controlling for gender, age, education, income, neighborhood incivility, and disorganization. These findings are useful; however, it remains unclear whether these individuals may warrant extra surveillance. For example, police often stop and surveil individuals with a criminal record in high-crime areas of communities to gain intelligence (Fagan et al., 2016). Without controlling for prior criminal record, it is difficult to discern whether racial bias is the source of differences in being watched or stopped by police across race or if differential involvement is.⁴

With that said, there is further evidence that indicates proactive policing techniques are disproportionately focused on minorities, particularly African Americans, and their communities (Bass, 2001; Gelman, Fagan, & Kiss, 2007; Hurst, Frank, and Browning, 2000; Weitzer, 2000). Using pedestrian stops specifically, Gelman and colleagues (2007) found that Blacks and Hispanics were stopped more frequently than whites in New York City after taking into account both precinct characteristics and estimates of criminal behavior based on race. Moreover, they found that stopping whites was more likely to result in an arrest than stopping Blacks or

⁴ Some scholars and activist groups have also argued that the use of prior criminal behavior should not be allowed as a determining factor to initiate a stop, but rather that suspicion should be based in current behavior only.
Hispanics (Gelman et al., 2007). Interestingly, Alpert and colleagues (2005) found that race determined how police officers would interpret suspicion. Specifically, they found that non-behavioral suspicions were used more often for people of color whereas behavioral suspicions were more likely to be used when determining suspicion of white individuals, indicating that race may lead to an automatic perception of suspicion versus innocence (Alpert et al., 2005).

This, along with evidence that police stops involving people of color are less likely to result in an arrest (Gelman et al., 2007; Coviello & Persico, 2015; Ridgeway, 2007), suggests that police may have stricter rules when evaluating the behavior of white individuals as opposed to people of color.

Even if such proactive policing tactics resulted in a temporary reduction in crime, they are simultaneously increasing the likelihood that law-abiding Blacks and Hispanics will have unnecessary contact with the police. Brunson and Miller (2006b) found that over half of their sample of young Black men who had no history of criminal behavior had negative encounters with the police. Similarly, research using traffic stop data has shown how pre-textual stops, or stops that use a minor traffic violation as a reason to stop someone when the stop is actually motivated by other concerns, impact Black male drivers to the point that “net of other explanatory variables, the data indicate that police make traffic stops for driving while Black and male” (Lundman & Kaufman, 2003:195). These findings are consistent with a number of studies demonstrating that people of color are more likely to be stopped on the highway and more likely to be ticketed, searched, and arrested (Ayers & Borowsky, 2008; Durose et al., 2005; Engel & Calnon, 2004; Harris, 1999; Langan, Greenfeld, Smith, Durose, & Levin 2001; Sanga, 2009; Weitzer, 2000). However, it is important to note the exceptions as well. For example, Farrell and McDevitt (2006) found that 18 percent of the 49 reports measuring racial profiling between 1998
and 2006 did not find racial disparities (cited in Farrell & McDevitt, 2010). Additionally, a national assessment by the Bureau of Justice Statistics of police contacts from 2015 revealed non-significant racial differences across police-initiated contacts overall and marginally significant racial differences for street stops specifically (Davis, Whyde, & Langton, 2018).

We also know that both Black adults and youth have less trust in the police than their white counterparts who are less likely to interact with police (Barlow & Barlow, 2002; Hurst et al., 2000; Leiber et al., 1998; Weitzer, 2000), therefore the ramification of the disproportionate use of proactive police tactics toward people of color may exacerbate distrust in police. Moreover, Blacks are more likely to report unjust treatment during their interactions with police, further bolstering the negative outlook people of color may feel toward police. For example, Black youth are more likely to report physical abuse during a police encounter (Friedman et al., 2004) and Black drivers are the least likely to perceive a traffic stop as legitimate and the most likely to indicate that the officer did not act appropriately (Lundman & Kaufman, 2003).

Similarly, Weitzer and Tuch (2002) found that after controlling for other determinants, race and experiences with racial profiling are the strongest predictors of attitudes toward the police and can have long-lasting effects (see also, Huebner et al., 2004). The enduring impact of a negative police encounter extends beyond the individual. Scholars indicate that these negative experiences are shared among family and friends creating vicarious experiences of police misconduct, which have also been shown to impact how Blacks perceive the police, even among those without direct police contact (Browning et al., 1994).

The committee responsible for the NASEM (2017) report on proactive policing outlines a number of reasons why proactive tactics may be associated with racial disparities and racial bias, but caution that only a very small number of studies have appropriately assessed the causal
relationship between proactive policing strategies and racial disparities and bias. These reasons include: 1) Black residents are more likely to have interactions with police officers if Blacks are more likely to commit crime and more likely to behave suspiciously in the presence of officers; 2) the type of crimes that police agencies choose to prioritize enforcement of may increase contact between officers and non-white residents if that particular type of crime is dominated by non-white offenders; 3) concentrating enforcement on certain geographic spaces that are high crime areas results in increased monitoring of and contact with minorities because high-crime areas are more likely to be minority neighborhoods; 4) focusing on high-rate offenders increases contact with Blacks because they already have a higher chance of having a criminal history because they reside in area with a greater police presence (NASEM, 2017:7-19). This report also reviews the existing research on this topic, including many of the studies addressed above, and concludes that:

“There are likely to be large racial disparities in the volume and nature of police-citizen encounters when police target high-risk people or high-risk places, as is common in many proactive policing programs, [but]… existing evidence does not establish conclusively whether, and to what extent, the racial disparities associated with concentrated person-focused and place-based enforcement are indicators of statistical prediction, racial animus, implicit bias, or other causes” (NASEM, 2017:12).

The studies discussed in this section suggest racial disparities in police contact may exist, but it is also important to recognize that racial disparities are not necessarily indicative of racial bias. This does not negate the fact that prior research indicates that racial minorities are not only more likely to be arrested, but they are also more likely to be stopped by the police for investigative purposes. This evidence suggests that disproportionate minority contact begins even before the commission of a crime takes place and may have more to do with differential selection and processing, rather than differential involvement. However, the evidence discussed
thus far does not adequately take into account other key individual and contextual components that may influence the likelihood of being stopped by the police.

Research Examining the Role of Gender and Intersectionality on Policing

In the early 1990s and into the 2000s scholars continued to note that crime trends were operating differently for men and women. Specifically the rate of arrests for men were decreasing, but the arrest rates for women were either increasing or decreasing less substantially (Winfree & DeJong, 2015), suggesting that the external causes shaping arrest statistics differ across gender (Chesney-Lind, 2002). Moreover, young women are more likely to receive intervention from the juvenile justice system than young men for status offenses (Horowitz & Pottieger, 1991; MacDonald & Chesney-Lind, 2001) and young women have seen a significant increase in arrest for “non-traditional” offenses like assault (Chesney-Lind & Eliason, 2006). Interestingly during this time period, self-reports on offending indicated that rates of violence for young women were actually decreasing (Chesney-Lind & Belknap, 2004; Steffensmeier et al., 2005). Many scholars have attributed this discrepancy, between self-reported and official crime statistics for women and girls, to shifts in policing such as zero-tolerance initiatives in schools, the war on drugs, hot-spot policing tactics, as well as revised responses to domestic violence (Bush-Baskette, 1998; Buzawa & Hirschel, 2010; Chesney-Lind & Eliason, 2006; Chesney-Lind & Irwin, 2007; Jones, 2010; Miller, 2008; Russ, 2004).

Similar to arrest and incarceration trends for men, women of color are disproportionately in contact with the criminal justice system. Young Black women are significantly less likely to have their cases dismissed in comparison to their white counterparts, are more likely to receive harsher punishment than whites (Miller, 1999), and make up nearly half of the female population in juvenile detention (American Bar Association, 2001). Black women have been shown to be
significantly more likely to be arrested than white women or white men (Visher, 1983), are more likely than white women to be stopped for a traffic violation (Lundman et al., 2003), at an increased risk for harsher sentencing following a conviction (Agozino, 1997; Bush-Baskette, 1998; Buzawa & Hirschel, 2010; Chesney-Lind, 2010; Crawford, 2000; Steffensmeier, Kramer & Streifel, 1993), and more likely to face police violence (Ritchie, 2017).

Disproportionate minority contact for males at different stages of the criminal justice system has been extended to police contact in general and proactive policing tactics specifically (Browning et al., 1994; Brunson & Miller, 2006b; Fagan et al., 2016; Gelman et al., 2007). Research suggests that women of color may also experience racial profiling by police (Lundman & Kaufman, 2003; Weitzer & Tuch, 2002) and, similar to highly publicized cases of police brutality toward Black men, cases of police misconduct toward Black women have occurred recently (e.g., Sandra Bland who died in police custody in Texas after a traffic stop; 13 young Black women who were allegedly sexually assaulted by Oklahoma City police officer Daniel Holtzclaw in 2015; a video of a young Black woman assaulted by a school resource officer in South Carolina) (Ritchie, 2017). Although it would be an assumption to draw conclusions about trends in police behavior from these incidents, there is evidence that Black woman victims of crime are less likely to receive assistance from the police in comparison to white woman victims (Robinson & Chandek, 2000). Yet, few studies have examined how gender influences – or interacts with race to influence – police-citizen interactions.

The majority of research on proactive policing tactics such as investigative stops has focused on men, with very little focus on how aggressive policing may be experienced differently for women. This is not to dismiss the value of studies that focus on men or include both men and women in their sample (but do not specifically focus on the role of gender);
however, it is an unfortunate gap that has been recognized for over thirty years (Visher, 1983) and only started to be addressed (Brunson & Miller, 2006a; Fine et al., 2003; Ritchie, 2017). Although men are often the primary target of investigative police stops (Durose, Schmitt, & Langan, 2005; Fagan et al., 2016; Ridgeway, 2007), women are not immune from being stopped by the police. For example, nearly 13,200 women in Boston were stopped by the police (via FIO) between 2007 and 2010 (Fagan et al., 2016). Female stops made up just over 18% of the total number of stops (72,619) during that time period (Fagan et al., 2016). Similarly, the Bureau of Justice Statistics reports that 21.3% (N = 26,269,000) of police contacts in 2011 took place between police and women (Berzofsky et al., 2017). Yet, we know little about how proactive police stops operate for women.

The first scholar to assess how gender and race impact police-citizen interactions was Visher in 1983. Findings indicated that not all women were treated chivalrously by police, which was assumed to be the case for many years; rather, only women who displayed “appropriate” gendered behaviors experienced such chivalry (Visher, 1983). Submissive, white, and older women experienced leniency and were significantly less likely to be arrested. This study (Visher, 1983) and others (Ritchie, 2017) highlight how police-citizen encounters during arrests may be influenced not only by gender, but by performances of gender as well. Such factors may also be at play during investigative stops between police and women. Similarly, Rengifo and Pater (2017) found that both gender and race played distinctive roles in police encounters in terms of the micro-aggressions experienced during the encounter; however, their sample included both voluntary (e.g., calls for service) and involuntary police encounters of only 14 young women.

Recent studies have started to illustrate how gender and race impact police use of violence across the United States (Ritchie, 2017) and investigative police stops in single city...
analyses, often with relatively small sample sizes (Brunson & Miller, 2006a; Fine et al., 2003; Kwate & Threadcraft, 2015; Rengifo & Pater, 2017). Two of these studies focus on negative police encounters (Brunson & Miller, 2006a; Fine et al., 2003) and one incorporates both voluntary and involuntary police contacts (Rengifo & Pater, 2017). Brunson and Miller (2006a) conducted surveys and in-depth interviews with 75 African American (35 female, 40 male) adolescents from St. Louis, Missouri. Just over 40% had reported serious delinquency so the authors could compare those who would be more likely to have police contact (i.e., those who offend) to those who would be less likely to have police contact. Nearly 82% of the young men and 46% of the young women reported being harassed or mistreated by the police (Brunson & Miller, 2006a). Results indicated that although males reported more negative police encounters, a significant portion of young women reported negative police encounters unique to their gender. The young men in the sample reported that police automatically viewed them as suspicious, often used disrespectful language, and performed physically invasive searches. Police stopped young men at all different times of day and at all different types of public spaces, including walking to and from school (Brunson & Miller, 2006a). Interestingly, only the young women who reported serious delinquency experienced negative police stops and they were all for minor issues such as truancy or violating curfew. Unless the stop occurred while in the company of young men, women were only stopped at night (Brunson & Miller, 2006a).

Fine and colleagues (2003) used a street survey of 911 young men and women in New York City to determine who had a negative encounter with either a police officer, security guard, or other adult in an authority position. Thirty-six individuals who fit these criteria and were able to be reached were followed up with a phone interview. Approximately one third of the sample

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5 Note that all police encounters in the sample were considered to be negative (harassment or mistreatment) because such interactions were interpreted as intrusive and antagonistic.
was stopped by the police. Young men and people of color were more likely to report being stopped and frisked; however, two-fifths of the female sample reported being flirted with or whistled at by the police on occasions separate from investigative police stops (Fine et al., 2003). Rengifo & Pater (2017) utilize interview data with young adults from New York City as well, specifically 43 Black and Latina/o individuals (67% male; 33% female). Their findings suggested that women experienced fewer involuntary contacts, but generally recounted their experiences as more negative than the male counterparts (Rengifo & Pater, 2017). However, it appears that their negative assessments are based on voluntary experiences because they centered on the police failing to show up, taking too long to show up, or challenging their account. In contrast, the men seem to view their police encounters, which were frequently involuntary, as part of their daily life and have grown accustomed to them, which may be the reason why their accounts of police contact came across as less negative (Rengifo & Pater, 2017). Also in New York City, Kwate and Threadcraft (2015) assessed how the police view Black women during SQF stops in terms of their body weight. Results indicated that narratives of Black women also fall along a physique spectrum and are more likely to be labeled as heavy, and more likely to be questioned within private spaced (Kwate & Threadcraft, 2015). The authors concluded that “the unique intersections of race and gender representations of Black women inform how they are seen by state actors” (Kwate & Threadcraft, 2015:225).

These four studies (Brunson & Miller, 2006a; Fine et al., 2003; Kwate & Threadcraft, 2015; Rengifo & Pater, 2017) find that police stops do vary by suspect gender and race. In particular an alarming proportion of young women recount instances of harassment by the police and negative experiences both during involuntary and voluntary police contacts (Brunson & Miller, 2006a; Fine et al., 2003). Overall, young women are less likely to be stopped by the
police, but that does not negate the findings that young women, particularly young women of color, are having negative encounters with the police. The nature of these stops may differ across gender, but these differences are informative for generating targeted police approaches to build community-police relations for various segments of the population.

In an effort to make visible the interactions Black women have with the police, Ritchie’s (2017) book, Invisible No More: Police Violence Against Black Women and Women of Color, reveals that studying women’s interactions with the police is not only important because it is severely understudied, but also because women and women of color in particular face different forms of police contact and police violence. These interactions are shaped by the historical narratives about what it means to perform femininity and how gendered expectations are racialized in ways that construct assumptions about criminality (Collins, 2000; Ritchie, 2017). When women of color act in ways that contradict either traditional gender roles or racialized gender narratives like the “mammy” by demonstrating strength or non-submission, state actors view them with suspicion and in need of control (Ritchie, 2017). How officers perceive women of color, like race in general, may not be intentional; however, perceptions can influence the way in which an officer behaves and the actions he or she takes (Payne, 2001; Robinson et al., 2010).

Although these studies are rich in detail and begin to illustrate how the intersection of gender and race operate across police interactions, they leave a lot of room for further exploration into how investigative police stops vary across gender and race. The existing qualitative research is limited because findings are generated from small sample sizes within specific communities. Quantitative analysis is needed to understand the full scope of investigative police stops across gender, race, and place because it can reveal patterns on a broader scale. It is also important to explore whether findings from studies about men can be
applied to similarly situated women or if variation exists. If differences indeed exist as suggested by prior research, then any resulting reform must also be gender specific to be effective. Moreover, the role that place plays is rarely incorporated into this line of inquiry. Incorporating an intersectional framework to get at place in tandem with gender and race will build our specificity of understanding.

**Research Examining the Role of Place on Policing**

A number of studies have examined the social ecology of police responses (Bass 2001), finding that residents of disadvantaged or distressed communities are significantly more likely to be arrested (Gase et al., 2016; Smith & Visher, 1981), experience police surveillance (Browning et al., 1994; Fagan & Davies, 2000; Hurst et al., 2000; Weitzer, 1999), experience officer misconduct (Kane, 2002), and view police with dissatisfaction (Anderson, 1999; Sampson & Bartusch, 1998). Kane (2002) used an ecological framework to assess whether variations in the ecological conditions in New York City neighborhoods impacted police misconduct over time (e.g., excessive force, bribery). The author assessed both traditional ecological factors as well as racial threat variables and found that structural disadvantage, population mobility, and increases in the Latina/o population, but not the Black population, were positively related to police misconduct (Kane, 2002). Interestingly, Sampson and Bartusch (1998) found that racial differences in terms of police satisfaction were no longer present when neighborhood concentrated disadvantage and violent crime rates were taken into account.

Research that assesses racial threat and policing, independent of other structural factors, suggests that police behavior is directly shaped by minority threat (Chambliss, 2001; Holmes, 2000; King & Wheelock, 2007; Liska & Yu, 1992). Smith and Holmes (2003) found evidence to support the racial threat hypothesis for citizen complaints of police brutality (see also, Camlin,
1989). Specifically, they found that the social context of Black and southwestern Hispanics were more likely to experience excessive force at the hands of police and increased the perception of threat by police officers (Smith & Holmes, 2003). Further evidence of the racial threat perspective can be seen in studies that demonstrate white residents’ fear of crime increases when the Black population increases (Quillian & Pager, 2001) and that the size of the police force and police spending increases as the Black population in an area grows (Carmichael & Kent, 2014; Stults & Baumer, 2007).

However, it is important to note that mixed support for racial threat theory has been found and measurement strategies, such as only using percent Black to capture threat, may be incomplete (Parker et al., 2005). For example, Parker and colleagues (2005) used three measures to assess racial threat on arrests and found that an increase in the size of the Black population actually resulted in a decline in Black arrests. The authors also examined concentrated disadvantage and found that higher disadvantage was positively associated with arrests as expected, but only for Blacks and not whites (Parker et al., 2005). This finding makes discerning whether racial threat is the source of variation in arrests across race challenging. Another study using arrests found that after taking into account neighborhood racial composition, the disparities between white and Black arrests (controlling for delinquency and crime rates) were no longer present. Their findings suggest that neighborhood context plays a significant role in arrest disparities across race (Gase et al., 2016) and that racial composition, rather than crime rates or poverty, may play a larger role in arrest disparities.

The majority of the studies discussed thus far in this section focus on either the role of community characteristics on arrests or police misconduct; however, there is also evidence to suggest that an ecological framework is needed to understand traffic stops and proactive policing
techniques, like investigative police stops specifically. For example, minority neighborhoods in Boston endure significantly more investigative stops and surveillance net of crime and other community-level factors (Fagan et al., 2016). In 2000 Fagan and Davies examined street stops across New York City and found that poverty, racial composition, and social disorganization were the strongest predictors of investigative stops which led to their conclusion that “policing is not about disorderly places, nor about improving the quality of life, but about policing poor people in poor places” (Fagan & Davies, 2000:457).

A number of studies have also assessed the role of individual race within place, specifically the racial composition of an area, to understand police stops (see e.g., Carroll & Gonzalez, 2014; Meehan & Ponder, 2002; Novak & Chamlin, 2012; Petrocelli et al., 2003; Renauer, 2012; Rojek et al., 2012). For example, using traffic stop data, Carroll & Gonzalez (2014) found that the odds of a Black driver being frisked in predominately white communities was four times greater than white drivers, and white drivers were more likely to be frisked in communities of color. This finding is reiterated in search data during traffic stops where search rates were found to increase in communities with a higher proportion of Black residents, but only for white drivers (Novak & Chamlin, 2012). Similarly, using Mobile Data Terminal (MDT) queries, Meehan and Ponder’s (2002:422) analysis revealed that “profiling, as measured by the proactive surveillance of African American drivers, significantly increases as African Americans travel farther from “black” communities and into whiter neighborhoods.” These findings lend support to ecological attribution bias and suggest that appearing to be “out of place” warrants police suspicion.

Anderson (1999) uses an ecological framework to explain how the street (as opposed to decent) orientation forms as a function of living in a disadvantaged community and teaches
adolescents the “code of the streets” as means of navigating urban life where violence and structural inequities are pervasive. The code promotes defending oneself to maintain personal reputations and avoid victimization (Anderson, 1999). This perspective has also been used to understand interactions with the police and ways to avoid future police interactions. Citizens prepare each other for future police encounters via intergenerational transmission (Brunson & Weitzer, 2011) where etiquette is passed on from older Black community members to help youth avoid trouble with the police (Anderson, 1990; Kennedy, 1997; Ream et al., 2010). Etiquette can be seen as a tool kit, similar to Anderson’s description of the code of the street, but specifically oriented toward how to behave when the police are around or if you are stopped by the police.

Anderson’s code of the street has also been shown to play an important and unique role in the lives of young inner-city Black women (Jones, 2008/2010). Young women in these neighborhoods are not immune to violence and this reality forces them to act in ways that contradict traditional femininity. When confronted or threatened, young Black women also have to enact the code of the street and defend themselves using violence; however, how these young women utilize violence to maintain respect is gendered (Jones, 2008/2010). Rather than using violence as a key part of their role as women (as men do to maintain their role as masculine), Black women use fighting and violence as a means to and end so that they can navigate between strength and protection back into traditionally feminine roles. Jones (2010) refers to this strategy as a “uniquely situated femininity” that moves between “good” and “ghetto.” The preoccupation that young women have with surviving in the context of their neighborhoods may place them at risk of being perceived as overly aggressive and violent by the police and impact how the police utilize investigative police stops on women in different types of neighborhoods.
Beyond etiquette (Brunson & Weitzer, 2011), experiences with violence, and how to maintain status in a context of violence (Anderson, 1999; Jones, 2010), residents of communities that experience frequent police attention also share stories of police encounters. These vicarious experiences are powerful and can shape attitudes toward the police (Soo Son et al., 1997; Weitzer and Tuch, 2006). Rosenbaum et al. (2005) demonstrated that vicarious police contacts had a stronger impact on Blacks in comparison to whites and Hispanics and that minorities were more likely to learn about police stops through family and friends, whereas media was the source of information on police stops for whites.

Given that distrust in the police is more common in disadvantaged communities of color (Barlow & Barlow, 2002; Brunson, 2007; Rengifo & Fowler, 2016; Sampson & Bartusch, 1998; Weitzer, 1999, 2000; Weitzer & Tuch, 2002) it is plausible that proactive police encounters, either direct or vicarious, play a role in shaping that distrust (Browning et al., 1994; Brunson, 2007; Feagin & Sikes, 1994; Huebner et al., 2004; Rosenbaum et al., 2005; Weitzer & Tuch, 2002). This is likely the case particularly for communities that experience a pervasive police presence.

In San Francisco Jones (2014) conducted three years of ethnographic work to understand the nature of the relationship between the police and young and adult African American men. Jones’ work demonstrates that young Black males from poor communities are getting used to police contact and surveillance because it is a routine occurrence that now structures their daily lives. She argues that targeted proactive policing designed to reduce crime may have unintended consequences. Seemingly constant police presence alters they ways in which residents navigate their lives and may shape how young Black men come to view themselves, connect with prosocial peers, and understand masculinity. Jones (2014) compares this adaptation to the way
residents of poor minority neighbors have grown accustomed to and adapted to regular violence (Anderson, 1999). Most people have few lifetime encounters with police, typically via traffic stops, and therefore the encounter takes place between people who do not likely know each other. But, for young Black males in poor communities, frequent stops and surveillance makes it so that police-citizen interactions are not taking place between strangers but rather individuals who are familiar with one another (Jones, 2014). Jones (2014:40) describes the regular contact between young Black males and the police within a context of constant suspicion by noting, “he is, even if not a suspect, always suspect.”

Criminological research has demonstrated a need to contextualize criminal behavior and criminal justice responses (Wikstrom, 2004). Extending this ecological framework to proactive police-citizen interactions is important particularly because of the evidence that investigative police stops are not uniformly distributed across space (Fagan & Davies, 2000; Fagan et al., 2016; Jones, 2014). Moreover, the use of an ecological perspective in conjunction with an intersectional framework allows for the exploration of how gender and race, individually and concurrently, operate across place.

Chapter 3: Current Study

As discussed above, prior research has demonstrated the important role that individual factors, like gender (see e.g., Chesney-Lind & Belknap; Daly, 1992; Heimer, 1995; Miller, 1999; Steffensmeier et al., 2005) and race (see e.g., Alpert et al., 2005; Browning et al., 1994; Gase et al., 2016), as well as contextual factors (see e.g., Anderson, 1999; Kane, 2002; Smith & Holmes 2003) play on different stages of the criminal justice process. Scholars have extended this line of inquiry to the earliest stage in the criminal justice process, police-citizen interactions.
(Browning et al., 1994; Fagan & Davies, 2000; Fagan et al., 2016; Gelman et al., 2007; Kane, 2002). However, this body of work has focused primarily on the role of race and place and less attention has been placed on the role of gender or the intersections of these important factors. Qualitative evidence demonstrates that gender modifies the interactions that people have with the police in meaningful ways (Brunson & Miller, 2006a; Fine et al., 2003; Rengifo & Pater, 2017).

Taken together, research and theory, indicate that people of color (Alpert et al., 2005; Browning et al., 1994; Gelman, Fagan, & Kiss, 2007; Hurst, Frank, and Browning, 2000; Weitzer, 2000) and individuals within disadvantaged and predominately Black areas are more likely to be proactively stopped by the police (Gase et al., 2016; Fagan et al., 2016). Additionally, individual race and place-based factors interact in important ways (Carroll & Gonzalez, 2014; Meehan & Ponder, 2002; Novak & Chamlin, 2012; Petrocelli et al., 2003; Renauer, 2012; Rojek et al., 2012). But research and theory have not taken the additional step toward integrating the impact of factors like race and place with gender to understand the concurrent impact of the intersections of race, place, and gender on police-citizen interactions. Taking on an intersectional approach allows for the development of more granular and specific knowledge about investigative police stops and can inform responses that are catered to different subsets of the population.

Therefore, this dissertation examines the effects of gender, race, and neighborhood factors, independently and concurrently, on investigative police stops. To accomplish this, four main research questions are assessed following the examination of the independent effects of gender, race, and neighborhood factors on investigative police stops and the likelihood of being frisked, searched, summoned, or arrested. These research questions and their associated hypotheses are presented below.
The first research question (RQ1) examines how the intersection of race and gender impact investigative police stops and outcomes during police stops. Prior research suggests that women of color face similar disproportionate treatment during arrest, sentencing, and in-custody treatment to men of color (see e.g., Chesney-Lind & Belknap, 2004; Steffensmeier et al., 2005). Moreover, race has been shown to change how others perceive gender and “appropriate” gendered behavior (Collins, 2000; Jones, 2010; Ritchie, 2017), therefore I examine whether gender and race jointly contribute to the likelihood of being stopped by the police and the likelihood that a stop results in further action (i.e., frisk, search, summons, arrest).

RQ1: Do gender and race jointly impact the likelihood of experiencing an investigative police stop and the actions that take place during a stop? (Gender x Race)

\[ H_{1a} \]: Gender and race will jointly impact the likelihood of an investigative police stops.

\[ H_{1b} \]: Gender and race will jointly impact the likelihood of being frisked, searched, summoned, or arrested during an investigative police stop.

The second research question assesses how neighborhood factors and gender impact being stopped by the police and experiencing further action by the police. Prior research indicates that disadvantaged communities face increased police surveillance (see e.g., Engel, 2003; Fagan et al., 2016). Evidence also suggests that the racial composition of a community impacts policing practices (see e.g., Parker et al., 2005). It is unclear whether this is the case for both men and women; however, intersectionality research indicates that men and women may be impacted by their neighborhoods differently (Crenshaw, 1991) and that women may need to behave differently depending on their location in order to survive and manage conflict (Jones, 2010).
RQ2: Do gender and neighborhood factors jointly impact the likelihood of experiencing an investigative police stop and the actions that take place during a stop? (Gender x Neighborhood)

H2a: Gender and neighborhood factors will jointly impact the likelihood of an investigative police stop.

H2b: Gender and neighborhood factors will jointly influence the likelihood of being frisked, searched, summoned, or arrested during an investigative police stop.

The third research question examines how race and neighborhood factors interact to impact police stops and the outcomes of police stops. Empirical literature and theory suggest that extra-legal factors like race, which is inextricably linked to place, play an important role in all stages of the criminal justice process, including policing (Mann, 1993). Moreover, studies using traffic stop data indicate that “the surveillance and stopping behavior of the police is sensitive to race and place” (Meehan & Ponder, 2002:426). With this in mind, I predict that the role race on investigative police stops will differ across neighborhood characteristics.

RQ3: Do race and neighborhood factors jointly contribute to the likelihood of experiencing an investigative police stop and whether further action takes place during a stop? (Race x Neighborhood)

H3a: Race and neighborhood factors will jointly impact the likelihood of an investigative police stop.

H3b: Race and neighborhood factors will jointly influence the likelihood that an investigative police stop results in a frisk, search, summons, or arrest.

The next stage focused on the three-way interaction between gender, race, and neighborhood to assess how the intersection of these key factors impact being stopped by the police and the outcomes that result from the stop. This is captured in the fourth research question. Prior research indicates that being a person of color (Browning et al., 1994; Crutchfield
et al., 2012) and living in a disadvantaged community (Engel 2003; Fagan & Davies, 2000) increase one’s likelihood of being stopped by the police. Additionally, there is evidence to suggest that police-citizen interactions differ for men and women in important ways (Brunson & Miller, 2006a; Fine et al., 2003; Ritchie, 2017). In terms of the intersection of gender, race, and neighborhood context, theory and evidence indicate that women of color in disadvantaged communities experience the police in unique ways that are directly informed by the narratives that accompany being at the “objectified” end of a series of binaries (men/women; white/black; poor/wealthy) (Collins, 2000; Jones, 2010; Ritchie, 2017). Although these three factors in relation to investigative police stops have not been studied simultaneously before, prior literature would suggest that the interaction of gender, race, and neighborhood shape investigative police stops.

RQ4: Do gender, race, and neighborhood factors concurrently shape the likelihood of experiencing an investigative police stop and whether the stop results in further action?

(Gender x Race x Neighborhood)

H4a: Race, gender, and neighborhood factors will concurrently impact the likelihood of experiencing an investigative police stops.

H4b: Race, gender, and neighborhood factors will concurrently influence the likelihood of being frisked, searched, summoned, or arrested during an investigative police stop.

The hypotheses presented follow both an intersectional approach as well as an ecological theoretical framework. I predict that proactive police encounters will be gendered, racialized, and place-based. Feminist, intersectional criminological theory has shown that gender, race, and place inequalities cannot be understood in isolation from one another (e.g., Jones, 2010; Lundman & Kaufman, 2003). These intersections have been shown to be meaningful in terms of shaping other criminal justice outcomes (see e.g., Chesney-Lind & Belknap, 2006; Lundman &
Kaufman, 2003; Ritchie, 2017) and have been shown separately to impact police encounters (see e.g., Brunson & Miller, 2006a; Fagan & Davies, 2000; Pope et al., 2002), it is therefore reasonable to suspect that similar disparate processes may be operating behind proactive policing tactics like investigative police stops. The following sections outline the data and analytical used to address each research question.

Chapter 4: Data, Methods, and Analytical Strategy

Two distinct data sets, one official, city-based data set (NYC SQF data) and one self-reported nationally representative data set (Add Health), are used to investigate the hypotheses presented in the previous section. Both of these datasets are necessary because the Add Health data allows for the comparison between those who are stopped by the police for investigative purposes and those who are not, while the SQF data allows for the investigation of different actions (i.e., questioning, search, frisk, summons, arrest) that take place during investigative police stops across gender, race, and neighborhoods.

Data: Add Health

The Add Health data was designed to understand how individual and environmental factors impact adolescent health. The Add Health study includes a nationally representative sample of 7th to 12th grade students in the United States (Harris, 2013). In 1994 an initial sampling frame was generated from 26,666 high schools maintained by the Quality Education Data Inc. (QED) in Denver, CO. From this list of schools, a stratified random ample of 132 middle and high schools were selected with a probability of selection proportional to school size and schools were representative on size, type, racial composition, urbanization, and region (Kalsbeek, Yang, & Agans, 2002). Within the selected schools 90,118 (79% response rate)
students took part in a questionnaire that covered topics like family, school achievement, mental health, physical health, and risky behaviors.

The following year (1995) 20,745 students who were selected from school rosters (stratified sample by grade and sex) took the first in-home survey (80% response rate). In 1996 the wave 2 in-home survey was collected from 14,738 adolescents (88.6% response rate). With few exceptions (e.g., were in 12th grade during wave 1) all wave 1 in-home survey respondents were eligible and asked to take part in subsequent waves. The wave 3 in-home survey was collected between 2001 and 2002 and captured responses from 15,170 young adults (77.5% response rate) (Chen & Chantala, 2014). Although the Add Health study has continued to follow the same adolescents even further into adulthood, wave 3 is the latest wave of data utilized in this study because it both asks the pertinent questions needed for the analysis and places the participants between the ages of 18 and 26. Not only are these peak years for criminal involvement, but they also align with the two largest age brackets seen in previously conducted studies using city-based, official data (Fagan et al., 2016).  

The sample consists of 9,907 participants who were interviewed at wave 1, wave 3, had available contextual data, and valid sampling weights. At wave 3 respondents were asked about their interactions with police as well as the age of their first police interaction where they were stopped for questioning. In order to establish proper temporal ordering pertinent control variables will be measured at wave 1. Wave 2 will not be used because the sampling pool used for wave 3 was the original wave 1 sample, rather than only those who participated in wave 2.

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6 Add Health data does not capture youth who may have already left school due to criminal involvement prior to 1994.

7 These questions were not asked at earlier waves (i.e., waves 1 and 2).
Measures: Add Health

Investigative Police Stops

The dependent variable, investigative police stops, measures whether or not (0 = No; 1 = Yes) a participant has been stopped or detained for questioning by the police. Specifically, participants at wave 3 were asked, “How many times have you been stopped or detained by the police for questioning about your activities? Don’t count minor traffic violations.” Participants who responded affirmatively were asked a follow up question: “How old were you the first time this happened?” Because the first question pertains to a participant’s entire life, rather than the prior year, only those who reported that their first time being questioned by the police occurred after the age at which wave 1 was collected will be coded as being stopped by the police. This strategy allows for the use of wave 1 variables as important covariates without temporality issues. Approximately 15.6% (N = 1,542) participants reported being stopped by the police for questioning at an age older than their age at wave 1. Of those who were stopped by police, 494 are young women and 1,048 are young men.

Gender and Race

Gender is recorded as male or female in the Add Health data. Although this does not encompass the breadth of gender identities that exist, the traditional sex dichotomy is useful for this study because it mimics how police reports code sex. Approximately 53.0% (N = 5,253) of the sample is female (1) and 46.98% (N = 5,253) is male (0). Three questions are utilized to determine respondent race/ethnicity. First participants are asked if they are of Hispanic or Latino origin. Second participants are asked “What is your race?” and can mark as many options as they want (e.g., both Asian and African American). Next, if respondents marked multiple races then they are asked which one category best describes their racial background and respond with a single “best-fitting” race. Hispanic or Latina/o is not one of the options given in the third
question; therefore, those who responded affirmatively to being Hispanic/Latina/o in the first question are coded as Hispanic. For those that are not Hispanic or Latina/o their “best fitting” racial category is used if more than one race option was chosen. Approximately 56.8% of the sample is white, 20.2% is Black, 14.2% is Hispanic, and 8.8% identify as another race.

Neighborhood

Ecological theories of crime suggest that structural characteristics of neighborhoods impact crime and perceptions of crime (Sampson & Groves, 1989; Taylor & Covington, 1993). Traditionally poverty, ethnic heterogeneity, and residential instability are used to assess the role of neighborhood context on criminal justice related outcomes. The Add Health data provides a variety of variables at the census tract level to describe respondents’ neighborhoods. It is important to note that the Add Health data does not provide place identifiers that can be linked with any outside databases. Rather, census tract information has already been connected to individuals in the Add Health data through an identifier generated by Add Health. Although this could be seen as a limitation because I cannot determine “where” participants are from, it does facilitate multi-level modeling by allowing participants from a national sample to be grouped by census tracts using Add Health’s Grouping Data. Contextual variables are collected from the wave 3 contextual data, rather than wave 1, because this time frame most closely overlaps with the outcome of interest (i.e., police stops).

Particularly relevant place characteristics for this study are concentrated disadvantage and racial composition. I calculate concentrated disadvantage from the proportion of residents below poverty, the unemployment rate, the proportion of female-headed household with children, and the proportion of residents receiving public assistance. The items are standardized and summed to create and index (all factor loadings ≥ 0.65; α = 0.81). Before standardization the average on
this index was 0.33, with a range of 0-2.12). Scholars have used a variety of strategies to tap into racial threat; some have used the proportion of the population that is Black whereas others have used a measure of change in racial composition. The Add Health data make it possible to look at the proportion of residents who are Black in a census tract, therefore this dissertation uses proportion of Black residents to tap into the influence of racial composition on investigative police stops. On average participants’ census tracts were made up of 16% Black residents.\textsuperscript{8}

\textit{Level-One Control Variables}

Several covariates are used at the individual-level: general offending history; substance use; age; family structure; neighborhood bond. Wave 1 general offending indicates whether or not (1 = Yes, 0 = No) a participant engaged in either property crime or violent crime. Violent crime captures if a participant used or threatened to use a weapon to get something from someone, has taken part in a physical fight where a group of friends was against another group, pulled a knife or gun on someone, or shot or stabbed someone. Property crime captures if a participant has stolen something worth more than $50, deliberately damaged property, entered a house or building to steal something, stolen something worth less than $50, or bought, sold, or held stolen property. Approximately 51\% of the sample ($N = 5,058$) reported engaging in one or more of the violent or property crime items. Substance use is a dichotomous variable indicating if a participant has used marijuana, any type of cocaine, crystal meth, or other type of illegal drug in the prior year. Approximately 38.3\% ($N = 3,795$) of participants reported using substances.

Age is measured in years at wave 1. On average the sample was 15.3 years old at wave 1. A dichotomous measure indicating whether or not participants lived with both biological parents

\textsuperscript{8} A measure of change in racial composition is often considered to be a better measure for testing the role of racial threat, but using a measure of change would have required the use of multiple waves of contextual data. This strategy would have then restricted the measurement strategy of police stops to only those who were first stopped after their age during wave 3.
is also incorporated into the analysis. Approximately 56.2% \((N = 5,564)\) of the sample reported living with both of their biological parents. Lastly, a participants’ bond to their neighborhood is controlled for. This measure is a summative scale based on participant’s level of agreement to six items: (1) You know most of the people in your neighborhood; (2) In the past month, you have stopped on the street to talk with someone who lives in your neighborhood; (3) People in the neighborhood look out for each other; (4) Do you usually feel safe in your neighborhood; (5) On the whole, how happy are you with living in your neighborhood? (6) If, for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be? The first four items have true/false or yes/no response options, and the last two are rated on a scale from 1-5 with 1 being “not at all” or “very unhappy and 5 being “very much” or “very happy.” All 6 items were coded so higher values represent stronger bonds to the neighborhood. Items were standardized first and then summed because of the scale variation across items. The average score on this measure was 9.34 and the scale ranged from 6 to 18 (all factor loadings ≥ 0.50; \(\alpha = 0.60\)).

Level-Two Control Variables

A series of control variables at the census tract- and county- level were also incorporated into the analysis. Specifically, population size, the proportion of the population living in an urban setting, the proportion of owner-occupied housing, and the proportion of employed females per census tract were controlled for. Additionally, violent and property crime rates at the county-level were accounted for. County crime rates are used because crime rates at the census tract-level are not provided in the Add Health data. Using crime at the county-level is a limitation of the data available. Given that crime rates can vary widely across a single county, a more granular measure may have been better for detecting the impact of crime rate on the likelihood of being
stopped by the police. It would have also been useful to control for police agency context, but Add Health participants cannot be linked to actual place identifiers and therefore cannot be merged with other datasets that may capture such characteristics. All descriptive statistics are listed in Table 1.

Table 1: Descriptive Statistics for Add Health Study Variables  (N = 9,907 Participants within 4,262 Census Tracts)

<table>
<thead>
<tr>
<th></th>
<th>% / Mean</th>
<th>n / SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police Stop</td>
<td>15.56%</td>
<td>1,542</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Individual-Level Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>53.02%</td>
<td>5,253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>56.80%</td>
<td>5,627</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>20.23%</td>
<td>2,004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>14.19%</td>
<td>1,406</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8.78%</td>
<td>870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>15.28</td>
<td>1.62</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Prior Offending</td>
<td>51.05%</td>
<td>5,058</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Use</td>
<td>38.31%</td>
<td>3,795</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Structure</td>
<td>56.16%</td>
<td>5,564</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighborhood Bond</td>
<td>9.34</td>
<td>2.47</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td><strong>CT-Level Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentrated Disadvantage</td>
<td>0.33</td>
<td>0.25</td>
<td>0.00</td>
<td>2.12</td>
</tr>
<tr>
<td>Prop. Black Residents</td>
<td>0.16</td>
<td>0.24</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Prop. Employed Females</td>
<td>0.59</td>
<td>0.09</td>
<td>0.14</td>
<td>0.98</td>
</tr>
<tr>
<td>Prop. Owner-Occupied Housing</td>
<td>0.56</td>
<td>0.25</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Population</td>
<td>5006.87</td>
<td>2372.01</td>
<td>20</td>
<td>36146</td>
</tr>
<tr>
<td>Prop. Urban Population</td>
<td>0.81</td>
<td>0.38</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Violent Crime (County-Level)*</td>
<td>182.09</td>
<td>125.60</td>
<td>0.00</td>
<td>1104.94</td>
</tr>
<tr>
<td>Property Crime (County-Level)*</td>
<td>407.78</td>
<td>224.87</td>
<td>0.00</td>
<td>1191.28</td>
</tr>
</tbody>
</table>

Abbreviations: SD = standard deviation; Min. = minimum; Max. = maximum.

Notes: Means and standard deviations are presented for interval and continuous variables. Percentages and number of respondents are presented for categorical variables. Age and Neighborhood Bond were centered. All CT-Level Variables were standardized before analysis, but the table presents unstandardized information.

* Crime statistics were not available in the data, therefore county-level crime counts per 100,000 residents were used instead.
Analytical Strategy: Add Health

This dissertation utilized multilevel logistic regression models. As noted in the measurement section, the dependent variable taken from the Add Health data is a dichotomous indicator of being stopped or detained for questioning by the police. Independent variables are situated at two different levels of analysis (i.e., individual-level, neighborhood-level). Specifically, hierarchical generalized linear models (HGLM) with a series of individual-level and cross-level interactions are used to answer the research questions. This technique is best suited for assessing the proposed research questions because it can properly assess constructs defined at different levels of analysis and reveal relationships at more than one level (Luke, 2004). Key to multilevel modeling and the current study’s research questions is that intercepts and slopes can be treated as outcomes of level-two predictors, meaning level-one parameters are modeled as a function of level-two independent variables and variability (Luke, 2004; Raudenbush & Bryk, 2002). For this dissertation, cross-level interactions are needed and therefore both intercepts and slopes need to be able to vary across level-two units.

The models below build on one another and the key notation for each model is in bold. Models are tested using HLM 7.03 (Raudenbush, Bryk, & Congdon, 2013). The bottom equation of each section is the system of equations from above it, but reorganized into a single equation (i.e., mixed-effects model). The first stage in the analysis tests an unconditional model to assess the degree to which being stopped for questioning by the police depends upon the neighborhood in which a person is nested:

\[ \text{PolStop}_{ij} = \beta_0 + r_{ij} \]

\[ \beta_0 = \gamma_{00} + \mu_0 \]

\[ \text{PolStop}_{ij} = \gamma_{00} + \mu_0 + r_{ij} \]
The unconditional model allows for the calculation of a baseline intraclass correlation coefficient (ICC) which provides the proportion of total variance that depends on level-two factors or, in this case, census tracts. Next, focal level-one predictors are introduced to assess the independent effects of gender and race on police stops:

\[
\text{PolStop}_{ij} = \beta_{0j} + \beta_{1j}\text{Gen}_{ij} + \beta_{2j}\text{Race}_{ij} + \text{INDV Covariates} + r_{ij}
\]

\[
\beta_{0j} = \gamma_{00} + \mu_{0j}
\]

\[
\beta_{1j} = \gamma_{10}
\]

\[
\beta_{2j} = \gamma_{20}
\]

\[
\text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \text{INDV Covariates} + \mu_{0j} + r_{ij}
\]

To examine the independent effect of place on police stops, level-two predictors (e.g., concentrated disadvantage) were incorporated into the model:

\[
\text{PolStop}_{ij} = \beta_{0j} + \beta_{1j}\text{Gen}_{ij} + \beta_{2j}\text{Race}_{ij} + \text{INDV Covariates} + r_{ij}
\]

\[
\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]

\[
\beta_{1j} = \gamma_{10}
\]

\[
\beta_{2j} = \gamma_{20}
\]

\[
\text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \gamma_{01}\text{Dis}_{ij} + \text{INDV Covariates} + \text{NBHD Covariates} + \mu_{0j} + r_{ij}
\]

After establishing the independent effects of gender, race, and neighborhood factors, the first research question (i.e., Do gender and race jointly impact the likelihood of experiencing an investigative police stop?) is assessed. Step 1 accomplishes this by testing the interaction between gender and race to examine whether these factors jointly influence the likelihood of being stopped by the police varies across race:

\[
\text{PolStop}_{ij} = \beta_{0j} + \beta_{1j}\text{Gen}_{ij} + \beta_{2j}\text{Race}_{ij} + \beta_{3j}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \text{INDV Covariates} + r_{ij}
\]

\[
\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]

\[
\beta_{1j} = \gamma_{10}
\]

\[
\beta_{2j} = \gamma_{20}
\]

\[
\beta_{3j} = \gamma_{30}
\]

\[
\text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \gamma_{30}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \gamma_{01}\text{Dis}_{ij} + \text{INDV Covariates} + \text{NBHD Covariates} + \mu_{0j} + r_{ij}
\]
This completes the Stage 1 of the analysis which examines the independent impact of gender, race, and place-based factors as well as the interaction between gender and race.

Stage 2 of the analysis focuses on the role of place and how place interacts with gender and race. Step 1a in the second stage of analysis introduces a random slope on gender to assess if the impact of gender varies across neighborhoods and step 1b introduces a random slope on race categories to assess if the impact of race varies across neighborhoods:

\[
 \text{PolStop}_{ij} = \beta_0j + \beta_1j\text{Gen}_{ij} + \beta_2j\text{Race}_{ij} + \beta_3j(\text{Gen}_{ij} \times \text{Race}_{ij}) + \text{INDV Covariates} + r_{ij}
\]
\[
\beta_0j = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]
\[
\beta_1j = \gamma_{10} + \mu_{1j}
\]
\[
\beta_2j = \gamma_{20}
\]
\[
\beta_3j = \gamma_{30}
\]

To address the second research question (i.e., Do gender and place jointly impact the likelihood of experiencing an investigative police stop?) step 2 incorporates a cross-level interaction between gender and place is added to examine the joint impact of gender and place-based factors:

\[
 \text{PolStop}_{ij} = \beta_0j + \beta_1j\text{Gen}_{ij} + \beta_2j\text{Race}_{ij} + \beta_3j(\text{Gen}_{ij} \times \text{Race}_{ij}) + \text{INDV Covariates} + r_{ij}
\]
\[
\beta_0j = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]
\[
\beta_1j = \gamma_{10} + \gamma_{11}\text{Dis}_{ij} + \mu_{1j}
\]
\[
\beta_2j = \gamma_{20} + \mu_{2j}
\]
\[
\beta_3j = \gamma_{30}
\]

\[
 \text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \gamma_{30}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \gamma_{01}\text{Dis}_{ij} + \gamma_{11}(\text{Gen}_{ij} \times \text{Dis}_{ij}) + \text{INDV Covariates} + \text{NBHD Covariates} + \mu_{0j} + \mu_{1j}\text{Gen}_{ij} + \mu_{2j}\text{Race}_{ij} + r_{ij}
\]
The third research question (RQ#3) examines how race and neighborhood factors interact to produce investigative police stops. Step 3 adds a cross-level interaction between race and neighborhood factors:

\[
\text{PolStop}_{ij} = \beta_0 + \beta_{1j}\text{Gen}_{ij} + \beta_{2j}\text{Race}_{ij} + \beta_{3j}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \text{INDV Covariates} + r_{ij}
\]

\[
\beta_0 = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]

\[
\beta_{1j} = \gamma_{10} + \gamma_{11}\text{Dis}_{ij} + \mu_{1j}
\]

\[
\beta_{2j} = \gamma_{20} + \gamma_{21}\text{Dis}_{ij} + \mu_{2j}
\]

\[
\beta_{3j} = \gamma_{30} + \gamma_{31}\text{Dis}_{ij}
\]

\[
\text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \gamma_{30}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \gamma_{01}\text{Dis}_{ij} + \gamma_{21}(\text{Race}_{ij} \times \text{Dis}_{ij}) + \gamma_{31}(\text{Gen}_{ij} \times \text{Race}_{ij} \times \text{Dis}_{ij}) + \text{INDV Covariates} + \text{NBHD Covariates} + \mu_{0j} + r_{ij}
\]

Lastly, the fourth research question (RQ#4) examines whether the race, gender, and place-based factors concurrently influence the production of investigative police stops. Step 4 incorporates a three-way interaction, and all two-way interactions, to assess the interaction between race, gender, and neighborhood factors:

\[
\text{PolStop}_{ij} = \beta_0 + \beta_{1j}\text{Gen}_{ij} + \beta_{2j}\text{Race}_{ij} + \beta_{3j}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \text{INDV Covariates} + r_{ij}
\]

\[
\beta_0 = \gamma_{00} + \gamma_{01}\text{Dis}_{ij} + \text{NBHD Covariates} + \mu_{0j}
\]

\[
\beta_{1j} = \gamma_{10} + \gamma_{11}\text{Dis}_{ij} + \mu_{1j}
\]

\[
\beta_{2j} = \gamma_{20} + \gamma_{21}\text{Dis}_{ij} + \mu_{2j}
\]

\[
\beta_{3j} = \gamma_{30} + \gamma_{31}\text{Dis}_{ij}
\]

\[
\text{PolStop}_{ij} = \gamma_{00} + \gamma_{10}\text{Gen}_{ij} + \gamma_{20}\text{Race}_{ij} + \gamma_{30}(\text{Gen}_{ij} \times \text{Race}_{ij}) + \gamma_{01}\text{Dis}_{ij} + \gamma_{21}(\text{Race}_{ij} \times \text{Dis}_{ij}) + \gamma_{31}(\text{Gen}_{ij} \times \text{Race}_{ij} \times \text{Dis}_{ij}) + \text{INDV Covariates} + \text{NBHD Covariates} + \mu_{0j} + \mu_{1j}\text{Gen}_{ij} + \mu_{2j}\text{Race}_{ij} + r_{ij}
\]

**Data: SQF**

The second source of data for the analysis is the New York City Police Department’s Stop, Question, and Frisk data (SQFs). SQF data was gathered from open sources on the NYPD website for the years 2012 through 2017. The SQF data includes geographic information for where the street stop took place, what action was taken during a stop (i.e., frisk, search,

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9 This data includes all recorded street stops only, it does not include traffic stops.
summons, arrest), and demographic information about the suspect, such as their gender, race, and age. Nearly 98% of the incidents from 2012-2017 could be geocoded using ArcGIS, resulting in 776,132 street stops that were geocoded within 2,091 census tracts and utilized for analysis.

The SQF data was then merged with data from the American Community Survey to examine the role of neighborhood-based characteristics. Additionally, open source raw crime incident data for New York City was gathered for 2012 and 2017. These incidents included geographic information to allow for geocoding and aggregation to the census tract level. Approximately 96% of the 2012 incidents and 98% of the 2017 crime incidents could be geocoded, resulting 484,607 incidents for 2012 and 458,753 incidents for 2017. Annual rates as well as violent and property crime rates were generated from this data at the census tract level and utilized as control variables and within sensitivity analyses.

Measures: SQF Data

Dependent Variables: Outcome of SQF

The SQF data contains a list of all the recorded street stops (aka Terry stops) that occurred between 2012 and 2017 in New York City. The SQF data also reveals what happened during the investigative stop in terms of whether the suspect was stopped and questioned, frisked, searched, summoned, or arrested. This is a critical difference between the SQF data and the Add Health data which indicates who was stopped for questioning, but does not include any further action. Additionally, the SQF data is from official police reports rather than self-reported via survey. Two measurement strategies for the dependent variable are utilized in this study. The first would is a dichotomous outcome that represents whether someone was frisked, searched, summoned, or arrested during the street stop or just stopped (1 = frisked, searched, summoned, or arrested; 0 = stopped without further action). The SQF data can record more than one action type for an encounter, meaning someone could have an F (frisked) and an A (arrested). In these
cases, the most invasive action will be used to code for the action taken by the police during the street stop (stopped being the least invasive, arrested as the most invasive). This dichotomous measurement strategy is useful because it helps reveal which of the people stopped by police end up experiencing a more invasive action at the hands of the police. Approximately 39% \((N = 306,807)\) of SQF reports end with a stop and 61% \((N = 479,530)\) of SQF reports result in further action such as a frisk, search, summons, or arrest.

The second measurement strategy for the outcome is categorical and indicates the action that took place during the police stop: stop, frisk, search, summons, or arrest. In this case stop is the baseline category \((0)\), frisk = 1, search = 2, summons issued = 3, arrest made = 4. Again, the most invasive action will be used to code for the action taken by the police during the stop (stop being the least invasive, arrest as the most invasive). As is the case with the dichotomous measurement strategy, 39.02% of SQF reports are for stops only. Approximately 44.17% \((N = 347,345)\) of stops ended in a frisks, 4.43% \((N = 34,858)\) ended in a search, 4.41% \((N = 34,679)\) ended with a summons being issued, and 7.97% \((N = 62,648)\) resulted in an arrest.

Both of these measurement strategies offer an interesting extension to the Add Health analysis. The Add Health analyses helps to assess how gender, race, and neighborhood factors impact the likelihood of being stopped for questioning by the police and the SQF analyses examine how gender, race, and place impact the likelihood of experiencing further action during the police stop, as well as which action took place.

**Gender and Race**

The key level-one variables are, again, gender and race. It is important to note that the SQF information is based on officer perception rather than suspect self-report. Although officer perceptions may not always be accurate, this information is still useful particularly because
officers are the ones making stops and therefore their perceptions of gender and race are likely more important than self-report based information. Again, the traditional sex dichotomy will be used to assess gender, meaning those labeled female are treated as women (1) and those labeled males are treated as men (0). Approximately 8.23% \( (N = 64,701) \) of these cases involve females and 91.77% \( (N = 721,636) \) involve males.

Race is also documented in SQF reports by the police officer. In the total sample approximately 9.95% \( (N = 78,255) \) of stopped individuals are white, 54.10% \( (425,384) \) are Black, 30.34% \( (238,574) \) are Hispanic, and 1.73% \( (13,640) \) are another race. Unfortunately, ethnicity and race cannot be combined in a meaningful way because reports for a Hispanic suspect did not include any racial information. Of the females in the sample, 12.09% \( (N = 7,825) \) are white, 48.07% \( (31,105) \) are Black, 26.80% \( (17,339) \) are Hispanic, and 9.80% are another race (Asian/Pacific Islander, Middle Eastern, American Indian). Of the male in the SQF reports, approximately 9.76% \( (N = 70,430) \) are white, 54.64% \( (394,279) \) are Black, 30.66% \( (221,235) \) are Hispanic, and 1.01% are “other.” These racial categories mimic those described in the Add Health measures section above.

**Neighborhood**

Concentrated disadvantage and racial threat are the two focal neighborhood-level variables used in this study. Both are measured at the census tract level. Concentrated disadvantage is calculated using percent below poverty, percent unemployed, percent female-headed households, and the percent of the population receiving food stamps. Each item was first standardized and summed to generate an index (all loadings ≥ 0.63; \( \alpha = 0.87 \)). Descriptive statistics displayed in Table 2 are based on unstandardized indices. Percent black was used to assess the role of neighborhood racial composition on police stops. Before standardizing, the
average census tract in the sample was approximately 25.66% Black. Percent Black was not incorporated into the measure of concentrated disadvantage for a number of reasons. First, it was important theoretically to separate percent black based on racial threat theory and the ecological attribution bias perspective. Second, factor analysis of all concentrated disadvantage items with percent black included indicated that percent black should be separate (loading for percent black ≤ 0.45; all others ≥ 0.60).

**Table 2:** Descriptive Statistics for SQF Study Variables  (N = 776,132 Street Stops within 2,091 Census Tracts)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>% / Mean</th>
<th>n / SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Further Action Beyond Stop</td>
<td>60.98%</td>
<td>479,530</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stopped (with no other action)</td>
<td>39.02%</td>
<td>306,807</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frisked</td>
<td>44.17%</td>
<td>347,345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Searched</td>
<td>4.43%</td>
<td>34,858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summoned</td>
<td>4.41%</td>
<td>34,679</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrested</td>
<td>7.97%</td>
<td>62,648</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Individual-Level Independent Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>% / Mean</th>
<th>n / SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>8.23%</td>
<td>64,701</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>9.95%</td>
<td>78,255</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>54.10%</td>
<td>425,384</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>30.34%</td>
<td>238,574</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.73%</td>
<td>13,640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>28.16%</td>
<td>11.65</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>“Suspicious Behavior”</td>
<td>3.99%</td>
<td>31,368</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CT-Level Independent Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>% / Mean</th>
<th>n / SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrated Disadvantage</td>
<td>57.21%</td>
<td>36.06</td>
<td>0.00</td>
<td>222.55</td>
</tr>
<tr>
<td>Percent Black Residents</td>
<td>25.66%</td>
<td>30.19</td>
<td>0.00</td>
<td>98.70</td>
</tr>
<tr>
<td>Percent Employed Females</td>
<td>71.20%</td>
<td>9.68</td>
<td>16.60</td>
<td>99.00</td>
</tr>
<tr>
<td>Percent Owner-Occupied Housing</td>
<td>36.60%</td>
<td>25.04</td>
<td>0.00</td>
<td>98.20</td>
</tr>
<tr>
<td>Population</td>
<td>4024.19%</td>
<td>2171.72</td>
<td>47.00</td>
<td>29256.00</td>
</tr>
<tr>
<td>Crime Rate</td>
<td>6213.56%</td>
<td>6908.25</td>
<td>218.23</td>
<td>128813.56</td>
</tr>
<tr>
<td>Violent Crime Rate</td>
<td>493.57%</td>
<td>508.89</td>
<td>0.00</td>
<td>10169.49</td>
</tr>
<tr>
<td>Property Crime Rate</td>
<td>938.01%</td>
<td>224.87</td>
<td>0.00</td>
<td>1191.28</td>
</tr>
</tbody>
</table>

**Abbreviations:** SD = standard deviation; Min. = minimum; Max. = maximum.

**Notes:** Means and standard deviations are presented for interval and continuous variables. Percentages and number of respondents are presented for categorical variables. All CT-Level Variables were standardized before analysis, but the table presents unstandardized information. * Crime Rates are measured per 100,000 residents.
Covariates

A number of control variables were incorporated at both the individual and census tract-level. The SQF data is a bit more limited in terms of individual-level covariates in comparison to the Add Health data; however, it does include a variable indicating the age of the suspect and whether or not the officers recorded that the suspect engaged in suspicious behavior, such as appearing to be part of a drug transaction or appearing to carry a weapon. At the census tract-level the analysis controls for the 2012 overall crime rate, the percent of owner-occupied housing, the percent of employed females, and the population size. Sensitivity analyses also include the 2017 overall crime rate, 2012 and 2017 violent crime and property crime rates. All descriptive statistics are displayed in Table 2.

Analytical Strategy: SQF Data

As noted above, there are two measurement strategies for the outcome variable, therefore there are two analytical strategies based on these measurement strategies for the SQF data, both of which use forms of multilevel modeling. The first set of multilevel models use binary logistic regression (HGLM) and the second set uses multinomial logistic regression (HLM) with stop only as the reference category. Both of these strategies follow the same equation structure as outlined in the Add Health analytical strategy. To reduce redundancy the equations are not repeated here, but some slight differences are worth noting. Rather than predicting police stops, this part of the study is focused on predicting how gender, race, and neighborhood factors impact if a stop results in any further action or not (binary option) or predicting if the incident results in a stop, frisk, search, summons, or arrest (categorical option). Again, stage 1 consists of testing the independent effects of gender, race, and place on being stopped vs. experiencing any further action (or on all four possible actions) and testing the first research question by examining the interactions between race and gender. This is followed by stage 2 where the cross-level
interactions between place and gender (RQ #2) and between place and race (RQ#3) are tested. Next, the fourth research question is assessed using three-way interactions to determine how the interaction between race and place varies across gender.

Before discussing the results below, it is important to situate the analytical strategy within the context of prior research using the NYPD’s SQF data. A number of studies have utilized external benchmarking strategies to detect the existence of racial disparities within SQFs (see e.g. Fagan, 2010; Gelman, Fagan, & Kiss, 2007; Parker, Lane, & Alpert, 2010). External benchmarks are typically generated from census tract-level racial composition and evidence using this technique (as discussed in the literature review) has demonstrated that SQFs are significantly more likely to occur in areas with a higher proportion of Black and Hispanic residents net of crime and socioeconomic factors. Although this technique is arguably more sophisticated and accurate for assessing racial disparities than simply comparing the percent of the population that is Black to the percent of people stopped who are Black, there are still concerns about what benchmarks should be utilized and how well they reflect the actual population that is at-risk for investigative police stops (Ridgeway & MacDonald, 2010). Other studies have used internal benchmarking strategies via propensity score matching that compare the outcomes of SQFs by officer that are similar in nature and suspect characteristics (see e.g. Ridgeway, 2007; Schell, Ridgeway, Dixon, Turner, & Riley 2007; Walker, 2003). This technique compares the outcome of a stop to similar stops made by other officers. The main challenge with this strategy is it cannot detect disparities if officers behave similarly. Lastly, hit rates have also been used to assess disparities in SQFs by suggesting that lower hit rates among people of color, or a lower rate of stops resulting in contraband, is indicative of racial bias (see e.g. Knowles et al., 2001; Persico & Coviello; Persico & Todd, 2006). If hit rates are lower for people of color
then it may indicate that officers use a lower threshold to determine suspicion for people of color than they do white suspects. Some scholars (Ridgeway & MacDonald, 2010) and recent studies (MacDonald & Braga, 2018) have recognized the challenges associated with each method and have opted to utilize both internal and external benchmarking methodologies.

The current study does not apply these methodological techniques for a few reasons. First, the research questions proposed using the SQF data are not about the likelihood of being stopped. Instead, this study aims to understand how gender, race, and place simultaneously impact the likelihood that a stop will result in further action. Therefore the use of external benchmarking is not suitable. The questions assessed using the Add Health are indeed about the likelihood of a stop. But, unlike other studies that require benchmarking because they do not have access to information about those who are not stopped, the Add Health data does include individuals who are not stopped by the police. Second, the intersectional nature of the research questions proposed in this dissertation are designed to explore how multiple factors of identity (i.e., gender, race, and place) shape the actions that occur during investigative police stops. The use of internal benchmarks comparing individual officer actions to other officers that operate in a similar environment would not capture the multidimensional nature of the research questions. Lastly, the overall objective of this study is to understand how a particular proactive policing tactic operates for a previously neglected population. More specifically, the aim is to assess the likelihood of being frisked, searched, summonsed, or arrested during an investigative police stop for women, particularly women of color from different types of neighborhoods. Multi-level modeling is able to accomplish these goals because of its capability of assessing cross-level interactions and three-way interactions.
Chapter 5: Results

The results are presented in three main parts. The first part includes results from the Add Health data. More specifically, part one outlines the independent and interactive effects of gender, race, and place on being stopped by the police using the Add Health data. Independent and interactive impacts of gender, race, and place on experiencing any further action during a police stop (dichotomous outcome) using the SQF data are included in part two of the results. Part three also includes results from the SQF data but presents findings from multinomial models to reveal how gender, race, and place impact the actions that occur during an investigative police stop. All models are estimated using full maximum likelihood via EM-Laplace 2 in HLM 7.03, with either a Bernoulli distribution (for dichotomous outcomes) or multinomial distribution (for categorical outcomes). Continuous variables at the census tract-level were standardized (concentrated disadvantage, percent black, etc.) and continuous variables at the individual or incident-level (age) were grand-mean-centered for ease of interpretation.

Results from the Add Health Data

Null Model

Before examining the first research question (i.e., Do gender and race jointly impact the likelihood of experiencing an investigative police stop and the actions that take place during a stop?), the unconditional model was assessed. Model 1 in Table 3 displays results for hierarchical logistic regression models predicting the probability of being stopped by the police using the Add Health sample without any covariates (unconditional two-level model with deviance = 26,763.93; par = 2). This intercept only model provides variance component estimates and indicates that the likelihood of being stopped by the police does not significantly vary across census tracts in the Add Health Sample ($\hat{\sigma}_b^2 = 0.11$, ICC = 0.03; $p > 0.05$). Although
this may indicate that multilevel modeling is not necessary, it is important to account for the
nested or hierarchical structure of the data (i.e., adolescents within census tracts). Not doing so
runs the risk of overestimating effects and biasing standard errors for individual-level factors.\(^{10}\)
Moreover, this study is particularly interested in the role of place-based factors and recognizes
the importance of examining the interrelated nature of individuals within neighborhoods.

**Table 3**: Hierarchical Logistic Regression Models Estimating the Impact of Individual and Census
Tract Characteristics on the Probability of Experiencing a Street Stop (Add Health)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.18 (-1.73)***</td>
<td>0.21 (-1.57)***</td>
<td>0.21 (-1.56)***</td>
<td>0.20 (-1.61)***</td>
</tr>
<tr>
<td>Individual-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.35 (-1.04)***</td>
<td>0.35 (-1.06)***</td>
<td>0.39 (-0.95)***</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.81 (-0.22)**</td>
<td>0.81 (-0.20)</td>
<td>0.98 (-0.02)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.90 (-0.11)</td>
<td>0.84 (-0.18)</td>
<td>0.88 (-0.13)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.82 (-0.19)</td>
<td>0.78 (-0.25)*</td>
<td>0.80 (-0.23)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.77 (-0.26)***</td>
<td>0.77 (-0.27)***</td>
<td>0.77 (-0.27)***</td>
<td></td>
</tr>
<tr>
<td>Prior Offending</td>
<td>1.42 (0.35)***</td>
<td>1.41 (0.34)***</td>
<td>1.42 (0.35)***</td>
<td></td>
</tr>
<tr>
<td>Substance Use</td>
<td>1.52 (0.42)***</td>
<td>1.54 (0.43)***</td>
<td>1.53 (0.43)***</td>
<td></td>
</tr>
<tr>
<td>Family Structure</td>
<td>0.98 (-0.02)</td>
<td>0.99 (-0.01)</td>
<td>0.99 (-0.01)</td>
<td></td>
</tr>
<tr>
<td>Neighborhood Bond</td>
<td>0.99 (-0.01)</td>
<td>0.99 (-0.01)</td>
<td>0.99 (-0.01)</td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td>0.59 (-0.53)**</td>
</tr>
<tr>
<td>Fem x Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.11 (0.10)*</td>
<td>1.11 (0.10)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.94 (-0.06)</td>
<td>0.94 (-0.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed Fem</td>
<td>1.08 (0.07)</td>
<td>1.07 (0.07)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>1.03 (0.03)</td>
<td>1.03 (0.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violent Crime (C)</td>
<td>1.05 (0.05)</td>
<td>1.05 (0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property Crime (C)</td>
<td>0.97 (-0.03)</td>
<td>0.97 (-0.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.99 (-0.01)</td>
<td>0.99 (-0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Population</td>
<td>1.09 (0.09)**</td>
<td>1.09 (0.09)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int. Var (ICC)</td>
<td>0.11 (0.03)</td>
<td>0.10 (0.03)</td>
<td>0.07 (0.02)</td>
<td>0.07 (0.02)</td>
</tr>
</tbody>
</table>

\(^{10}\) It is important to recognize that continuing with a multi-level model when the level two variance is not significant
may be unnecessarily complicated and perhaps, a more parsimonious model should be used. However, the decision
to continue to use a multilevel model should be based on the nature of the data and if clustering effects are possible,
then they need to be accounted for appropriately (Huang, 2018).
**Direct Effects of Gender, Race, and Place**

Model 2 in Table 3 incorporates individual-level variables and indicates that young women are less likely to be stopped by the police for questioning than young men. More specifically, being female decreases the odds of being stopped by the police by 65% (OR = 0.35***; [0.35 – 1) × 100%]). This relationship is maintained in Model 3 of Table 3 after census tract-level covariates are included. Significant results from model comparison tests ($\chi^2 = 605.51$, $df = 9$, $p < 0.001$) between Model 1 and Model 2 demonstrates improved model fit (deviance = 26,159.42; parameters = 11). Results from Model 3 are also visually presented in Figure 1.

**Figure 1**

A significant race effect was detected in Model 2 of Table 3 (OR = 0.81**), indicating that Black participants in the nationally representative sample were 19% [0.81 – 1) × 100%] less likely to be stopped by the police in comparison to white participants. However, with the inclusion of census tract-level covariates in Model 3 of Table 3, no significant race effects were maintained. This suggests that the likelihood of being stopped by the police does not differ for adolescents of different racial/ethnic backgrounds when place-based factors are taken into account. When interpreting this finding it is important to consider that nearly 57% of the sample
in the Add Health data is white, only 20% self-identified as Black, and the average participant was approximately 15 years of age at wave 1. With that said, it appears as though race has little to no effect on the likelihood of being stopped by the police for investigative purposes on a national scale. Although contrary to much of the research discussed in the literature review section of this study, a recent national assessment conducted by the Bureau of Justice Statistics found that Black and white individuals over the age of 16 were equally as likely to have been stopped by the police. Additionally only a marginally significant difference between Black and white individuals was found for street stops specifically (Davis, Whyde, Langton, 2018).

Variance components from Models 1 – 4 in Table 3 all indicated that the likelihood of being stopped by the police does not significantly vary across place (i.e., census tracts). Although no significant level-2 variation was detected in the Add Health data, specific place-based factors were examined. Nearly all of the census tract characteristics or county characteristics tested had non-significant effects on police stops, however, concentrated disadvantage was found to significantly increase the likelihood of being stopped by the police (OR = 1.11*, p = 0.044). Specifically, a one standard deviation increase in concentrated disadvantage increases the odds of being stopped by the police by 11%. The lack of significant findings for other census tract-level variables may perhaps suggest that the influence of place-based characteristics are only detected within a smaller overall geographic area (e.g., differences within a single state, differences within a single city) and may operate differently across the U.S.

The significant impact of other individual-level variables is also worth noting. For example, prior general offending (OR = 1.41***), prior substance use (OR = 1.54***), and age (OR = 0.77***) have significant effects on being stopped by the police.\footnote{Model 3 in Table 3 was also examined without prior offending and substance use in the model. The impact of race remained non-significant at the 0.05 level, but was marginally significant at 0.10 level.} Engaging in offending
behavior and using substances increased the odds of being stopped by the police by 41% and 54%, respectively. Additionally, as age increases, the odds of being stopped by the police decrease by 23%.

**Interaction between Gender and Race**

Next, the interaction between race and gender is incorporated into Model 4 of Table 3. This allows for the assessment of hypothesis 1a, that predicts gender and race will jointly impact the likelihood of being stopped by the police. Interactions between each race/ethnic group and gender were included in the model, but only the interaction between gender and Black is included (it was also the only significant interaction). The results indicate that the disparity between young men and young women is larger for Black individuals than it is for white individuals. Similarly, this interaction also suggests that the differences between Blacks and whites, in terms of the likelihood of being stopped by the police, is larger for young men than it is for young women.

More specifically, Black women are significantly less likely to be stopped by police in comparison to the reference category, which is white men (OR = 0.59**). Simple slopes were calculated based on Model 4 in Table 3 and rotating the reference category to generate the likelihood of being stopped by the police for each of the four gender/race categories. These values are presented in Figure 2. This figure shows that the likelihood of being stopped by the police is similar for young Black and white men, but that young white women were more likely to report being stopped by the police when compared to Black women. Interestingly the gap between Black and white women is much larger than the gap between Black and white men. The reference group was rotated in order to assess whether the differences between these groups are significant. Results (not displayed) indicate a significant difference between white women and
Black women. When compared to Black men, both Black and white women are significantly less likely to be stopped; however, the difference between Black and white men is not significant. The inclusion of gender x race interactions improved overall model fit slightly (model comparison test between model 4 and model 3 = $\chi^2 = 10.33$, $df = 3$, $p < 0.001$).

**Figure 2**

![Impact of Race x Gender on Police Stops](image)

**Interaction between Gender and Place**

After examining the interaction between the two main individual-level factors (gender and race), cross-level interactions were assessed. First I assessed the interaction between concentrated disadvantage and gender to test hypothesis 2a which predicted that gender and neighborhood factors would jointly impact the likelihood of an investigative police stop. The interaction between gender and concentrated disadvantage was not significant (OR = 0.91, $p = 0.16$; results not displayed in tables). Although, tract-level proportion Black was not significant in Models 3 and 4 of Table 3, an interaction between gender and tract-level proportion Black was tested and found to be significant (OR = 0.79, $p < 0.001$; results not displayed in tables). A figure was created to assist with the interpretation of the interaction findings. Low proportion
Black represents one standard deviation below the average and high proportion Black represents one standard deviation above the average. As indicated by Figure 3, young men are more likely than women to be stopped by the police in all areas, but the difference between them decreases as the proportion of Black residents in a tract increases. This might suggest that men and women are treated more alike in areas with more Black residents, perhaps due to a guilty by association (guilty by place) perception. It might also indicate that women perform gender differently across different areas and adopt more masculine traits in areas where a large proportion of residents are Black (Jones, 2010).

**Figure 3**

![Impact of the C-L Int. Gender x Prop Black on Police Stop](image)

**Interaction between Race and Place**

To examine hypothesis 3a, cross-level interactions between individual-level race and place-based characteristics were incorporated. Similar to the findings above, the interaction between concentrated disadvantage and Black was not significant (OR = 0.92, $p = 0.27$; results not displayed in tables). The interaction between tract-level proportion Black and individual-
level Black was also not significant (OR = 0.01, \( p = 0.94 \); results not displayed in tables).\(^{12}\) The lack of significant findings in relation to place-based factors may be a function of the data being generated from a national sample.

Hypothesis 4a, which proposed that gender, race, and neighborhood factors would concurrently influence the likelihood of being stopped by the police, was not examined. The three-way interactions between these key factors were not incorporated because neither of the cross-level interactions between race or gender and concentrated disadvantage were significant. Additionally, the interaction between race and tract-level proportion Black was not significant. The lack of significant findings between race or gender and place-based characteristics runs contrary to research on intersectionality. However, as mentioned above, no significant level-2 variation was detected using this data which may be a result of the small average number of participants per census tract and the national coverage of the data.

**Dichotomous Results from SQF Data**

**Null Model**

Model 1 in Table 4 displays results for hierarchical logistic regression models predicting the probability of experiencing any further action (i.e., frisk, search, summons, or arrest) without any covariates. This intercept only model provides variance component estimates and indicates that the likelihood of experiencing any further action during a police stop varies significantly across census tracts (\( \hat{\sigma}_b^2 = 0.30, \ p < 0.001 \)). This suggests that approximately 8.4% of the variation in the dependent variables is attributed to place and indicates that multilevel modeling is the appropriate analytical strategy.\(^{13}\)

\(^{12}\) The interaction between concentrated disadvantage and other racial/ethnic groups, as well as proportion Black and other racial/ethnic groups, were also not significant.

\(^{13}\) Model is assumed to have a logistic distribution with a mean equal to 0 and a variance equal to \( \pi^2/3 \), therefore ICC is defined as the ratio of between-cluster variance to total variance, \( \rho = (\hat{\sigma}_b^2 / (\hat{\sigma}_b^2 + (\pi^2 / 3))) \)
*Direct Effects of Gender, Race, and Place*

This section examines the independent effects of gender, race, and place-based factors on the likelihood of experiencing further action during an investigative police stop. Model 2 in Table 4 demonstrates that compared to men, women are less likely to experience more invasive action during an investigative stop (OR = 0.41***). The odds of being frisked, searched, summoned, or arrested during a police stop are 59% \((0.41 – 1) \times 100\%\) lower for women than they are for men in New York City. This finding holds when census tract-level covariates are included in the model (see Model 3 in Table 4). Figure 4 displays this finding and clearly shows that men who are stopped by the police are much more likely to experience further action than women who are stopped. This may suggest that police enact a higher threshold to determine suspicion for men than they do women given that investigative stops between police and women tend to end with just the stop (and likely questioning), whereas men are more likely to experience further action. This interpretation rests on the assumption that further action takes place only when police have evidence to warrant doing so. It is important to note that frisks are often conducted as precaution for officer safety regardless of objective indicators of criminal behavior.
Findings pertaining to race demonstrate that Black individuals who are stopped by the police in New York City are more likely to experience further action during their encounter when compared to white suspects (OR = 1.38***). More specifically, being a Black suspect as opposed to a white suspect increases the odds of being searched, frisked, summoned, or arrested by 38% \((1.38 - 1) \times 100\%\). This finding holds when census tract-level covariates are introduced in Model 3 of Table 4. Figure 5 presents the results from Model 3 (Table 4) and depicts the increased probability of experiencing further action during a police stop for Black suspects in comparison to white suspects.

As indicated in the previous section, significant level-2 variation was found which suggest that over 8% of the variation in experiencing further action during a police stop is attributed to census tracts. To understand the role of specific place-based factors, I incorporated census-tract characteristics in Model 3 of Table 4. Concentrated disadvantage significantly and positively increases the odds of experiencing more invasive action during an investigative stop (OR = 1.17***). A one standard deviation increase in concentrated disadvantage is associated with a 17% increase in the odds of being searched, frisked, summoned, or arrested. This aligns
with prior research on arrests, street stops, and overall increased surveillance (see e.g., Browning et al., 1994; Fagan & Davies, 2000; Gase et al., 2016).

**Figure 5**

![Impact of Race on Any Further Action](image)

**Table 4:** Hierarchical Logistic Regression Models Estimating the Impact of Individual and Census Tract-Level Characteristics and Individual-Level Interactions on the Probability of Frisk, Search, Summons or Arrest (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.57 (0.45)***</td>
<td>1.30 (0.26)***</td>
<td>1.30 (0.26)***</td>
<td>1.30 (0.26)***</td>
</tr>
<tr>
<td>Individual-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.41 (-0.88)***</td>
<td>0.41 (-0.88)***</td>
<td>0.41 (-0.88)***</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>1.38 (0.32)***</td>
<td>1.36 (0.31)***</td>
<td>1.38 (0.32)***</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.21 (0.19)***</td>
<td>1.20 (0.18)***</td>
<td>1.21 (0.19)***</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.11 (0.10)***</td>
<td>1.10 (0.10)***</td>
<td>0.99 (-0.01)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.98 (-0.02)***</td>
<td>0.98 (-0.02)***</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>1.15 (0.14)***</td>
<td>1.15 (0.14)***</td>
<td>1.15 (0.14)***</td>
<td></td>
</tr>
<tr>
<td>“ Suspicious Beh”</td>
<td>5.45 (1.70)***</td>
<td>5.45 (1.70)***</td>
<td>5.44 (1.69)***</td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x Black</td>
<td></td>
<td></td>
<td></td>
<td>0.90 (-0.11)***</td>
</tr>
<tr>
<td>CT-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.17 (0.16)***</td>
<td>1.17 (0.16)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prop. Black</td>
<td>1.05 (0.05)***</td>
<td>1.04 (0.04)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>0.95 (-0.05)***</td>
<td>0.96 (-0.05)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime (12)</td>
<td>0.94 (-0.06)***</td>
<td>0.94 (-0.06)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int. Var (ICC)</td>
<td>0.30*** (8.4%)</td>
<td>0.27*** (7.5%)</td>
<td>0.22*** (6.3%)</td>
<td>0.22*** (6.3%)</td>
</tr>
</tbody>
</table>
The impact of racial composition on the likelihood of experience any further action is similar to that of concentrated disadvantage. More specifically, the proportion of Black residents in a census tract significantly and positively increases the odds of any further action during a stop (OR = 1.04**), such that a one standard deviation increase in proportion of Black residents in a census tract increases the odds of more invasive action by 4%. This lends support to racial threat theory and suggests that the actions police officers take may differ across communities of different racial compositions.

Findings related to other census tract-level variables, particularly crime rate, are also worth highlighting. Crime rate is significantly and inversely related to further action during a police stop (OR = 0.94***). Appendix A displays a series of sensitivity checks using similar models, but with crime measured in 2017 and with violent and property crime separated. Violent crime is a measurement of murder or non-negligent manslaughter, forcible rape, robbery, and felony assault. Non-violent crime includes burglary, larceny theft, motor vehicle theft, and arson. Bernoulli models assessing the likelihood of experiencing any further action in Appendix A using crime measured in 2017 (OR = 0.95*** ) mimic results for 2012; however, separating violent and non-violent crime at either 2012 or 2017 revealed that the significant inverse relationship was found for only non-violent crime (2012: OR =0.93***; 2017: OR = 0.95***). The impact of violent crime was positive, but not significant.

**Interaction between Gender and Race**

Hypothesis 1b which posited that gender and race would jointly impact the likelihood of experiencing further action during a police stop is assessed next. Model 4 in Table 4 incorporates the individual-level interaction between race and gender. Note that only the interaction between Black x gender is displayed (OR = 0.90***), but each race x gender interaction was included in
the model. The results indicate that Black women are significantly less likely to experience further action (i.e., frisk, search, summons, or arrest) when stopped by police in comparison to the reference category, which is white men. Figure 6 clarifies these results by graphing the probability of experiencing further action during a police stop for each race x gender grouping. Black men are more likely to experience further action during an investigative stop than all other displayed groups. Contrary to the findings using the Add Health data, the SQF data reveals that Black women are significantly more likely to experience more invasive action than white women, but significantly less likely when compared to Black and white men. One potential explanation for the differences in findings across the two datasets is the racial composition of New York City in comparison to the United States overall. The reference categories were rotated to confirm that a significant difference between Black and white women was present. The inclusion of these interactions improved overall model fit (model comparison test between model 4 and model 3: $\chi^2 = 470.95, df = 1, p < 0.001$).

Figure 6
Interaction between Gender and Place

Beyond understanding the direct impact of place-based factors, this dissertation aims to understand how place interacts with individual-level factors like gender. Model 5 in Table 5 incorporates cross-level interactions between gender and concentrated disadvantage as well as gender and proportion Black to assess the second research question and hypothesis 2b\textsuperscript{14}: Do gender and neighborhood factors jointly impact the likelihood of experiencing further action during a police stop? The interaction between gender and census tract proportion Black is significant (OR = 0.92***). Interpreting cross-level interactions is more straightforward with the use of a figure that graphs the predicted probabilities at different levels of the place-based factor. Low proportion Black represents one standard deviation below the average and high proportion Black represents one standard deviation above the average. Figure 7 shows the gap between male and female likelihood of being frisked, searched, summoned, or arrested decreases as proportion Black increases.

\textsuperscript{14} Interactions between gender and crime were also examined and were not significant.
Men are more likely than women to experience further action during a stop in all areas, but the gap between them decreases as the proportion of Black residents in a tract increases. This may indicate that police are more likely to take further action with women who are stopped in areas with more Black residents. Although a qualitative assessment would be needed to clarify this finding, it might also speak to gender performance expectations across place. Women in areas with more Black residents may perform gender in ways that differ from more white communities. Jones (2010) ethnographic work and other feminist criminological work has demonstrated that young women of color are forced to adopt more masculine behaviors in inner-city impoverished communities of color in order to protect themselves against victimization. Perhaps such behavior adaptations are also used in the context of police stops to drive the finding that women who are stopped in Black communities are more likely to experience further action.
Table 5: Hierarchical Logistic Regression Models Estimating Impact of Cross-Level and Three-Way Interactions on the Probability of Frisk, Search, Summons or Arrest (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.30 (0.26)***</td>
<td>1.26 (0.23)***</td>
<td>1.24 (0.22)***</td>
</tr>
<tr>
<td>Individual-Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.42 (-0.86)***</td>
<td>0.41 (-0.89)***</td>
<td>0.43 (-0.84)***</td>
</tr>
<tr>
<td>Black</td>
<td>1.36 (0.31)***</td>
<td>1.39 (0.33)***</td>
<td>1.40 (0.34)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.20 (0.18)***</td>
<td>1.22 (0.20)***</td>
<td>1.23 (0.21)***</td>
</tr>
<tr>
<td>Other</td>
<td>1.10 (0.10)***</td>
<td>1.12 (0.12)***</td>
<td>1.03 (0.03)*</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.98 (-0.02)***</td>
<td>0.98 (-0.02)***</td>
</tr>
<tr>
<td>Year</td>
<td>1.15 (0.14)**</td>
<td>1.15 (0.14)**</td>
<td>1.15 (0.14)**</td>
</tr>
<tr>
<td>“Suspicious Beh”</td>
<td>5.45 (1.69)***</td>
<td>5.44 (1.69)***</td>
<td>5.43 (1.69)***</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x Black</td>
<td>-</td>
<td>-</td>
<td>0.95 (-0.05)</td>
</tr>
<tr>
<td>CT-Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.17 (0.16)***</td>
<td>1.21 (0.19)***</td>
<td>1.20 (0.18)***</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>1.05 (0.05)***</td>
<td>0.95 (-0.05)**</td>
<td>0.94 (-0.06)**</td>
</tr>
<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>0.95 (-0.05)**</td>
<td>0.95 (-0.05)**</td>
<td>0.95 (-0.05)**</td>
</tr>
<tr>
<td>Crime</td>
<td>0.94 (-0.06)***</td>
<td>0.94 (-0.06)***</td>
<td>0.94 (-0.06)***</td>
</tr>
<tr>
<td>Population</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
<td>0.97 (-0.03)*</td>
</tr>
<tr>
<td>Cross-Level Int.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x CD</td>
<td>1.01 (0.01)**</td>
<td>-</td>
<td>1.10 (0.10)***</td>
</tr>
<tr>
<td>Fem x Prop Black</td>
<td>0.93 (-0.08)***</td>
<td>-</td>
<td>1.09 (0.08)*</td>
</tr>
<tr>
<td>Black x CD</td>
<td>0.95 (-0.05)***</td>
<td>0.96 (-0.03)***</td>
<td></td>
</tr>
<tr>
<td>Black x Prop Black</td>
<td>1.12 (0.11)***</td>
<td>1.14 (0.13)***</td>
<td></td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x Black x CD</td>
<td>0.89 (-0.12)***</td>
<td>0.82 (-0.20)***</td>
<td></td>
</tr>
<tr>
<td>Fem x Black x PropBlack</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance Comp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int. Var (ICC)</td>
<td>0.22*** (6.3%)</td>
<td>0.22*** (6.3%)</td>
<td>0.22*** (6.3%)</td>
</tr>
</tbody>
</table>

Also in Model 5 of Table 5, results demonstrated a significant impact of the interaction between female and concentrated disadvantage (OR = 1.01**). The predicted likelihood for men and women across low (one standard deviation below average), average, and high (one standard deviation above average) levels of concentrated disadvantage are presented in Figure 8. The significant interaction finding is quite small in magnitude, but the finding demonstrates that the gap between men and women in terms of the odds of experiencing any further action decreases as concentrated disadvantage increases. This may suggest that in areas with higher concentrated
disadvantage, police are stopping individuals at a higher rate and less likely to find evidence to warrant further action for both men and women. The attenuated gap may also support the explanation provided for the interaction between female and proportion Black above, suggesting that gender may be performed differently by women across neighborhoods of different levels of concentrated disadvantage.

Figure 8

Impact of the C-L Int. Gender x Concentrated Disadvantage on Any Further Action

Interaction between Race and Place

Interaction terms between race categories and concentrated disadvantage as well as proportion black were incorporated in Model 6 of Table 5 to test the third research question (Do race and neighborhood factors jointly contribute to the likelihood of experiencing an investigative police stop and whether further action takes place during a stop?). Logistic regression results and Figure 9 display the impact of the cross-level interaction between individual-level race categories and census tract proportion Black (OR = 1.12***).
The results indicate that the impact of race on being frisked, searched, summoned, or arrested during a stop decreases as the proportion of Black residents increases. Meaning, the racial differences in the odds of experiencing further action during a stop are larger in neighborhoods with a smaller proportion of Black residents, but these racial differences decrease in neighborhood with a higher proportion of Black residents. Black suspects are less likely to be frisked, searched, issued a summons, or arrested in neighborhoods with more Black residents compared to when Black suspects, which mirrors the finding from above. Put another way, Black suspects are more likely to experience further action in areas with a smaller proportion of Black residents, but white suspects are more likely to experience further action during a stop in areas with more Black residents. This provides evidence supporting the ecological attribution bias perspective and “out of place” literature. Results also support the importance of examining individuals within context using an ecological and intersectional lens.

Hierarchical logistic regression results indicate that in more disadvantaged neighborhoods Black suspects are less likely to experience further action when stopped by police
in comparison to Black suspects in neighborhoods with average or lower levels of concentrated disadvantage (OR = 0.95***). White suspects are also less likely to experience further action when stopped by police in more disadvantaged areas in comparison to less disadvantaged areas. These findings can be seen in Figure 10 and Model 6 of Table 5.

**Figure 10**

![Impact of C-L Int. between Black x Concentrated Disadvantage on Any Further Action](image)

This pattern suggests that in less disadvantaged neighborhoods the police use a higher threshold of suspicion when initiating a stop of a Black suspect, which leads to more stops requiring more invasive measures like a search etc. However, in more disadvantaged neighborhoods this threshold may be lower as demonstrated by the decreased odds of a Black suspect experiencing a frisk, search, summons, or arrest after they are stopped.

**Three-way Interaction between Gender, Race, and Place**

Three-way interactions are examined next to assess the fourth research question. The first examines the three-way interaction between gender, race, and census tract-level proportion Black and the second examines the three-way interaction between gender, race, and census tract-level concentrated disadvantage. Results from Model 7 of Table 5 and Figure 11 show that racial differences in the odds of a stop leading to any further action decrease for males as proportion
Black increases. This mirrors results from the cross-level interaction between race and proportion Black from above, where the odds of being frisked, searched, issued a summons, or arrested for Black male suspects decreases as proportion Black increases, but the odds increase for white males as proportion Black increases. This pattern does not hold for women. Instead, as proportion Black increases the odds of any further action for all women, regardless of race, increases slightly.

**Figure 11**

Findings from Model 7 of Table 5 and Figure 12 indicate that the odds of further action during a stop decrease for all race/gender groups as concentrated disadvantage increases. This may indicate that in areas with more disadvantage individuals are more likely to be stopped, but less likely to warrant further action, supporting a “guilty by association” or ecological attribution bias perspective. The inclusion of three-way interactions improved overall model fit (Model comparison test to model 6: $x^2=573.28301$, df=11, p<0.001).
Categorical Results from SQF Data

Null Model

Model 1 in Table 6 displays the unconditional multinomial models that compare each action taken by the police to being stopped only. Significant level-two variation is found for each action and variance components (0.34***, 0.46***, 0.38***; 0.44***) indicate that approximately 9.3% of the variation in frisks, 12.3% of the variation in searches, 10.4% of the variation in summons issued, and 11.8% of the variation in arrests is attributed to census tracts. This reaffirms the need to use a multilevel model to understand investigative police stops and the actions taken during these stops.
Table 6: Hierarchical Multinomial Regression Models Estimating Impact of Individual Characteristics on the Probability of Frisk, Search, Summons, or Arrest vs. Stop (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1.08 (0.08)***</td>
<td>0.87 (-0.14)***</td>
</tr>
<tr>
<td>Individual-Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.32 (-1.13)***</td>
<td>0.33 (-1.11)***</td>
</tr>
<tr>
<td>Black</td>
<td>1.50 (0.40)***</td>
<td>1.27 (0.24)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.26 (0.23)***</td>
<td>1.10 (0.10)***</td>
</tr>
<tr>
<td>Other</td>
<td>1.16 (0.15)***</td>
<td>1.06 (0.06)</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.99 (-0.01)***</td>
</tr>
<tr>
<td>Year</td>
<td>1.07 (0.07)***</td>
<td>1.27 (0.24)***</td>
</tr>
<tr>
<td>“Susp. Beh”</td>
<td>5.77 (1.75)***</td>
<td>5.94 (1.78)***</td>
</tr>
<tr>
<td>Int. Var (ICC)</td>
<td>.34*** (9.3%)</td>
<td>.33*** (9.1%)</td>
</tr>
</tbody>
</table>

**Note:** OR (Odds Ratio), Coef (Coefficient), ***p < 0.001, **p < 0.01
Direct Effects of Gender, Race, and Place

Model 3 in Table 7 separates the types of actions that can take place during an investigative police stop and indicates that being a woman decreases the odds of being frisked (vs. stopped only) by 68% (OR = 0.32***). Similarly, the odds of a female suspect being searched (vs. stopped only) is 67% (OR = 0.33***), lower than for males. The impact of gender is less severe when comparing summons to stop only and arrest to stop only. During an investigative stop, being a woman decreases the odds of being issued a summons by 35% (OR = 0.65***), and decreases the odds of arrest by 16% (OR = 0.84***), as compared to men. Results displayed in Figure 13 indicate that women, when stopped by police, are less likely to experience a frisk, search, summons, or arrest when separately compared to being stopped only.

Figure 13
Table 7: Hierarchical Multinomial Regression Models Estimating Impact of Census Tract-Level Characteristics and Individual-Level Interactions on the Probability of Frisk, Search, Summons, or Arrest vs. Stop (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FRISK vs. STOP</td>
<td>SEARCH vs. STOP</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.87 (-0.14)**</td>
<td>0.10 (-2.35)**</td>
</tr>
<tr>
<td></td>
<td>0.87 (-0.14)**</td>
<td>0.10 (-2.33)**</td>
</tr>
<tr>
<td>Female</td>
<td>0.32 (-1.13)**</td>
<td>0.33 (-1.11)**</td>
</tr>
<tr>
<td>Black</td>
<td>1.48 (0.39)**</td>
<td>1.27 (0.24)**</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.24 (0.22)**</td>
<td>1.10 (0.09)**</td>
</tr>
<tr>
<td>Other</td>
<td>1.15 (0.14)**</td>
<td>1.06 (0.06)</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)**</td>
<td>0.99 (-0.01)**</td>
</tr>
<tr>
<td>Year</td>
<td>1.07 (0.07)**</td>
<td>1.27 (0.24)**</td>
</tr>
<tr>
<td>“Susp. Beh”</td>
<td>5.77 (1.75)**</td>
<td>5.95 (1.78)**</td>
</tr>
<tr>
<td>Fem x Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CT-Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.20 (0.18)**</td>
<td>1.16 (0.15)**</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>1.07 (0.07)**</td>
<td>0.98 (-0.02)</td>
</tr>
<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)</td>
<td>0.98 (-0.02)</td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>0.96 (-0.04)**</td>
<td>0.93 (-0.07)**</td>
</tr>
<tr>
<td>Crime</td>
<td>0.91 (-0.09)**</td>
<td>0.97 (-0.04)</td>
</tr>
<tr>
<td>Population</td>
<td>0.94 (-0.06)**</td>
<td>0.98 (-0.03)</td>
</tr>
<tr>
<td>Variance Comp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int Var (ICC)</td>
<td>.27*** (7.6%)</td>
<td>.45*** (12.0%)</td>
</tr>
<tr>
<td></td>
<td>.27*** (7.6%)</td>
<td>.45*** (12.0%)</td>
</tr>
</tbody>
</table>
Hierarchical multinomial logistic regression results (Model 2 in Table 6 and Model 3 in Table 7) indicate that relative to white suspects, Black suspects are more likely to be frisked vs. stopped only (OR = 1.48***), more likely to be searched vs. stopped only (OR = 1.27***), and more likely to be arrested vs. stopped only (OR = 1.15***). This race effect is consistent with prior literature (Browning et al., 1994; Crutchfield et al., 2012; Gelman et al., 2007) and is maintained when suspicious behavior and census tract-level covariates are included in the model. This finding lends support to the differential selection and processing perspective which posits that extra-legal factors like race influence criminal justice actors’ behavior, including the police. Interestingly race does not significantly impact whether a suspect is issued a summons vs. stopped only. Figure 14 depicts the attenuating gap between Black and white suspects for search (vs. stop) and arrest (vs. stop) in comparison to the large gap between Black and white suspects for frisk (vs. stop). This might indicate that police have stricter standards when evaluating the behavior of white individuals as opposed to Black individuals, which reiterates findings in prior research (Gelman et al., 2007; Ridgeway, 2007; Coviello & Persico, 2015). The large differential seen in frisks vs. stops may indicate that police feel the need to take more precautions when interacting with a Black suspect to ensure they do not possess something that could harm the officer.
The independent influence of place-based factors is examined next. Model 3 in Table 7 indicates that in census tracts with higher concentrated disadvantage, suspects are more likely to be frisked vs. stopped only (OR = 1.20***), more likely to be searched vs. stopped (OR = 1.16***), more likely to be issued a summons vs. stopped (OR = 120***), and more likely to be arrested vs. stopped only (OR = 1.11***). A one standard deviation increase in concentrated disadvantage increases the odds of being frisked vs. stopped, searched vs. stopped, summoned vs. stopped, and arrested vs. stopped by 20%, 16%, 20%, and 11%, respectively. This suggests that regardless of the type of action, individuals stopped in more disadvantaged areas are more likely to experience further action beyond the stop.

Multinomial models also demonstrate that this impact of tract-level proportion Black from Bernoulli models holds when comparing frisk vs. stop (OR = 1.07***), but not for search vs. stop (OR = 0.98 NS). Interestingly the proportion of Black residents is inversely related to arrests vs. stops (OR = 0.93***), with a one standard deviation increase in proportion Black decreasing the odds of arrest by 7%. This may indicate that police in Black communities are frisking suspects more often, but less likely to find evidence.
during the frisk to warrant an arrest. Ecological attribution bias based on place, specifically the proportion of Black residents in a census tract, may help to explain these findings.

Before examining the key interactions in a multinomial model, it is important to note the findings related to crime and each action. In multinomial models a significant impact of crime is only found when comparing frisks vs. stops (OR = 0.91***). This may suggest that more stops are made in high crime areas, but that such stops are less likely to warrant a frisk, indicating that the threshold police use to determine whether or not to make a stop is lower in high crime areas. If these stops are less likely to result in a frisk then it makes sense that no significant effects were found between crime and searches vs. stops, summonses vs. stops, or crime and arrests vs. stops because without a frisk it is less likely evidence would warrant further action. Appendix B shows that the inverse and significant relationship of crime is maintained when using 2017, but separating violent and non-violent crime reveals a more nuanced relationship. Non-violent crime again demonstrates a significant inverse effect when examining frisk vs. stop (OR = 0.87***), search vs. stop (OR = 0.95*), and summonses vs. stop (OR = 0.90**), but a positive and significant effect appears when comparing arrest vs. stop (OR = 1.06**). Interesting violent crime has a significant and positive effect on frisk vs. stop (OR = 1.06**), but an inverse and significant impact on arrest vs. stop (OR = 0.95*). This may suggest that in areas known for violent crime, police are more likely to suspect that an individual is carrying something dangerous and therefore execute the precautionary frisk more frequently when stopping individuals, yet these frisks are less likely to result in evidence to warrant an arrest (hence the inverse effect of violent crime when comparing arrests to stops), reiterating evidence of ecological attribution bias.
Interaction between Gender and Race

Utilizing hypothesis 1b again, the same interactions between gender and race were examined, but in a multinomial fashion. Model 4 in Table 7 demonstrates the same effect that was seen in Bernoulli models, but only for frisk vs. stop (OR = 0.91*). The interaction between Black x Female is not significant for search vs. stop, summons vs. stop, nor arrest vs. stop. Findings displayed in Figure 15 indicate that Black men are the most likely to experience a frisk during an investigative stop compared to white men as well as all women. Black women, however, are more likely to be frisked than white women.

Figure 15

Although the reference category presented in Table 7 is white men, analyses were re-ran with rotated reference categories to confirm a significant difference between Black and white women as well as Black and white men. This aligns with research that examines the role of race among women arrestees (Visher, 1983) and inmates (Buzawa & Hirschel, 2010; Chesney-Lind, 2010) and within traffic stops (Lundman & Kaufman, 2003). Research has suggested that women of color may also experience racial profiling by the police (Lundman & Kaufman, 2003; Weitzer & Tuch, 2002). Women are not uniformly experiencing investigative police stops, rather Black
women are significantly more likely to face further action during a stop when compared to white women.

Interaction between Gender and Place

Next, the second research question was examined in a multinomial fashion disaggregated the actions taken during an investigative police stop. Multinomial Model 5 in Table 8 demonstrates a similar impact of the female x proportion Black interaction when comparing frisk vs. stop (OR = 0.96**) and arrest vs. stop (OR = 0.94**), as was found in Bernoulli models presented in the previous section. Figure 16 displays findings pertaining to frisk vs. stop and demonstrates an attenuating gap between men and women as proportion Black increases. It also shows that the likelihood of being frisked decreases for both men and women as proportion Black increases. Figure 17 displays findings related to arrest vs. stop, which similarly shows an attenuating gap as proportion Black increases. The difference here is an increased likelihood of arrest compared to being stopped for both men and women as proportion Black increases. The different slope directions in Figures 16 and 17 may suggest that in areas with a higher proportion of Black residents, evidence to suggest that a frisk is needed is less likely because so many individuals are stopped in these areas; however, if evidence is indeed found than an arrest is more likely to occur in areas with a higher proportion of Black residents.

None of the interactions between gender and concentrated disadvantage on each action vs. stopped only were significant (Model 5 of Table 8). Given the small in magnitude effect (OR = 1.01**) of this interaction in dichotomous models, it is not surprising that the impact is no longer significant in the multinomial model.
Figure 16

Impact of the CL-Int. Gender x Proportion Black on Frisk vs. Stop

Figure 17

Impact of the CL-Int. Gender x Proportion Black on Arrest vs. Stop
**Table 8:** Hierarchical Multinomial Regression Models Estimating Impact of Cross-Level Interactions on the Probability of Frisk, Search, Summons, or Arrest vs. Stop (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.87 (-0.14)***</td>
<td>0.10 (-2.35)***</td>
</tr>
<tr>
<td><strong>Individual-Level</strong></td>
<td><strong>OR (Coef)</strong></td>
<td><strong>OR (Coef)</strong></td>
</tr>
<tr>
<td>Female</td>
<td>0.32 (-1.13)***</td>
<td>0.33 (-1.11)***</td>
</tr>
<tr>
<td>Black</td>
<td>1.48 (0.39)***</td>
<td>1.27 (0.24)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.24 (0.22)***</td>
<td>1.10 (0.10)***</td>
</tr>
<tr>
<td>Other</td>
<td>1.15 (0.14)***</td>
<td>1.06 (0.06)***</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.99 (-0.01)***</td>
</tr>
<tr>
<td>Year</td>
<td>1.07 (0.07)***</td>
<td>1.27 (0.24)***</td>
</tr>
<tr>
<td>“Susp. Beh”</td>
<td>5.77 (1.75)***</td>
<td>5.94 (1.78)***</td>
</tr>
<tr>
<td><strong>Interactions</strong></td>
<td><strong>OR (Coef)</strong></td>
<td><strong>OR (Coef)</strong></td>
</tr>
<tr>
<td>Fem x Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.19 (0.18)***</td>
<td>1.16 (0.15)***</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>1.07 (0.07)***</td>
<td>0.98 (-0.02)***</td>
</tr>
<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)***</td>
<td>0.98 (-0.02)***</td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>0.95 (-0.04)**</td>
<td>0.93 (-0.07)**</td>
</tr>
<tr>
<td>Crime (12)</td>
<td>0.91 (-0.09)**</td>
<td>0.97 (-0.04)*</td>
</tr>
<tr>
<td>Population</td>
<td>0.94 (-0.06)**</td>
<td>0.98 (-0.03)***</td>
</tr>
<tr>
<td><strong>C-L Interactions</strong></td>
<td><strong>OR (Coef)</strong></td>
<td><strong>OR (Coef)</strong></td>
</tr>
<tr>
<td>Fem x CD</td>
<td>1.02 (0.02)</td>
<td>0.99 (-0.01)***</td>
</tr>
<tr>
<td>Fem x Prop Black</td>
<td>0.96 (-0.04)**</td>
<td>1.01 (0.01)***</td>
</tr>
<tr>
<td>Black x CD</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black x Prop Black</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Int. Var (ICC)</td>
<td>.27*** (7.6%)</td>
<td>.45*** (12.0%)</td>
</tr>
</tbody>
</table>

---

**Note:** Coefficient estimates with corresponding standard errors in parentheses. Models adjusted for other sociodemographic characteristics. Levels of significance: *p < 0.10, **p < 0.05, ***p < 0.01.
Interaction between Race and Place

The third research questions and hypothesis 3a are examined in a multinomial fashion to test whether race and place jointly impact the likelihood of experiencing each type of action in comparison to being stopped only. In multinomial models (Model 6 of Table 8), the same relationship found in Bernoulli models presented earlier, is found for frisk vs. stop (OR = 1.15*** and arrest vs. stop (OR = 1.08*). Figure 18 displays the attenuating gap between Black and white suspects’ likelihood of being frisked or arrested (compared to stop only) as census tract proportion Black increases. The likelihood of being frisked decreases for Black suspects, but increases for white suspects, as proportion Black increases; however, the likelihood of arrest increases as proportion Black increases for both white and Black suspects. Disaggregation by type of action indicates that the “out of place” findings from dichotomous models are reiterated when comparing frisks vs. stops. However, the convergence between Black and white suspects for arrests vs. stops suggests that if evidence supports an arrest, police are not using race as an extra-legal factor to decide to make an arrest in areas with a higher proportion of Black residents.

Figure 18
Next the cross-level interactions between race and tract-level concentrated disadvantage is examined. Findings that are similar to earlier dichotomous results can be seen in Model 6 of Table 8 where the interaction between race and concentrated disadvantage for frisk vs. stop (OR = 0.96*) and for arrest vs. stop (OR = 0.89***) are significant. Surprisingly disaggregating type of action reveals a different pattern than was seen when examining the interaction between race and proportion Black, which provides further reason for assessing concentrated disadvantage and proportion Black separately. Figure 19 indicates that as concentrated disadvantage increases the odds of being frisked vs. stopped and the odds of being arrested vs. stopped decrease for both white and Black suspects. This lends support for ecological attribution bias and differential suspicion based on both race and place, where individuals in certain areas are treated as suspicious and more likely to be stopped, but less likely to experience further action. Model comparison tests demonstrated significant model improvement with the incorporation of cross-level interactions ($x^2 = 205.57344$, df=3, $p < 0.001$).

**Figure 19**

Impact of the CL-Int. Race x Concentrated Disadvantage on Frisk vs. Stop and Arrest vs. Stop

![Graph showing impact of concentrated disadvantage on frisk and arrest odds](image-url)
**Three-way Interaction between Gender, Race, and Place**

Lastly, the three-way interactions between gender, race, and place were examined to test the fourth research question in a multinomial model. Findings are presented in Table 9 and display the results for the interaction between gender, race, and tract-level proportion Black, as well as results for the interaction between gender, race, and tract-level concentrated disadvantage. For the former interaction, results indicated a significant interaction when comparing arrests vs. stops only (OR = 0.83*). The interaction between gender, race, and proportion Black was not significant when comparing frisks to stops, searches to stops, or summons to stops.

![Figure 20](image-url)

The trends depicted in Figure 20 mimic those from dichotomous models in Figure 11 in that a convergence between gender/race groups is seen as proportion Black increases. However, Figure 20 demonstrates that when arrests are compared to those who are stopped only, all suspects stopped are more likely to be arrested in areas with more Black residents than they were in areas with fewer Black residents. In dichotomous models the trend was increasing for all
gender/race groups, except for Black men. This distinction is important because it shows how nuanced patterns are revealed when actions are examined separately. Figure 20 also indicates Black women and white men are equally as likely to experience an arrest following a stop in areas with a higher proportion of Black residents. This aligns with research and theory that suggests historical narratives about Black women often translate into being viewed as more masculine and dangerous (Collins, 2000; Ritchie, 2017; Payne, 2001).

Table 9 also displays results for the three-way interaction between gender, race, and concentrated disadvantage in a multinomial model. Figure 21 and 22 depict the significant findings for this interaction comparing frisks to stops and arrests to stops. As was seen in dichotomous models (Figure 12), a descending trend for all gender/race groups as concentrated disadvantage increases is found. This suggests that people who are stopped in more disadvantaged areas are less likely to be frisked or arrested compared to when the same groups of people are stopped in less disadvantaged neighborhoods. As noted earlier, this may be a reflection of how common investigative police stops in disadvantaged areas are. Meaning, individuals are more likely to be stopped in these areas perhaps because of the perception of
danger in disadvantaged neighborhoods, rather than actual evidence of suspicious behavior. The result is a decreased likelihood that a stop results in evidence to warrant further action.

**Figure 21**

Impact of Three-way Int. Gender x Race x Concentrated Disadvantage on Frisk vs. Stopped Only

**Figure 22**

Impact of Three-way Int. Gender x Race x Concentrated Disadvantage on Arrest vs. Stopped Only
Table 9: Hierarchical Multinomial Regression Models Estimating Impact of Three-Way Interactions on the Probability of Frisk, Search, Summons, or Arrest vs. Stop (SQF)

<table>
<thead>
<tr>
<th>Variable</th>
<th>FRISK vs. STOP</th>
<th>SEARCH vs. STOP</th>
<th>SUMMONS vs. STOP</th>
<th>ARREST vs. STOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
</tr>
<tr>
<td></td>
<td>0.83 (-0.19)***</td>
<td>0.10 (-2.33)***</td>
<td>0.09 (-2.36)***</td>
<td>0.16 (-1.84)***</td>
</tr>
<tr>
<td>Individual-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.32 (-1.15)***</td>
<td>0.24 (-1.44)***</td>
<td>0.76 (-0.27)***</td>
<td>0.84 (-0.18)***</td>
</tr>
<tr>
<td>Black</td>
<td>1.53 (0.43)***</td>
<td>1.27 (0.24)***</td>
<td>0.97 (-0.03)</td>
<td>1.16 (0.15)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.29 (0.26)***</td>
<td>1.08 (0.08)*</td>
<td>1.16 (0.15)***</td>
<td>1.11 (0.11)***</td>
</tr>
<tr>
<td>Other</td>
<td>1.04 (0.04)</td>
<td>0.91 (-0.09)*</td>
<td>1.15 (0.14)***</td>
<td>0.96 (-0.04)</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.99 (-0.01)***</td>
<td>1.00 (0.01)***</td>
<td>0.99 (-0.003)***</td>
</tr>
<tr>
<td>Year</td>
<td>1.07 (0.07)***</td>
<td>1.27 (0.24)***</td>
<td>0.87 (-0.14)***</td>
<td>1.54 (0.43)***</td>
</tr>
<tr>
<td>“Susp. Beh”</td>
<td>5.75 (1.75)***</td>
<td>5.93 (1.78)***</td>
<td>3.56 (1.27)***</td>
<td>4.71 (1.55)***</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x Black</td>
<td>0.90 (-0.11)*</td>
<td>1.37 (0.31)**</td>
<td>0.97 (-0.03)</td>
<td>1.15 (0.14)*</td>
</tr>
<tr>
<td>CT-Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.22 (0.20)***</td>
<td>1.19 (0.17)***</td>
<td>1.19 (0.17)***</td>
<td>1.17 (0.16)***</td>
</tr>
<tr>
<td>Prop. Black</td>
<td>0.94 (-0.06)**</td>
<td>0.96 (-0.04)</td>
<td>1.09 (0.08)*</td>
<td>0.87 (-0.14)***</td>
</tr>
<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)</td>
<td>0.98 (-0.02)</td>
<td>0.96 (-0.04)</td>
<td>0.98 (-0.02)</td>
</tr>
<tr>
<td>Owner-Occ.</td>
<td>0.96 (-0.04)**</td>
<td>0.93 (-0.07)**</td>
<td>0.99 (-0.01)</td>
<td>0.95 (-0.04)*</td>
</tr>
<tr>
<td>Crime</td>
<td>0.91 (-0.09)***</td>
<td>0.97 (-0.04)*</td>
<td>0.96 (-0.04)</td>
<td>1.02 (0.02)</td>
</tr>
<tr>
<td>Population</td>
<td>0.94 (-0.06)***</td>
<td>0.98 (-0.03)</td>
<td>1.01 (0.01)</td>
<td>1.05 (0.05)**</td>
</tr>
<tr>
<td>C-L Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x CD</td>
<td>1.10 (0.10)*</td>
<td>0.98 (-0.02)</td>
<td>1.07 (0.07)</td>
<td>1.15 (0.14)*</td>
</tr>
<tr>
<td>Fem x Prop Black</td>
<td>1.10 (0.09)</td>
<td>1.08 (0.07)</td>
<td>1.08 (0.08)</td>
<td>1.05 (0.05)</td>
</tr>
<tr>
<td>Black x CD</td>
<td>0.98 (-0.02)</td>
<td>0.96 (-0.04)</td>
<td>1.03 (0.03)</td>
<td>0.92 (-0.09)**</td>
</tr>
<tr>
<td>Black x Prop Black</td>
<td>1.17 (0.15)***</td>
<td>1.02 (0.02)</td>
<td>1.04 (0.04)</td>
<td>1.10 (0.09)**</td>
</tr>
<tr>
<td>3-Way Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fem x Black x CD</td>
<td>0.89 (-0.11)**</td>
<td>0.95 (-0.05)</td>
<td>0.94 (-0.06)</td>
<td>0.86 (-0.15)**</td>
</tr>
<tr>
<td>Fem x Black x Prop Black</td>
<td>0.88 (-0.13)</td>
<td>0.89 (-0.12)</td>
<td>0.83 (-0.19)</td>
<td>0.83 (-0.18)*</td>
</tr>
<tr>
<td>Variance Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int Var (ICC)</td>
<td>.27*** (7.6%)</td>
<td>.45*** (12.0%)</td>
<td>.34*** (9.3%)</td>
<td>.42*** (11.3%)</td>
</tr>
</tbody>
</table>
Chapter 6: Discussion

This dissertation examined how gender, race, and place impact proactive policing tactics, specifically investigative police stops (i.e., SQF), using a national self-report based sample (Add Health) and a city-specific official sample (NYC SQF data). Through both an intersectional and ecological lens, this study aimed to understand if the interactions between gender, race, and neighborhood factors shape the likelihood of being stopped by the police and the likelihood that an investigative police stop results in a frisk, search, summons, or arrest. Existing literature has not sufficiently assessed how gender influences encounters between individuals and the police quantitatively. Studies that assess the role of race or place on proactive policing tactics have yet to examine such factors in relation to gender and in relation to one another. This study was a first step toward filling this gap by contextualizing investigative police stops and the result of such stops (i.e., search, frisk, summons, arrest) in terms of gender, race, and place. This dissertation makes three main contributions to the field.

First, it helps to address a largely neglected area of existing research by examining investigative police stops from an intersectional lens using gender, race, and place. Second, it intentionally focuses on and contributes to our theoretical understanding of the earliest stage of the criminal justice process, before a crime has been committed. And third, this research adds to the literature on disproportionality in the criminal justice process by using a unique method that brings together a city-based, official data source and a national, self-report data source.

Overall, results revealed important nuanced relationships between key individual-level factors, like gender, race, and their interaction (i.e., gender x race), and the likelihood of experiencing an investigative police stop and whether a street stop results in further action. Findings also suggested that cross-level interactions, as well as three way interactions, between
individual-level characteristics and place-based factors are particularly informative in terms of understanding whether investigative police stops proceed beyond a stop and what actions take place thereafter.

Summary of Key Results

There are many findings that can be pulled from the analysis conducted in this dissertation, but I want to summarize the key findings that relate specifically to the goals of this study. First, findings from the Add Health data indicated that although young women are less likely to be stopped by the police for investigative purposes in comparison to young men, the role of race does not appear to have a significant influence on one’s likelihood of being stopped on a national scale. This is surprising given the wealth of prior research on racial disproportionality in the criminal justice system. It is important to assess this finding with the sampling structure of the Add Health data in mind. This data set is really nationally representative of students, not all adolescents, given that only adolescents in school were eligible for the study. Moreover, participants are from all areas of the U.S. and there is significant variation in policing practices across the country that may make detecting patterns across race more challenging, for example. Examining the interaction between gender and race, however, revealed significant differences across race for young women, but not for young men. In fact, contrary to expectation, results indicated that young white women were more likely to be stopped or detained for questioning by the police compared to young Black women. This affirms the hypothesis that gender and race jointly influence the likelihood of being stopped by the police. But, the nature of the interaction does not align with prior research on the role of intersectionality in other stages of the criminal justice process. Research suggests young women of color are more likely to be arrested, sentenced for longer, and experience in-custody
maltreatment (see e.g., Chesney-Lind & Belknap, 2004; Steffensmeier et al., 2005). Additionally, race has been shown to change how others perceive gender and “appropriate” gendered behavior in a manner that prejudices women of color (Collins, 2000; Jones, 2010; Ritchie, 2017).

The role of gender was found to also have an important impact when examined in an interaction with tract-level proportion Black. Men are more likely than women to be stopped by the police in all areas, but the difference between men and women decreases as the proportion of Black residents in a tract increases. Contrary to the proposed hypotheses, no other cross-level interactions were significant.

The second and third set of findings using the SQF data supported the hypotheses proposed in this dissertation. Gender and race interact in important ways and revealed that Black women, although significantly less likely to experience further action during a police stop than men of either race, are significantly more likely to experience a frisk, search, summons, or arrest when compared to white women. Multinomial models revealed this is particularly the case during the first stage of escalation, between being stopped only or being stopped and frisked. Results from the second research question indicated that gender and place-based factors jointly influence the likelihood of further action during an investigative police stop. Specifically, interactions between gender and tract-level proportion Black and tract-level concentrated disadvantaged revealed that the disparities in the odds of experiencing any further action between men and women decreased as proportion Black or concentrated disadvantaged increase. This suggests again, that in certain contexts the police may treat women more similarly to men because of the location in which a stop takes place.
Assessing the cross-level interactions between race and proportion Black revealed that racial differences in terms of experiencing further action also decreased as proportion Black increased (probability increased for white suspects, but decreased for Black suspects). Interestingly the interaction between race and concentrated disadvantage showed that both Black and white suspects were less likely to experience further action as disadvantage increased. This may suggest that in less disadvantaged areas, police use a higher threshold of suspicion for both Black and white suspects. Lastly, three-way interactions indicated gender, race, and place concurrently shape the likelihood of experiencing further action during a police stop.

Implications for Theory and Research

Two theoretical perspectives dominate the literature examining variation across policing practices. The first centers on differential involvement vs. differential selection and processing to explain minority overrepresentation in police contact as well as other stages of the criminal justice process (Piquero, 2008). Support for both perspectives has been found suggesting that differential selection and processing as well as differential involvement may be responsible for the disproportionate number of minorities who have contact with the police and who end up in the criminal justice system (Pope et al., 2002; Wilbanks, 1987). Meaning, extra-legal factors like race are not absent from police work. An ecological perspective is the second theoretical framework commonly used to understand differences across proactive policing tactics. According to this framework, policing practices are impacted by characteristics of neighborhoods (Kubrin & Weitzer, 2003), particularly disadvantage (Fagan & Davies, 2000) and racial composition (Parker et al., 2005). These theories are particularly useful for understanding how proactive policing tactics may vary across race and across place, but “theoretical models
used to explain discriminatory patterns of policing…display a presumption of gender neutrality or an uncritical focus on men” (Brunson & Miller, 2006a: 533).

This study addresses the gender gap that currently exists in theories that seek to understand why certain people are stopped by the police. In particular, stage one of analysis incorporated a feminist intersectional theoretical approach to allow for the consideration and understanding of multiple identities (i.e., gender, race) simultaneously. This approach has been used in research that examines other stages of the criminal justice system (see e.g., Chesney-Lind & Belknap; Daly, 1994) and has more recently been used to qualitatively assess the role of race and gender on police-citizen interactions (Brunson & Miller, 2006a; Kwate & Threadcraft, 2015) and police violence (Ritchie, 2017). However, this approach has not been used to quantitatively reveal how race, place, and gender concurrently impact investigative police stops and their outcomes. Using an intersectional framework informs theory by testing the role of influential factors simultaneously, rather than testing key factors separately and making assumptions about how different social positions operate together.

**Gender and Race**

Examining the first research question using both the Add Health and SQF data demonstrated that gender and race jointly impact investigative police stops. Results from the Add Health data were surprising because they suggested that young white women were significantly more likely than young Black women to be stopped by police and the likelihood of a police stop was similar for Black and white young men. However, results from the SQF data revealed that Black women were significantly more likely to experience further action during an investigative police stop compared to white women. Black men were the most likely to experience further action and the gap between Black and white men in terms of the odds of experiencing further
action was larger than the gap between Black and white women. Multinomial models revealed this was particularly the case when comparing those who were stopped and frisked to those who were stopped only. Theoretically, these findings reiterate the importance of intersectionality given that women are not uniformly experiencing police stops. Instead the interaction between race and gender reveals significant differences between white women and women of color. Literature examining the role of this interaction in the context of other criminal justice outcomes has found that women of color deal with differential treatment during arrest, sentencing, as well as while in custody (see e.g., Chesney-Lind & Belknap, 2004; Ritchie, 2017; Steffensmeier et al., 2005). Similarly, this the SQF results from this study mimic existing research and theory. The findings that women were less likely to be stopped and less likely to experience further action compared to males overall supports the notion that police may behave chivalrously towards women. However, the SQF findings reiterate Visher’s (1983) findings that only white women benefit from such behavior. But, as noted earlier, on a national scale young white women were more likely to be stopped for questioning than their Black counterparts.

It is challenging to reconcile some of the differences between this studies’ national sample findings with existing research on intersectionality in the criminal justice system, but the Add Health findings pertain to stops only and do not examine outcomes of stops. One potential explanation to align with prior research could be the motivation behind the police stops. For example, it is possible that young white women are more likely to be stopped by the police in comparison to young Black women because the police are attempting to look out for or protect them. Early research on the role of chivalry toward women by the police was demonstrated to operate for white women only (Visher, 1983). Moreover, qualitative research indicated that young women were most often stopped by police at night for curfew or status offense purposes.
(Brunson & Miller, 2006). Taken together, prior research could be used to suggest that young white women are stopped more often than young Black women because of benevolent motivations to protect them. The data used in this study are unable to capture police officer motivation, but future research should aim to capture this in order to understand why the patterns in the current study were found.

Additionally, the difference between the Add Health findings and the SQF findings may be a result of sampling and time differences. The Add Health data is nationally representative of in-school adolescents starting in 1994, whereas the SQF data captures all recorded investigative stops in the city of New York from 2012 to 2017. Moreover, the Add Health data is over 50% white. Each of these distinctions is important to consider. Police departments do not operate uniformly across the entire country, therefore, it may be inappropriate to draw firm conclusions from a national sample. Second, and most importantly, adolescents who are not in school were not included in the Add Health sample. Adolescents who are not attending school are more at risk for engaging in illegal behavior and generally more likely to be hanging out in places that may attract police attention. Lastly, urban environments have been the focus of proactive policing tactics and therefore the inclusion of rural and suburban communities across the United States may make it difficult to detect important differences across gender and race. With that said, it is important to understand how relationships operate on a national scale so that researchers and policy makers can determine whether problems exist and solutions need to occur on a national scale or on a more localized one. The Bureau of Justice Statistics utilized the Police-Public Contact Survey, which is part of the National Crime Victimization Survey, to examine different types of police contact on a national scale. Similar to the findings in this study, the BJS found non-significant differences across race in terms of the likelihood of having any
police-initiated contact and marginally significant differences between Black and white individuals when assessing the likelihood of experiencing a street stop (Davis, Whyde, and Langton, 2018). In terms of gender alone, their findings reiterate those found in the current study that women are significantly less likely to be stopped by the police. Unfortunately this national report does not include results that capture the intersection of gender and race simultaneously (Davis, Whyde, and Langton, 2018).

**Gender, Race, and Place**

The second stage of analysis in this study informs theory on investigative police stops by revealing how key individual-level and contextual factors concurrently operate within police stops and whether a stop results in further action. Moreover, findings contribute a number of key insights to this area of empirical criminological research. First, this dissertation quantitatively investigated the first stage of the criminal justice process, or investigative police stops and the outcomes of investigative police stops, using two-way and three-way cross-level interactions between gender, race, and place. In particular, this study begins to address the concerning gap in gender-specific research on proactive police-citizen interactions. Beyond gender, this study illuminates how different factors shape early encounters people have with the police. We know from prior research that race (e.g., Bass, 2001; Browning et al., 1994; Crutchfield et al., 2012) and place (see e.g., Fagan & Davies, 2000) tend to matter in terms of police contact separately, but results revealed the impact of the intersections between gender, race, and place by considering these factors concurrently. Examining this early stage in the criminal justice process is important because disproportionality experienced in the first stage likely influences disproportionality at later stages in the process and these early encounters have been shown to be
critical in shaping attitudes and perceptions toward the police (Brunson & Weitzer, 2011; Hurst, Frank, & Browning, 2000; Rengifo & McCallin, 2017; Weitzer & Tuch, 2002).

Results indicated that place-based factors, such as concentrated disadvantage and proportion Black, independently and significantly impacted the likelihood that a police stop would result in further action. Specifically, police stops that occurred in areas with higher concentrated disadvantage were more likely to result in further action regardless of type (i.e., frisk, search, summons, or arrest), suggesting that important place-based variations exist across these types of stops. Similar evidence of the role of ecological factors has been seen in prior research using SQF data (Fagan & Davies, 2000) as well as arrests, overall police surveillance, and officer misconduct (Browning et al., 1994; Gase et al., 2016; Hurst et al., 2000; Kane, 2002). Parallel results were found for the role of census tract-level proportion Black on the likelihood of further action overall (and frisk vs. stop; summons vs. stop), lending further support for the role of ecological factors and perhaps racial threat theory as well (Cahmbliss, 2001; Smith & Holmes, 2003).

The contribution of this dissertation rests in the assessment of place-based factors through an intersectional lens in combination with gender and race. The cross-level interaction between gender and place-based factors supported the hypothesis that the effect of gender on the actions that take place during a police stop do vary by neighborhood factors. For example, the gap between men and women, in terms of the odds of experiencing further action, decreases as proportion Black increases. This lends support to the idea that women may perform gender in different ways across different places, therefore police may have certain expectations of women depending on where they are. Jones’ (2010) works has demonstrated that women of color from communities of color are more likely to engage in ways that may be interpreted as more
masculine as a means of self-protection. Although more detail is needed to confirm this finding in relation to the current study, it may be the case that police treat men and women more similarly in areas with more Black residents because women in these communities are forced to behave in ways that do not align with stereotypical gender norms (Collins, 2000). This attenuated gap across census tracts is also found, although only in dichotomous outcome models, for the interaction between gender and concentrated disadvantage.

Incorporating the interactions between race and place-based factors to examine the third research question revealed that the impact of race on experiencing further action at the hands of police also varies across place. For example, Black suspects were more likely to experience further action during a stop in areas that had a smaller proportion of Black residents and less likely to in more Black areas. The opposite was shown for white suspects who were more likely to experience further action during a stop in areas with a higher proportion of Black residents in comparison to areas with a smaller proportion of Black residents. This attenuating gap between Black and white suspects in terms of experiencing further action in predominately Black communities lends support to the ecological attribution bias perspective (Smith, 1986) and prior research that has found police make assumptions about individuals based on where they are (Petrocelli, Piquero, & Smith, 2002). Racial profiling and “the surveillance and stopping behavior of the police is sensitive to race and place” (Meehan & Ponder, 2002:426). Findings also mirror results from studies utilizing this perspective that have found evidence for an “out of place” or “guilty by association” phenomenon (Carroll & Gonzalez, 2014; Smith & Alpert, 2007). Findings here indicate that white suspects are more likely to experience further action in areas where they might appear as if they don’t belong, that is in predominately Black communities, because police may label them as suspicious given the area they are in. Similarly,
Black individuals are more likely to experience further action when they are in less Black communities, again suggesting that appearing out of place warrants suspicion.

Evidence from this study supports the hypotheses associated with the fourth research question that the impact of the interaction between gender and race operates differently across place. It is more difficult to compare the results of the three-way interactions to prior literature because few, if any, studies have examined the concurrent impact of gender, race, and place on investigative police stops. With that said, it appears as though the variation across place is more substantial for men than it is for women. The patterns revealed in the cross-level interactions for race and proportion Black hold more firmly for men than for women. However, it is quite interesting that all gender/race groups are more likely to experience further action during a stop in areas with a higher proportion of Black residents, except for Black males who are less likely to experience further action in these areas compared to areas with a smaller proportion of Black residents. This, in conjunction with prior research, may suggest that Black males in Black areas are particularly at risk of being stopped by the police with little evidence for suspicion needed resulting in less evidence to actually warrant further action. The three-way interaction between gender, race, and concentrated disadvantage revealed that all race, gender groups were less likely to experience further action in areas with more disadvantage in comparison to areas with lower levels of concentrated disadvantage. This may suggest that the threshold that officers use to determine suspiciousness is lower for all individuals in areas where more criminal activity tends to occur. However, this effect seems to be strongest for Black males.

Together these findings support the need to examine investigative police stops through an ecological, as well as intersectional, lens. Doing so reveals important differences across social identities and places that can inform theory, research, and policy. Future research should
continue to flesh out our understanding of the role of intersectionality in policing practices by focusing on other racial or ethnic populations, particularly Latinx individuals. Given the current political climate around illegal immigration from South America, it would be important to examine if shifts in political rhetoric have impacted investigative police stops specifically for the Latinx communities. Additionally, recent qualitative work has indicated that police use of force varies across women of different racial backgrounds and Black women are particularly at risk for police violence (Ritchie, 2017). This research informs the current study but it does not quantitatively examine use of force or citizen complaints that arise between police contact with women. Filling this gap is an important next step to build off of the findings in this dissertation.

Implications for Practice

It is important to consider the implications for practice that can be drawn from this dissertation. However, given the exploratory nature of the study in terms of assessing the role of gender, race, and place concurrently on investigative police stops, it is also important to recognize where more research is needed to inform practice further. With that said, the results from this study in conjunction with future related research can be used to inform policy and practice in a number of ways.

Practical implications drawn from prior research on racial disparities across policing practices are informative for the current study even though the focus here is to move beyond race alone in order to understand how intersections of identity matter in investigative police stops. The findings from this study suggest that police departments and the public might be more uniformly served by increasing police accountability and transparency, building community trust, implementing legal intervention when needed, and expanding and reinforcing officer training and education.
Given the differences across race, gender, and place found in this study, it is critical to continue to push for more accountable and transparent police practices. In response to national concern regarding police use of force against people of color, Obama formed a task force to make recommendations on policing practices that were effective at reducing crime while simultaneously building trust with the public. This report (President’s Task Force on 21st Century Policing, 2015) along with other publications on the role of race in policing practices (Hing, 2016; NACSEM, 2017; Smith, 2015) have suggested a number of ways to improve accountability and transparency within police departments that are equally relevant to the current intersectional study. One such way is through a non-punitive peer review process that either takes place internally within police departments or in tandem with community members. This process would provide a great opportunity for officers to review incidents that may not have fallen beyond the bounds of department policy, but may have had a negative impact on the suspect or community (Hing, 2016; President’s Task Force on 21st Century Policing, 2015). Reviewing incidents to compare officer behavior towards different segments of the population, such as young women of color versus young white women, or from different neighborhoods, might illuminate patterns of behaviors that police departments are unaware of. The use of technology to accomplish this is also important. Reviewing body-worn camera footage would assist in these non-punitive review processes. The premise of such a process is not to punish officer behavior, but instead to facilitate a learning process and improve the ways in which officers approach stops with different segments of the public. Finally, data collection and dissemination that includes information about multiple sources of individual-level and contextual identity is needed to continue to both build our knowledgebase on the topic and monitor the impact of any policy changes enacted. Many police departments have started to implement more
rigorous data collection processes and the results of this study reaffirm the need to continue this endeavor.

The second overarching practical implication of this dissertation is the promotion of community trust. All segments of the population deserve to feel as though they can trust the police. Because police practices like SQFs are not uniformly experienced by all people it is fair to assume that not all people view the police in the same way. Although this study did not measure suspect’s attitudes toward the police, the findings presented along with previous research indicate that differences in treatment impact attitudinal differences and views on police legitimacy (Barlow & Barlow, 2002; Hurst et al., 2000; Leiber et al., 1998; Weitzer, 2000).

Different ways to build community trust across race and gender lines are needed. Community-oriented policing might be one tool to help facilitate trust building across different subsets of the community. Community-oriented strategies directly engage members of the public often through non-enforcement activities to build trust and cooperation (Hing, 2016; NASCEM, 2017). This approach has been promoted to improve the relationship between the police and communities of color, but could also be used to modify relationships with more specificity (e.g., across gender or sexual orientation). For example, if women of color in certain communities are significantly more likely to be frisked, searched, or arrested than in other communities it follows that police should work on building positive relationships with that segment of the population. Obama’s task force suggested that the voices of youth need to be heard more by the police and this study, along with prior research (see e.g., Jones, 2014; Ritchie, 2017), suggest that the voices of young women also need to be heard by the police. We can no longer assume that all people of color or all people from the same communities experience police contact in the same way. Along the same lines, the diversification of police departments to mimic the communities they serve has
been suggested as an important way to improve community trust (Hing, 2016; President’s Task Force on 21st Century Policing, 2015). Diversity along racial, gender, and neighborhood upbringing might serve to further facilitate community trust.

The third practical implication that can be drawn from this study in conjunction with prior research is the use of legal intervention to reduce disparities in policing practices, specifically SQFs. In 1994 the Violent Crime Control and Law Enforcement Act allowed the Department of Justice to open investigations into law enforcement agencies at the state and local level if they believed unconstitutional policies or practices were taking place. This act has primarily been used to combat racial disparities in a number of major cities via federal consent decrees and federal monitors. Evidence suggests that these forms of federal interventions have been successful (see e.g., Green & Jerome; MacDonald & Braga, 2018; Rushin, 2017). If similar cases of gender disparities arrive in court or disparities across other sources of identity, then federal intervention might be a useful tool to promote change. More localized legal intervention is also relevant here. For example, in California an assemblywoman introduced a bill that created the Racial and Identity Profiling Advisory Board to examine data and generate solutions to reduce profiling based on race or any other identity characteristic like gender (AB, 953). This dissertation further bolsters the need to expand our definition and general understanding of profiling beyond race to incorporate other important sources of identity.

Expanding officer education and training is the fourth practical implication that can be drawn from the current study. Prior research has pushed scholars and practitioners to implement racial bias training in police departments. The findings from this dissertation suggest that police officers should be trained to think about their own personal, as well as institutional, biases or thinking schemas toward women, toward people of different gender and race identities (e.g.,
women of color), and toward people from certain places. Although the empirical evidence for the use of implicit bias training is underdeveloped, there is evidence that implicit bias training can serve as an important opening for discussion around race and self-reflection (Smith, 2015).

Lastly, practical implication of this dissertation relates to the different findings between the two datasets used. As mentioned earlier, there are many important distinctions between the Add Health data and the SQF data that need to be considered when interpreting the results. But, perhaps more importantly, these distinctions have implications for practice. Results suggest that policy and practical changes might be more useful when tailored to a specific city or localized area. National changes may be important in broad strokes, but the nuances revealed in the SQF data suggest that smaller geographic units (e.g., neighborhoods, cities, or even states) have specific needs that cannot easily be detected, and therefore addressed, on a national scale. Similarly, it is important to avoid assuming that the trends seen in New York City would also be seen in other major U.S. cities. Instead, city-specific implications should be drawn from city-specific assessments when possible.

Limitations

Although this dissertation has a number of important implications, it is not without potential limitations. First, utilizing two separate data sources helps to facilitate the exploration of discrepancies in police stops across different types of people using a survey source and what actions take place during police stops using an official data course. But, the use of two data sources with different participants opens up the risk of multiple conclusions. The Add Health data source includes youth and adults, whereas the SQF data is primarily adult. Different processes may be at play for different age groups. Second, the data limit the outcomes that can be explored. Examining who is stopped and whether a stop results in a frisk, search, summons, or
arrest is useful, but it does not allow for the assessment of other negative outcomes that could occur such as harassment or sexual violence, both of which have been shown to be commonplace for young women of color in disadvantaged communities (Jones, 2010; Ritchie, 2017). Third, SQF data represent a specific type of person-focused proactive policing tactic, but the Add Health data allows participants to refer to any “stop for questioning” by the police. Participants in the Add Health data may be referencing to a SQF stop or they may be referencing a different type of stop. These differences add a layer of caution when interpreting the findings of this study across both samples. With that said, survey accounts may be better able to capture the investigative police stops as perceived by the citizen, rather than the officer who is responsible for generating SQF reports.

There are two data limitations specific to the SQF data that are worth noting: 1) the inability to account for prior criminal record or behavior and 2) inability to account for repeat suspects. Given that investigative police stops, under the proactive policing strategy, were designed to target known high-rate offenders, it would be useful to be able to determine if in fact these street stops are happening more frequently with individuals with a criminal history. Moreover, it would be interesting to examine if prior criminal record impacts the actions that occur during a police stop differently across gender and across race. The NYPD data does not provide identifiable information about the suspect, making it impossible to account for individuals who appear many times in the data.

Although the goal of this dissertation was to quantitatively examine how intersections between gender, race, and place operate in the context of investigative police stops, this approach results in a less rich or detailed account that qualitative study would be better able to capture. From both a policy and empirical perspective it is critical to understand patterns across data
using quantitative data, but as with all quantitative research, some of the story that is particularly relevant for women of color in disadvantaged areas may be lost in the numbers. Moreover, the addition of police organization data might be useful to capture the institutional pressures that influence investigative police stops. Future research should aim to combine these methods of inquiry to more fully understand the ways in which intersectionality operates within investigative police stops.

Lastly, it is important to recognize that census tracts are only one useful geographic unit of analysis and other smaller geographic units of analysis may lead to different results. For example, Weisburd et al. (2015) found a modest deterrent effect of SQFs on crime using a microlevel unit of analysis, specifically street segments. Although this study was not aimed at understanding the effectiveness of SQF, a similar unit of analysis may be informative given small geographic focus that proactive policing tactics often have.

**Conclusion**

Criminological research has recognized the need to examine the role of gender, race, and place on a variety of criminal justice outcomes, but research on race and policing as well as place and policing tends to neglect the role of gender. Feminist intersectional theory indicates that assessing the crosscutting influence of inequalities is critical for understanding different people’s unique experiences within the criminal justice system, including police encounters (Brunson & Miller, 2006a; Jones, 2010; Ritchie, 2017). With an intersectional and ecological perspective in mind, this dissertation offers new insight for our understanding of investigative police stops by contextualizing street stops and the outcomes of these stops. Results indicated that investigate police stops are not gender-blind, not uniformly experienced by all women, and do not operate
identically across place. Rather, important distinctive variations across gender, race, and place exist.
### Appendix A: Hierarchical Logistic Regression Models Estimating the Impact of Individual and Census Tract Characteristics on the Probability of Frisk, Search, Summons or Arrest (SQF)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
<td>OR (Coef)</td>
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<td>1.30 (0.26)***</td>
<td>1.30 (0.26)***</td>
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<td>0.41 (-0.88)***</td>
<td>0.41 (-0.88)***</td>
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<tr>
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<td>1.36 (0.31)***</td>
<td>1.36 (0.31)***</td>
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<td>1.20 (0.18)***</td>
<td>1.20 (0.18)***</td>
</tr>
<tr>
<td>Other</td>
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<td>1.10 (0.10)***</td>
<td>1.10 (0.10)***</td>
</tr>
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<td>Age</td>
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<td>0.98 (-0.02)***</td>
<td>0.98 (-0.02)***</td>
</tr>
<tr>
<td>Year</td>
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<td>1.15 (0.14)***</td>
<td>1.15 (0.14)***</td>
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<tr>
<td>“Suspicious Beh”</td>
<td>5.45 (1.70)***</td>
<td>5.45 (1.70)***</td>
<td>5.45 (1.70)***</td>
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<td>CT-Level</td>
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<tr>
<td>Con. Dis.</td>
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<td>1.15 (0.14)***</td>
<td>1.17 (0.15)***</td>
</tr>
<tr>
<td>Prop. Black</td>
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<td>1.04 (0.04)*</td>
<td>1.04 (0.04)*</td>
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<tr>
<td>Employed Fem</td>
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<td>0.97 (-0.02)</td>
<td>0.98 (-0.03)</td>
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<tr>
<td>Owner-Occ.</td>
<td>0.96 (-0.04)*</td>
<td>0.96 (-0.04)*</td>
<td>0.96 (-0.04)*</td>
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<tr>
<td>Crime (17)</td>
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<td>-</td>
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<tr>
<td>Violent Crime (12)</td>
<td>-</td>
<td>1.03 (0.03)</td>
<td>-</td>
</tr>
<tr>
<td>Non-Violent Crime (12)</td>
<td>-</td>
<td>0.93 (-0.08)***</td>
<td>-</td>
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<tr>
<td>Violent Crime (17)</td>
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<td>-</td>
<td>1.02 (0.02)</td>
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<tr>
<td>Non-Violent Crime (17)</td>
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<td>0.95 (-0.05)***</td>
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<tr>
<td>Population</td>
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<td>0.97 (-0.03)*</td>
<td>0.98 (-0.02)*</td>
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<tr>
<td>Variance Comp.</td>
<td><strong>0.22</strong>* (6.3%)</td>
<td><strong>0.22</strong>* (6.3%)</td>
<td><strong>0.22</strong>* (6.3%)</td>
</tr>
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</table>

**Note:** All ORs are significant at the 0.01 level (indicated by ***).
Appendix B: Hierarchical Multinomial Regression Models Estimating the Impact of Individual and Census Tract Characteristics on Probability of Frisk, Search, Summons, or Arrest vs. Stop (SQF)

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<tr>
<th>Variable</th>
<th>Model 3 with 2017 Crime</th>
<th>Model 3 with 2012 Violent and Non-Violent Crime</th>
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<tr>
<td></td>
<td>FRISK vs. STOP</td>
<td>SEARCH vs. STOP</td>
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<td>Intercept</td>
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<td>0.33 (-1.11)***</td>
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<td>Black</td>
<td>1.48 (0.39)***</td>
<td>1.27 (0.24)***</td>
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<tr>
<td>Hispanic</td>
<td>1.24 (0.22)***</td>
<td>1.10 (0.09)**</td>
</tr>
<tr>
<td>Other</td>
<td>1.15 (0.14)***</td>
<td>1.06 (0.06)</td>
</tr>
<tr>
<td>Age</td>
<td>0.98 (-0.02)***</td>
<td>0.99 (-0.01)***</td>
</tr>
<tr>
<td>Year</td>
<td>1.07 (0.07)***</td>
<td>1.27 (0.24)***</td>
</tr>
<tr>
<td>“Susp. Beh”</td>
<td>5.77 (1.75)***</td>
<td>5.95 (1.78)***</td>
</tr>
<tr>
<td>CT-Level</td>
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<td></td>
</tr>
<tr>
<td>Con. Dis.</td>
<td>1.20 (0.18)***</td>
<td>1.16 (0.15)***</td>
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<tr>
<td>Prop. Black</td>
<td>1.07 (0.06)***</td>
<td>0.98 (-0.02)</td>
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<tr>
<td>Employed Fem</td>
<td>0.97 (-0.03)</td>
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<tr>
<td>Owner-Occ.</td>
<td>0.96 (-0.04)*</td>
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<tr>
<td>Crime (17)</td>
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<td>0.97 (-0.03)*</td>
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<td>Violent Crime</td>
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<td>Non-Violent</td>
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<td>Population</td>
<td>0.95 (-0.05)***</td>
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<td>Int. Var (ICC)</td>
<td>.27*** (7.6%)</td>
<td>.45*** (12.0%)</td>
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