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Gender and Prosecutorial Decision Making: An Examination of Representative Bureaucracy Theory

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

GENDER AND PROSECUTORIAL DECISION MAKING: AN EXAMINATION OF
REPRESENTATIVE BUREAUCRACY THEORY

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

In

INTERNATIONAL CRIME AND JUSTICE

by

Maria E. Arndt

2022

To: Dean John F. Stack, Jr.
Green School of International and Public Affairs

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Florida International University, 2022

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DEDICATION

I dedicate this dissertation to my family, friends, and mentors that have guided me along
this path

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ABSTRACT OF THE DISSERTATION
GENDER AND PROSECUTORIAL DECISION MAKING: AN EXMANINATION OF
REPRESENTATIVE BUREAUCRACY THEORY

by

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Prosecutors are powerful actors in the American criminal justice system, yet relatively little is known about their decision making compared to other legal agents. They decide to bring charges against defendants and are granted substantial influence over plea negotiations, thus affecting the trajectory of case outcomes. While an emerging body of scholarship examines what factors influence prosecutorial discretion, there are few studies that examine how their identities influence case outcomes. Once a traditionally, white, male-dominated field, prosecution is becoming more diverse. Research suggests representation affects organizational output. This theory, known as representative bureaucracy, suggests that more diverse organizations have more democratic output. In prosecutors' offices, this may entail policies that reduce unwarranted disparities stemming from arrests or advocating for vulnerable victims. To assess the effects of representative bureaucracy theory on criminal case processing, the current study analyzes the relationship between prosecutor gender and charge reductions, prosecutorial dismissals, plea dispositions, and custodial sentences. Based on tenets of

representative bureaucracy theory, it is possible female prosecutors' cases will result in fewer unwarranted disparities for defendants. Mixed effects logistic regression models are used to (1) show the effects of variation in prosecutors assigned to cases on the four outcomes and (2) show the effects of variation in prosecutors assigned to cases on the four outcomes while controlling for a variety of defendant and legal factors. Explained variation due to prosecutors is high in charge reductions, but considerably lower in others. Results also do not show a significant influence of prosecutor gender on the four case outcomes except for a few differences. These results are discussed in the context of organizational socialization in prosecutors. Prosecutors' individual identities may not be as influential for decision making. Office culture may lead prosecutors to align their decision making to fit the norms and practices of their organization.

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CHAPTER 1

INTRODUCTION

Criminal justice contact has substantial consequences for individuals, their families, and communities. Often, the costs are experienced by those who are already marginalized including racial and ethnic minorities, women, LGBTQ+ people, and lower-income individuals. This fact is widely acknowledged in criminal justice research; however, these inequities persist despite efforts such as community policing, progressive prosecution, and sentencing reforms. Evaluation of policing and legal reforms demonstrate these policies have unintended consequences that either exacerbate disparities or are ineffective (e.g., de Maillard & Terpstra, 2021). One lesser explored area of research is the effect of legal actors' identities and their influence on unwarranted disparities and case outcomes. Prosecutors hold significant power and, in recent years, are more diverse than ever. This provides researchers with an opportunity to examine how this shift in the demographics of prosecutors' offices affects case outcomes and the prevalence of unwarranted disparities.

American courts are powerful entities comprised of judges, attorneys, and other law enforcement agents making consequential decisions that affect the trajectory of criminal cases. Most notably, prosecutors are granted considerable discretion that subsequently influences various points of case processing. For example, they can decide to file charges against individuals accused of crimes on behalf of the state. After this decision, they can choose which charges to file and whether to engage in charge or plea negotiations with relatively little oversight (Tonry, 1993; Sklansky, 2018). When cases are disposed through pleas, defendants forgo the opportunity for a jury to convict or

acquit them; instead, they rely on prosecutors and defense counsel to come to an agreement. Despite this enormous responsibility and the power granted to them, little is known about the American prosecutor compared to other legal actors.

Previous scholarship notes the persistence of unwarranted disparities in case outcomes despite checks and legislation aimed at reducing these differences (Spohn, 2017). There is evidence that despite sentencing laws intended to curb differences in sentences that are not due to offense or other relevant case information, there are still inequities in case outcomes for similarly situated defendants (e.g., Anderson & Spohn, 2010). Most studies of disparities in case outcomes focus on offender and offense characteristics because these datapoints are routinely collected and readily available to researchers. For example, research consistently shows that more punitive or longer sentences are experienced by younger, minority defendants (B.D. Johnson & Lee, 2013; Tuttle, 2019). Other relevant predictors of differences in sentences include criminal history (Tillyer et al., 2015) and victim preferences (Myers, 1979). There is also evidence of conditioning effects of the above factors at sentencing; for example, race has been shown in a recent study to condition the effects of criminal records at sentencing (Franklin & Henry, 2020). Black, Hispanic, and Native American defendants have higher odds of incarceration for each increase in prior convictions.

The characteristics of the court actors who make decisions about cases and defendants are also a potentially important source of disparity in criminal justice outcomes like sentencing. Individual identity and lived experiences may play an important role in case processing, especially as diversity in the legal profession increases (McWithey, 2020). Once a predominantly white and male-dominated field, prosecution

has changed because more women and minorities choosing to become lawyers and judges. There has been a push for formerly marginalized groups to access to decision making power to better serve their communities (Bradbury & Kellough, 2011). Despite these advancements, little is known about the degree of this influence or the contexts in which decision making might be affected by prosecutors' attributes. Of the few studies on this topic, most focus on judges and sentencing outcomes (Bielen & Grajzl, 2020; Boyd & Nelson, 2017; Myers, 1988; Steffensmeier & Herbert, 1999). Even fewer focus specifically on prosecutors' or judges' attributes like race, ethnicity, or gender despite their discretion at various point of case processing (Kim et al., 2015; Stemen & Escobar, 2018; Wei & Xiong, 2020; LaPrade, 2020).

An extensively studied theoretical perspective that has only been recently applied to courts research is representative bureaucracy, which is the idea that increased participation of marginalized groups in governance, business, and other institutions leads to more democratic output (Kingsley 1944; Meier, 1975; Mosher, 1968). Subsequent work developing the theory began in the 1970's as sociologist argued that different social groups should have representatives in government and other important entities. Many scholars felt this theory was used to argue for more equitable institutions that do not reinforce classism by having predominantly middle-class members (Krislov, 2012). Moving beyond theory, researchers expanded work on representative bureaucracy to include testable hypotheses and types of representation (passive, active, and symbolic representation) (Lim, 2006).

Recent meta-analyses of representative bureaucracy theory research find representation is important in various contexts; however, there are still fields in which the

effects of representation have not been adequately explored (Bishu & Kennedy, 2020). Representation has been observed in studies of law enforcement and policing (Bradbury & Kellough, 2008), yet it has not been extensively studied in prosecutors' offices. Since prosecutors have a great influence over local and state policies, the increased participation of formerly marginalized groups in the legal system may influence how cases are handled. Based on this perspective, more diversity in law enforcement, the legal profession, and the judiciary would reduce unwarranted disparities that plague the American legal system.

Grounded in the tenets of representative bureaucracy, this dissertation assesses the role of prosecutor gender on case outcomes in a mid-sized Florida jurisdiction. With recent data from 2017 and 2018, the analysis measures the differences in case outcomes for cases handled by male and female prosecutors. Using mixed effects logistic and mixed effects linear regression models, the outcomes observed in this study are (1) charge reductions, (2) prosecutor-led dismissals, (3) plea dispositions, and (4) pleas resulting in custodial sentences. These models are better suited for this study theoretically and statistically because cases are grouped underneath their assigned prosecutor. Cases handled by one prosecutor, are more likely to have consistent outcomes across similarly situated defendants compared to cases handled by another attorney, particularly when considering the gender of the prosecutor.

Previous studies of unwarranted disparities have relied on older data sources (Kutateladze, 2018; Shermer & Johnson, 2010), which limits how reflective the results from these analyses are for cases currently being processed in criminal courts. This study uses case-level data from 2017 and 2018 gathered from a Florida State Attorney's Office.

The dataset contains both administrative data from the State Attorney's Office and pretrial detention data from the corresponding county sheriff's office. There is evidence pretrial detention adversely affects subsequent case outcomes like disposition (Harrington & Spohn, 2007) and sentence lengths (Oleson et al., 2016). There is extensive defendant and case information, as well prosecutor-level variables. Prosecutor identification numbers are used to nest cases at the second level and judge names are used to nest cases at the third level.

Finally, the hypotheses presented in this dissertation are anchored in representative bureaucracy theory which is based on the importance of minority participation in public-facing institutions. Typically, studies of prosecutorial discretion are anchored in focal concerns theory (e.g., Brady & Reys, 2020; Galvin & Ulmer, 2021; Ulmer et al., 2007), or other theories related specifically to criminal justice. These theories typically focus on defendant characteristics that influence decision making without consideration for prosecutor. There is evidence in other fields of study that women decision makers are more likely to align themselves with marginalized groups because they are historically underrepresented in many professional settings (Beaman et al., 2012; Lim, 2006; Schuck, 2018). As a result, outcomes for minority defendants may be more democratic when women are decision makers because they are hyper-aware of systemic inequality.

The analyses include prosecutor and defendant information to examine how these factors influence charging, plea bargaining, and sentencing. Chapter 2 opens with a discussion of relevant theories of gender in the context of the courts. In Chapter 3, I examine past research on prosecutorial discretion and discuss how legal agents'

characteristics can affect criminal case outcomes. Chapter 4 outline the gaps in the literature this study will address, the method of analysis, and a description of the data used in these analyses. Chapter 5 includes descriptive results and Chapter 6 contains the unconditional and random effects models for charge changes from referral to filing, prosecutor-led dismissals, plea dispositions resulting in custodial sentences, and custodial sentence type models. Chapter 7 ends with a discussion focusing on the implications for the results, the limitations of the current study, and remedies and directions for future research in prosecutorial decision-making.

CHAPTER 2

THEORETICAL FRAMEWORK

Representative Bureaucracy

Representative bureaucracy theory is a useful perspective for understanding how legal actors' identities may shape their decision making and influence outcomes for defendants. The foremost theory related to representation government and other public-facing institutions is representative bureaucracy, which contends that institutions are more democratic and equitable when they reflect the communities they serve (Kingsley, 1944). The arguments for representation were largely moral; sociologists argued minority groups should have access to discretion and influence in public institutions to reduce classism in government (Krislov, 2012). Once these groups were members of government, public education, and law enforcement, society would be more equitable.

Building upon Kingsley's (1944) initial formulation, Mosher (1968) argued that there are two distinct types of representation to be achieved by diverse or underrepresented groups: passive and active. Passive representation refers to organizations simply including members that reflect the diversity of the community. Importantly, even when minorities do not adopt the opinions of the rest of their group, they can still passively represent that group with their presence. This form of representation does not guarantee action; rather, it is symbolic. Yet, passive representation can still be valuable in its symbolism, because it signals to other minorities or vulnerable groups that they too can become members of government, legal, or corporate entities. Furthermore, diverse local governments are more likely to enact inclusive policies than more homogenous entities (e.g., Atkins & Wilkins, 2013).

In prosecutors' offices, the presence of more women in prosecutors' offices as line attorneys, division chiefs, and even elected attorneys is valuable to demonstrate the important role women can play in law enforcement. Prior research in other contexts implies that offices may also be perceived as more legitimate if they are reflective of the community (e.g., Riccucci & Van Ryzin, 2017). Two general conclusions from extant studies of representative bureaucracy include (1) members of more diverse organizations make different decisions than homogenous ones, and (2) it is more likely to occur in organizations with more discretion afforded to members.

Models examining the effects of representation often show a correlation between passive representation and outcome variables, but do not offer much information about how much the outcomes can be attributed to passive representation alone (Lim, 2006). To remedy this issue, Lim (2006) further classified different aspects of representation, including the distinction between indirect and direct contributions of minority bureaucrats. He referred to these concepts as precursors to active representation. The classification of active representation refers to minorities in positions of power using their influence or discretion to bolster the needs of other minorities in their communities.

There is a sizable body of literature that examines representation and organizational output (Andrews et al., 2013; Andrews & Miller, 2013; Bradbury & Kellough, 2011; Day, 1996; Fernandez et al., 2017; Grissom et al., 2015; Kennedy, 2014; Meier, 2019; Smith & Monaghan, 2013; Sowa & Selden, 2003). Scholars argue passive representation eventually leads to active representation, which results in changes in output. Shared goals and priorities can be "defined, activated, and protected" through active representation once passive representation occurs (Day, 1996; p. 23). Certain

issues that were not prioritized in more homogenous organizations may be prioritized in more diverse organizations. As a result, members can actively pursue policies that aid marginalized groups (e.g., Hinderer & Young, 1998). Once more diversity is observed within a company, school, or government entity, active representation can advance underreported groups' causes by allowing diverse members of an institution to shape policy or make decisions that advance the cause of the organization (Andrews et al., 2014; Andrews et al., 2005).

A sizeable body of scholarship examines how these are related to bureaucratic decision making and subsequent outcomes. There are three “substantive effects of passive representation” that link diversity in organizations to outcomes: partiality, shared values, and empathetic understanding (Lim, 2006; p. 194). *Partiality* refers to preference of the minority one belongs to group over all others. Research examines this in various contexts (e.g., Riccucci, 2009). Riccucci (2009) identified increased passive representation in federal government positions; however, when she specifically examined the race and ethnicity in addition to gender, she found minority women were still the least represented in government positions. White women have increased their participation in government and corporate positions, however, that does not always appear to translate into shared values or a willingness to include minorities such as Black and Hispanic women into these positions. These groups are typically siloed in lower-paying positions with less influence on organizational policies and practices (Riccucci, 2009).

There is evidence of this effect in various contexts including local government (Beaman et al., 2012; A.E. Smith & Monaghan, 2013) and education (Nicholson-Crotty et al., 2016). Prior research also suggests that the presence of women in positions of

power leads to improved outcomes for women and girls in their communities and organizations. Women in government leadership is associated with increased educational attainment of young girls and a closing gap between familial expectations of males and females (Beaman et al., 2012). Beaman et al. (2012) found girls in the West Bengal state in India were more likely to pursue post-secondary education in villages where women held leadership positions. This has also been examined in the United States; there is evidence that Black school-aged girls are less likely to become teen mothers if Black female teachers are present in schools. High schools with Black female teachers were also more likely to lead to higher educational attainment for Black students overall (Atkins et al., 2013).

In a more recent study, Nicholson-Crotty and colleagues (2016) examined race of teachers and referrals to gifted programs for Black students, finding partial support for representation. Black students were more likely to be referred to gifted programs when taught by Black teachers, but increased presence of Black teachers in school did not translate to referrals or improved test scores (Nicholson-Crotty et al., 2016). Importantly, the analyses of individual-level (student scores) and aggregate (school characteristics) data allows the authors to assess the odds students will be referred to gift programs, the characteristics of the school, and the interactions between these factors (Nicholson-Crotty et al., 2016). This study also is an example of studies incorporating both passive and active representation.

In contrast to partiality, *shared values* refer to minorities or formerly marginalized bureaucrats bolstering the cause of minority groups out of solidarity (Kranz, 1974; Lim, 2006; Meier, 1993). Early studies of representative bureaucracy acknowledge the value

of comradery among different minority groups. Kranz (1974) argued marginalized bureaucrats, like women, are more likely to achieve equitable outcomes and governance even if they do not belong to a particular minority group because they are more aptly able to empathize with their status. In the context of criminal justice outcomes, prosecutors from formerly marginalized groups, like female prosecutors, may have less unwarranted disparity in their caseloads compared to male attorneys.

Partiality and shared values are related to the third type of passive representation, called *empathetic understanding*, which refers to minorities' ability to understand the ideas of their group or other minority groups, even if they do not hold those beliefs themselves (Herbert, 1974). Herbert argues that understanding how minorities may be affected by certain policies is important because non-minorities do not share the same lived experiences as minorities. Based on this theory, more female prosecutors would lead to more equitable outcomes due to empathetic understanding of minority defendants (Lim, 2006).

Representation in Various Contexts. There are practical examples of representation in both criminal justice and other fields (Bradbury & Kellough, 2008; Fernandez et al., 2017; Headley & Wright, 2020; Johnston & Houston, 2018; Selden, 1997; Sowa & Selden, 2003). Importantly, the presence of female teachers in public schools is associated with higher test scores for young girls, leading to be place in more advanced courses (Keiser et al., 2002). Keiser and colleagues also acknowledge the importance of administrative structure in highly bureaucratic organizations and whether female bureaucrats are evenly distributed throughout these organizations. As high-ranking bureaucrats, they can leverage their positions to benefit women and minority

clients by making more equitable decisions. This effect has been demonstrated in various studies of government agencies.

Selden (1997) examined the salience of passive and active representation for racial minorities in federal Farmer's Home Administration (FHA) offices. This office provides low-interest loans to low-income people who live in rural areas to rebuild or fix old homes. She found that loans and other resources were more likely to be allocated to Black, Hispanic, and Asian populations when those groups help positions in the FHA. In this analysis, the connection between passive and active representation is the presence of minorities in the FHA that are sensitive to housing discrimination that minorities experience. They would then tailor policies to address this issue because they share similar experiences of discrimination (Meier, 1993; Selden, 1997). This scenario is particularly salient for gender issues in the workplace and when the official has the discretion to act in women's best interests (Keiser et al., 2002). There is also evidence of the link between passive and active representation in political entities; over a two-year period, the presence of women and minorities in the U.S. Senior Executive Service (SES) is associated with more federal budget items directed toward those minority groups' interests (Kim, 2003).

Bradbury and Kellough (2008) examines active representation in local government, demonstrating the importance of racial diversity in determining policy. Using survey data from citizens and local government officials in two Georgia counties, the authors hypothesized Black officials would be more likely to advocate for causes that would improve Black communities. They also suspected Black officials would have similar attitudes about a range of issues included in the survey, which was supported.

Representation is also important for policing and crime reporting. Prior research suggests sexual assault victims are more likely to report when women are represented on the force, which provides support for passive representation (Meier & Nicholson-Crotty, 2006). They also demonstrate the importance of active representation because departments with more women police officers had higher arrest and clearance rates and for sexual assaults. Overall, female officers in this study seemed to understand the gravity of sexual offenses and had a greater empathy for sexual assault victims' experiences considering victims were mostly female.

Research also suggests that minority representation affects officer-suspect interactions. A few studies find Black suspects are more likely to show deference to police if black officers are represented and involved in their arrests (Theobald & Haider-Markel, 2009). Representation could, in this case, lead to de-escalation and fewer officer-involved incidents. However, some studies find the opposite effect. Brown and Frank (2006) found Black officers are more likely to make an arrest when the suspect was Black, while others find the presence of Black officers in law enforcement was associated with an increase in racial profiling, rather than the opposite effect (Wilkins & B.N. Williams, 2008).

Some studies with more recent data find mixed effects of representation. For example, Headley and J.E. Wright (2020) found use of force incidents against Black suspects are less likely when the arresting officer is Black, indicating the positive influence of representation. However, they also found White and Black officers were less likely to arrest White suspects overall (Headley & J.E. Wright, 2020). Headley (2021) also found institutional safeguards like external review boards influence minority

representation in police-suspect interactions. Departments with such review boards demonstrate minority representation is significantly associated with a decrease in police use of force incidents (Headley, 2021). Importantly, this finding contrasts with earlier studies of representation that argue institutions with fewer safeguards or regulations will show more evidence of active representation because they are freer to make such decisions (Wilkins & B.N. Williams, 2008).

Given the relevance of representative bureaucracy theory in policing, it is possible representation influences prosecutorial discretion as well. Furthermore, there is a sizeable body of scholarship that examines the influence of diversity in the judiciary on sentences. Some research finds Black judges are more lenient than their White colleagues are based on balance theory, or the idea that minorities or women in positions of power will “balance out” gender or racial disparities by using their discretion (Ifill, 2000; M.R. Williams, 2017). Qualitative analysis also shows women are more likely to impose more lenient sentences than male judges (Bogoch, 1999). Other find that Black and female legal actors are more punitive (Steffensmeier & Britt, 2001). Later research supports gender differences in judicial discretion (Kutateladze & Crossman, 2009). The emphasis on studying the effects of representation on policing and judicial discretion still leaves an important gap in prosecutorial discretion scholarship.

The Role of Organizational Socialization. Some scholars argue there are limits to representation and what it can do for marginalized communities (e.g., Headley et al., 2021). The response to studies that do not find differences for minorities based on representation is typically socialization. In professional settings, individuals’ views are shaped by the values and goals of the organization (Schein, 1978). Members of an

organizational form a professional identity through training, interactions with peers, and observations of more seasoned group members. They form networks and find role models to emulate (Pratt et al., 2006). This perspective has historically been presented in contrast to representative bureaucracy (Hong, 2017). The traditional outcomes of most socialization studies find women who work in male-dominated fields conform and therefore their decisions do not differ much from male group members (Pratt et al., 2006).

Women may use assimilation as a form of protection. Men are typically viewed as more competent and objective, so women earn respect by adopting the mannerisms and attitudes of their male colleagues (Hatmaker, 2013). Hatmaker (2013) studied gender and the tactics women use in the engineering field, finding that women were more likely to overtly state their preparedness, qualifications, and demonstrate their technical competence. Female judges have also been shown to have their qualifications questioned more than male judges. In the courtroom, women may have to demonstrate their skills and competence more frequently to be taken serious by male colleagues (Bogoch, 1999). To assimilate, women may also adopt traditional views of male counterparts. This suggests that both male and female prosecutors will charge punitively, and male and female judges will employ the longest possible sentence. Extant scholarship also suggests women are at higher risk for failure in leadership positions, particularly when those leadership positions are in traditionally masculine fields (A.E Smith & Monaghan, 2013). Thus, they will conform to reduce this risk.

Several studies of police interactions with suspects have demonstrated the role of socialization. These studies may demonstrate no differences in outcomes for women or

minorities (Novak et al., 2011). Other find the opposite results of representative bureaucracy theory studies; Black suspects often have higher odds of arrests during interactions with Black officers (Brown & Frank, 2006; Mbuba, 2018) and women officers are more likely to arrest women suspects (Mbuba, 2018). Other studies find women are more likely to arrest suspects regardless of suspect attributes (Huff, 2021).

The structure of an organization can also affect representation over time. Some studies testing the effects of representation find that institutions with formal office practices or specific guidelines are less likely to find support for representative bureaucracy theory (Wilkins & B.N. Williams, 2008). Wilkins and Williams found police departments with clearly delineated office policies are less likely to demonstrate active representation. In this environment, active representation may be less likely to occur because it can be difficult to achieve with such organizational safeguards. They argue that these defined policies lead to the opposite process; members will conform to traditional standards and policies of the organization. Organizational socialization is readily observed in some police departments but not others (Conti & Doreian, 2014). Researchers argue this is due to different policies and levels of formality because highly bureaucratic organizations like police agencies tend to have more cohesion among members.

In a highly structured environment, one would expect individual identity is less salient for decision making. Conversely, in offices with less formalized policies and procedures, individual perceptions may be more influential than the group. One of the main assumptions of representative bureaucracy theory is that representation is associated with outcomes if certain conditions are met. Importantly, discretion during decision

making and the outcomes must be relevant to bureaucrats. Prosecutors are granted considerable discretion, policies and practices vary across offices and are typically informal (Tonry, 1996; Metcalfe & Chiricos, 2018), and their decisions are consequential for the communities they serve. In this environment, the effects of representation on case processing may be observed. There are several ways prosecutors' offices may exhibit both passive and active representation, however, this has not been adequately explored in previous research.

Integrating Gender, Prosecutorial Discretion, and Representative Bureaucracy Theory

There is a sizeable gap in research assessing the importance of legal actor attributes and representation in the legal profession. By integrating traditional studies of legal discretion and representative bureaucracy, the current study bridges a gap by contributing to a greater understanding of how diversity can affect outcomes. According to this perspective, prosecutors' offices that mirror the communities they serve is important for both policy and practice. Women can use their discretion regularly for individual cases and in setting office policies that reduce unwarranted disparities over time.

Representative bureaucracy has been linked to performance and output in a variety of contexts including local governance (Bearfield, 2009), education (Atkins et al., 2013; Nicholson-Crotty et al., 2019), and law enforcement (Andrews & Miller, 2013; Hong, 2017; Mbuba, 2018; Meier & Nicholson-Crotty 2006; Schuck, 2018; Theobald & Haider-Markel 2009; Wilkins & B.N Williams, 2008). Despite the relevance of representation in policing, few studies have examined its effects in court outcomes.

Recently, Baker, and Hassan (2020) examined case acceptance in a Northern U.S. County. They included prosecutor gender, a variety of defendant, victim, and case information to assess differences in odds of case acceptance. The study has four hypotheses: (1) prosecutors would be more likely to accept cases when they involved male defendants, (2) there would be no significant differences for male and female prosecutors case acceptance decisions all offenses, (3) female prosecutors would be more likely to accept cases for sexual assault and domestic violence cases against male defendants, and (4) female prosecutors with more years of experience will be more likely to accept sexual assault and domestic violence cases compared to male prosecutors and less experienced female prosecutors (Baker & Hassan, 2020). Results showed similar odds of case acceptance across all offense types.

They also found female prosecutors were more likely to accept cases involving sexual assault. The odds increased when the victim in the case was a female but were less when the victim was not White. Furthermore, female prosecutors with more experience were more likely to accept sexual assault and domestic violence cases than male prosecutors or newer female prosecutors. This implies representation is important for some offenses more than others. Baker and Hassan's research highlights a gap in studies of prosecutorial discretion. Prosecutors can exercise their discretion in a way that mirrors their beliefs as well as the law, policies of the State Attorney, and law enforcement. Female prosecutors can serve as advocates for female defendants by both passive and active representation. Prosecutors' offices may be more efficient if they are representative of the communities they serve.

Prosecutors' offices and courts are hierarchical organizations with high caseloads and multiple goals (Blumberg, 1967; Feely, 1973). While representative bureaucracy theory has typically been applied to government organizations, education, and policing, it provides a useful framework for criminal case decisions when considering the attributes of prosecutors and judges due to the structure of the court system. Representation means legal actors reflect the communities they serve and allows them to advocate for defendants from diverse backgrounds. Through active representation, prosecutors have discretion that allows them to actively make decisions that can either advance or hurt the interests of a particular group. Judges also have discretion over the evidence that they allow at trial (Gatowski et al., 2001). Individual attributes have been the focus of criminal justice research; little attention has been paid to the organizational structure of legal agencies (Feely, 1973). This is changing in response to the renewed focus on prosecutorial discretion and transparency in the legal process. Discretion, while regulated in part by mandatory minimums, is still vast and unfettered for prosecutors (Ghadge, 2020).

Prosecutor's offices are becoming more diverse, which necessitates empirical work assessing how diversity affects decision making (McWithey, 2020). Most studies are focused on the importance of defendant characteristics, case information, and prior criminal history. However, little is known about how prosecutor attributes and experiences affect decision making. Some studies have examined this issue without specifically testing the importance of representation (e.g., Arndt, 2021; King et al., 2010). For example, King et al. (2010) found diversity in the legal profession reduced the salience of prosecutor race and ethnicity at sentencing.

In the past few years, prosecutors, particularly newly elected prosecutors, have espoused progressive approaches to criminal case processing aimed at reducing unwarranted disparities, the reliance on incarceration, and the collateral harms of prosecution to defendants, victims, and their families. A new wave of elected prosecutors is also more diverse than ever before, yet a 2015 investigation found most elected prosecutors are still white men (Kelly, 2015). However, these incumbents are being challenged by younger and more diverse groups of attorneys. These attorneys have considerable public support and are beginning to enact more progressive policies aimed at reducing the traditional punitive nature of prosecution (Reflective Democracy Campaign, 2022).

Representation in the field of prosecution has been vastly understudied, which limits the conclusions regarding case processing researchers can draw from existing knowledge. Given that prosecutors wield significant power over charging, plea bargaining, and subsequent case outcomes, it is imperative to understand how increased representation and diversity affects how cases are handled. To contribute to this body of research, this dissertation links extant studies of criminal case processing and representative bureaucracy as a theoretical framework to explain variation in decisions across men and women prosecutors. Little is known about how prosecutors' attributes affect their decision making, despite the theoretical relevance of individuals' lived experiences and decisions. The current study will contribute to this body of scholarship by assessing the influence of line prosecutors' gender on four case outcomes.

CHAPTER 3

LITERATURE REVIEW

The Prosecutor's Role in Case Processing

The influence of prosecutors on criminal case outcomes in American state courts is widely acknowledged. Prosecutors derive this influence from statutes that allow them to pursue any actions that constitute crime. Prosecutors are required to pursue convictions but have discretion to refuse to prosecute cases when appropriate (American Bar Association *Standards for the Prosecution Function*, 2017). As per *United States v. Cox* and *In Re United States*, prosecutorial power should not be regulated by federal or state governments because prosecutors should work to achieve just outcomes without fealty to a particular political party or administration. While these decisions were important for maintaining the separation of powers and allow prosecutors to pursue public safety interests, they also guaranteed that prosecutors would be granted substantial discretion with limited oversight (Tonry, 1996). Before the 1970s, this unrestricted discretion was granted to judges at sentencing; sentences were individualized which led to concerns that minorities were being punished more severely compared to white defendants for similar offenses (Frankel, 1972). Frankel's report asserted judges were largely responsible for the overrepresentation of minorities in prisons because they did not have limits on sentencing discretion.

This report also paved the way for new laws restricting judicial discretion. The Anti-Drug Abuse Act of 1986, perhaps the most important example of the expansion of prosecutorial power, established mandatory minimum sentences for drug offenses. This law also made penalties for certain drugs higher than others. Defendants convicted of

crack-related offenses received much harsher sentences than defendants charged with cocaine-related offenses. (Nelson, 2005). This disproportionately affected Black defendants because they report more crack use compared to white and Hispanic defendants to report more powder cocaine use (Riley, 1998). After the implementation of these laws at the federal level, states began adopting truth-in-sentencing laws, mandatory minimums, and habitual offender laws. One habitual offender law, known as the “Three Strikes and You’re Out” law has led to disproportionately harsh outcomes for certain defendants (Iyengar, 2008). The most prominent example of the effects of these laws is in California, which was the first state to adopt three-strikes laws.

These laws were intended to reduce judicial discretion in the hopes unwarranted sentencing disparities would no longer be an issue. However, these laws merely shifted discretion to prosecutors. Prosecutors now play a more pivotal role in case outcomes (Ball, 2006; Romain & Freiburger, 2013; Starr & Rehavi, 2013; Sklansky, 2018). They act as gatekeepers of the courts while influencing decisions that were once solely up to the discretion of judges (Kersetter, 1990). Prosecutors can exercise discretion at both earlier stages of case processing like charging and dismissals, and later during plea to obtain convictions and influence sentences. Prosecutors can change charges at any point in case processing, and plea negotiations are up to the discretion of individual prosecutors.

These decisions have notable effects on case outcomes, since prosecutors can either circumvent or trigger mandatory minimum sentences through charging discretion (Vance & Oleson, 2014). Given the reliance on plea bargaining as the primary form of case dispensation in the United States, prosecutors exert considerable influence over case

outcomes (Ghadge, 2020). A growing body of research examines the effect prosecutors have on case outcomes in response to the displacement of discretion to prosecutors.

Studies focused on prosecutors and their role in case processing assess the impact of various factors on differences in outcomes. Early studies examine the effects of case information like victim and witness credibility (Frohman, 1991; Spohn & Tellis, 2014; Kaiser et al., 2017), revealing several important findings. Studies examining the effects of victims often analyze charging decisions for sexual assaults, as victim testimony is the sole or most important piece of evidence. Prosecutors are more likely to pursue charges against suspects when victims experience serious bodily harm (Worrall et al., 2006). Worrall and colleagues (2006) also found victims' willingness to pursue charges result in felony charges as opposed to charge reductions to misdemeanors.

Others assess how case specific information like offense type and defendants' criminal histories influence both earlier decisions and final sentences (Bishop & Frazier, 1984; Roberts, 1997). Later studies examine the condition effects of criminal history on racial and ethnic disparities, finding disparities even in models that account for the interaction of race and criminal history (Franklin & Henry, 2020; Hester & Hartman, 2017).

A relatively large body of criminal case processing research evaluates the importance of defendant characteristics. Much of this research focuses on the effects of defendant race and ethnicity on outcomes (Baumer, 2013; Kutateladze et al., 2014; Kutateladze et al., 2016, Kutateladze, 2018; Mitchell, 2005; Zatz, 2000). Other studies examine the effects of defendant gender on case processing (Albonetti, 1987, 1991; Demuth & Steffensmeier, 2004; Donnelly & MacDonald, 2018; Farnworth & Teske,

2008; Kruttschnitt & McCarthy, 1985). These studies find disparities based on these defendant attributes that are not explained by other case-related information, with a few notable exceptions (e.g., Bishop & Frazier, 1984).

Some findings demonstrate Black and Hispanic defendants are more likely to have their cases filed even if they are later dismissed (Wu, 2016), result in a custodial sentence (Hester & Hartman, 2017), and receive longer sentences (Ridgeway et al., 2020). Others find Black and Hispanic defendants are less likely to have charges reduced or dismissed (Kutateladze, 2018). Importantly, some studies include defendant information while account for contextual factors that influence case outcomes like county demographics and caseload predictors (Franklin, 2010; LaPrade, 2020; Myers & Talarico, 1987; Stemen & Escobar, 2018; Ulmer & B.D. Johnson, 2006). These studies are a valuable contribution to the field of prosecutorial decision-making research because they consider external pressures that may influence attorneys' decisions and perceptions from early decisions to later plea negotiations.

Charging. Prosecutors act as gatekeepers to the criminal justice system (Kersetter, 1990). The first exercise of prosecutorial discretion is the decision to accept or reject cases at filing (Cole, 1969). At this point, they can also reduce arrest charges at this stage of case processing. Prosecutors are tasked with using available case information and evidence to determine how cases will progress through the court system. While most studies examine later decisions, there is a sizeable body of literature examining which factors influence charging decisions (e.g., Meeker et al., 2021; O'Neal & Spohn, 2017). In addition to their ability to reject cases at this point, they can reduce charges if they feel the arrest charges are too punitive or they cannot be proved.

There are many factors that contribute to prosecutors' decisions to reduce charges. Importantly, charge reductions are a tool prosecutors can use at various points during case processing to influence subsequent case outcomes. At both these decision points, prosecutors are granted considerable discretion with minimal oversight. Furthermore, there are various factors that influence prosecutors to reduce charges.

Some research assesses the importance of resource conservation and caseload management to explain charging decisions. State prosecutors have higher caseloads that affect their decision making (Gershowitz & Killinger, 2011). They can also reduce, or even reject charges to address overzealous policing (Hepburn, 1978). Advocates for prosecutorial reform emphasize the importance of selective prosecution, which refers to the rejection of cases that either drain scarce office resources or are based on faulty evidence (Cole, 1971; Schmidt & Steury, 1989). Prior research suggests cases that are with more charges per case or more serious, complex offenses are more likely to have charges reduced at various points in case processing (L. Liu, 2022; Shermer & B.D. Johnson, 2010). This may be the result of an effort to streamline case processing. Some studies, however, examine the importance of case related characteristics like victim, witness, evidence, and other case specific factors.

Previous research examines the effects of these factors for sexual assault or domestic violence, finding victim characteristics influence their perceived credibility. In this context, prosecutors may use other criteria to evaluate whether they should file a case. Some analyses of case acceptance found victim characteristics were important considerations prosecutors used as evidence (Spohn et al., 2001). Prosecutors may be influenced by several competing concerns when deciding charges. When prosecutors are

faced with scant evidence, or victims who do not want to cooperate, their charging decisions are affected (O'Neal & Spohn, 2017).

Prior research suggests evidence is a salient predictor of prosecutors' charging decisions since this factor should theoretically reduce disparities based on defendant extralegal characteristics. In an early study of prosecutorial discretion at charging, Albonetti (1986) found the presence of evidence is the most important predictor of charging decisions. Later work also supports the salience of prosecutors' perceptions of victims, witnesses, and defendants (Beichner & Spohn, 2005; Frohman, 1997). These studies often examine one offense type, for example, Beichner & Spohn (2005) specifically analyzed sexual assault cases to determine the salience of perceived victim credibility on prosecutors' decisions to proceed with cases. These studies use data gathered from state prosecutors' offices, which have high caseloads and varying state laws that make comparisons between jurisdictions and studies tenuous.

In a study of early charge reductions in an urban New York state court, Bernstein and colleagues (1977) found several factors were significant predictors of charge reductions, including offense type, severity, and defendant race. Assaults were the most likely to have charges reduced compared to other offenses like burglary, larceny, or robbery. Furthermore, felonies were more likely to be reduced to misdemeanors. The authors pose two reasons for this finding. First, felonies have more room to be reduced compared to misdemeanors. Importantly, the study jurisdiction has high caseloads like many urban courts, so defendants are encouraged to plead guilty to a misdemeanor at first appearance to reduce the court's caseload (Bernstein et al., 1977). Finally, defendant race and gender were not significant predictors of charge reductions alone. However, the

magnitude of charge reductions for Black defendants was less than White defendants, which suggests they are still disadvantaged at this decision point.

Building upon this work, Bishop and Frazer's (1984) study of charge reductions in a Florida jurisdiction and included an important control: the number of counts for each case. Results show male defendants are more likely to have more severe charges filed and less likely to receive charge reductions. However, once pretrial detention, prior arrests and convictions, and offense severity are added into the model, the effects of gender are no longer statistically significant. Additionally, defendant race does not reach statistical significance (Bishop & Frazier, 1984). Albonetti (1992) also examined initial charge reductions in Florida finding race was not a significant predictors of charge reductions using both main and interaction effects. This finding may be attributed to the small sample size of 400 cases.

Kingsnorth and MacIntosh (2007) examined gender differences at several early decision points including case screening, charge reductions, dismissals, and the decision to file cases as felonies. Their analyses of charging revealed employment status, witness corroboration, and victim age were salient for charging male defendants, but not female defendants. Filing charges for female defendants was influenced by victim injury, victim cooperation, and substance use. The charge reduction model demonstrated offense severity, witness testimony, and victim cooperation were significant predictors of higher odds of charge reductions for male defendants. Some less intuitive findings emerged for female defendants: prior arrest record was associated with higher odds of charge reductions and coparenting status was not related to charge reductions (Kingsnorth & MacIntosh, 2007).

While the above studies examine charging decisions that occur early in case processing, most studies consider the importance of defendants' attributes in prosecutors charge reduction decisions that occur during the plea-bargaining process (Albonetti, 1992; Bernstein et al., 1977; Goulette, 2021; B.D. Johnson & Larroulet, 2019; Kutateladze, 2018; L. Liu, 2022; Wooldredge et al., 2015).

Dismissal. Many studies of early prosecutorial decisions examine prosecutor-led dismissals. Such studies focus on a variety of defendant, office, and case factors that influence dismissal decisions. These factors include perceived victim credibility, the relationship between the victim and the offender, victim or witness cooperation, and defense counsel type (Kutateladze & Leimberg, 2018; Sommers et al., 2014; Spohn, 2014). Prior research acknowledges the downstream orientation of prosecutorial decision making at early case processing (Frohmann, 1994). This proposition suggests prosecutors may be reluctant to prosecute cases if they do not feel they have enough evidence to take the case to trial, thus affecting dismissal decisions. In addition to evidentiary concerns, there may also be office-level factors that lead to dismissals. High caseloads have been widely cited to influence plea negotiations; however, it is also likely these concerns affect dismissal decisions (Nardulli, 1979; Wooldredge, 1989).

Prosecutors may also feel that, to maintain a working relationship with police officers, they need to charge and prosecute cases referred to their office (Arndt, 2021). Conversely, they may want to address disparities in the cases that are referred to their offices. This tension is evidenced by the differences in declination rates across offices. Some offices have nearly 100% case acceptance, leading to dismissals later in the legal process (Kutateladze & Andiloro, 2014). Other offices have higher case rejection at

initial screening, so dismissals are less common. Office policies, the relationship between elected prosecutors and police, and office caseload are features that influence dismissals beyond defendant characteristics.

In addition to organizational determinants of dismissals, race and other defendant identities are linked to prosecutorial dismissal decisions (e.g., Franklin, 2010b). Some prior research suggests unwarranted disparities in dismissals for Black and Hispanic defendants compared to White and Asian defendants (Baumer et al., 2000). Some studies even find no evidence of disparities in charge dismissals, even if minority defendants are disadvantaged later in case processing (Owens et al., 2017). Other studies find Black and Hispanic defendants have higher odds of case dismissals compared to similarly situated White defendants (Arndt, 2021; Bosick, 2021; Hartley & Tillyer, 2018; Kutateladze et al., 2014; J. Wu, 2016).

Kutateladze and colleagues (2014) examined multiple decision points for cumulative disadvantage. Analyses of dismissals showed Black defendants had the highest odds of dismissals, followed by Hispanic then Asian defendants. In fact, White defendants had the lowest odds of dismissals. Furthermore, pretrial detention was associated with higher odds of dismissals. Research suggests a link between race and pretrial detention (Menefee, 2018), which may contribute to these findings.

Importantly, research suggests in cumulative disadvantage studies that finds dismissals rates for Black defendants are more likely to have cases dismissed, but they are also more likely to receive custodial sentences (e.g., Kutateladze & Leimberg, 2018). Research in the Denver County District Attorney's Office also finds Black defendants have higher odds of case dismissal (Bosick, 2021). In this jurisdiction, Hispanic

defendants had the same odds of dismissals as White defendants. Initially, this report shows some evidence of leniency toward Black defendants based on the dismissal outcome. However, of cases that were not dismissed, White defendants are more likely to have prosecution deferred. Furthermore, drug cases for White defendants are more likely to be handled in drug courts as opposed to traditional court processing compared to Black and Hispanic defendants. Another study in a mid-sized Florida jurisdiction examined case screening, diversion, and dismissal decisions for low-level traffic offenses. Results showed Black defendants were more likely to have their cases end in dismissals compared to White and Hispanic defendants (Arndt, 2021).

The above studies indicate two potential considerations for policy and practice: prosecutors may acknowledge disparities and decline to prosecute, or these cases are not viable and should not have been filed to case screening (Kutateladze et al., 2014). Later analyses in the Manhattan District Attorney's Office demonstrate similar findings for minority defendants from less affluent neighborhoods (Kutateladze et al., 2016). Importantly, this finding suggests higher odds is partially due to higher numbers of cases involving Black and Hispanic defendants due to disparate policing. The relationship between policing and prosecutorial dismissals is noted, asserting these decisions can be used to address mistakes made by police during arrests (Gershowitz, 2018).

Plea Disposition. Another avenue for prosecutors to influence case outcomes is through negotiated pleas. At this stage, prosecutors can offer charge and sentence reductions in exchange for expedited case dispensation. Guilty pleas are more common forms of case dispensation compared to trials (Johnson et al., 2016; LaFree, 1985). Advocates of plea bargaining argue guilty pleas also allow defendants to avoid the rigors

of a trial while reducing the likelihood of aggravating case facts to become public (Ulmer & Bradley, 2006). In a sense, defendants receive a reward for pleading guilty and reducing court resource output.

Notwithstanding these benefits of plea bargaining, some scholars argue plea bargaining can be coercive for some defendants, leading to disparate outcomes. Minorities are typically less likely to plead guilty (Berdejo, 2018; Devers, 2011; Kutateladze et al., 2016; LaFree, 1980; Subramanian et al., 2020). At this stage of case processing, prosecutors wield immense discretion and there are several ways in which defendants can be negatively affected during plea bargaining (Kutateladze et al., 2016; Piehl & Bushway, 2007; Petersilia, 1985; Starr & Rehavi, 2013). Another possibility is that minorities are less likely to plead guilty because they are less trustful of the justice system and legal actors (e.g., Frenzel & Ball, 2008). Some research also finds no evidence of racial disparities (e.g., Shermer & B.D. Johnson, 2010). Recent studies have data examining charge reductions that occur during plea negotiations (e.g., B.D. Johnson & Larroulet, 2019; Metcalfe & Chiricos, 2018).

Kutateladze and colleagues (2016) examined plea bargaining for misdemeanor marijuana offenses with a distinction between charge and sentence bargaining. They found Black defendants, even in the full models, were disadvantaged. Hispanic defendants also received less favorable plea offers, but the disparities were greater for Black defendants. These defendants were less likely to receive reduced charge offers and they were more likely offered custodial sentences in exchange for guilty pleas.

Metcalfe and Chiricos (2018) similarly examined guilty pleas in a Florida jurisdiction. However, unlike Kutateladze and colleagues' (2016) study, the authors

included various offense types and severities in their analyses. Importantly, race, gender, and race/gender dyads were included in one model to determine the importance of various defendant identities on guilty plea dispositions. The second and third models were split by race (Black and White) to assess the influence of case, criminal history, and offense severity predictors on guilty pleas. Results showed Black defendants were less likely to plead guilty, but the dyads showed this finding was only significant for Black male defendants and not Black female defendants. Also, Black male defendants received the least favorable pleas. The models split by race were not different in terms of the significance of predictors of plea dispositions, but extensive prior records were associated with higher odds of going to trial in the model for Black defendants (Metcalf & Chiricos, 2018).

Testa and Johnson (2020) examined disparities in plea negotiations using data gathered from the Maryland Commission on Criminal Sentencing Policy. The authors included multiple jurisdictions and offense categories in the models, revealing several notable findings. Two logistic regression models demonstrated (1) Black and Hispanic defendants were less likely to plead guilty, and (2) interaction effects for age, gender, and race or ethnicity did not emerge as statistically significant. The authors hypothesized male minorities would be less likely to plead guilty, however, this was not the case. Three additional model compared the odds of different types of pleas including ABA negotiated pleas, non-ABA negotiated pleas, and open or non-negotiated pleas. Minority defendants, as expected, were more likely to plead guilty via ABA pleas because these are binding unlike non-ABA or non-negotiated pleas (Testa & Johnson, 2020). The results show unwarranted disparities may occur because minorities may be less trusting of the system.

Goulette (2021) examined the effects of race, gender, and a combination of race and gender on charge reductions from indictment to disposition and the magnitude of charge reductions. None of the race, gender, or combinations of race and gender were statistically significant in the multilevel models for charge reductions. However, in the charge reduction magnitude model, White male defendants received less favorable charge reductions compared to White female defendants (Goulette, 2021). Notably, this study does not contain ethnicity and gender interactions or evidentiary information, which may play a role in determining the instances and magnitude of charge reductions during plea negotiations.

Pretrial detention may also influence plea negotiations in addition to defendant identities. Prior research finds that defendants who are detained are disadvantaged compared to defendants released on bond or recognizance (Euvard & Leclerc, 2017; Sacks & Akerman, 2012). In fact, pretrial detainees plead guilty more often and faster than those released on bail (Petersen, 2020). Defendants who are not detained have more leverage because they are not primarily concerned with ending their confinement and they can aid in the preparation of their defense (Stevenson & Mayson, 2017).

Through plea negotiations, prosecutors have substantial influence over the types of sentences defendants will receive (Baumer, 2013; Meithe, 1987; Ulmer, 2012). There are several reasons why prosecutors influence the types of sentences defendants could receive. In addition to evidence that judges are more inclined to disregard risk assessment results or other more objective recommendations if prosecutors will agree to a different sentence (Metz, 2020), they can use leverage in earlier points in case processing to influence sentences. These findings and the fact that many judges are former prosecutors,

are evidence that judges and prosecutors' decisions are linked. The current state and federal judiciary mainly consist of former prosecutors who were attorneys during the tough-on-crime era (Demleitner, 2020). While the above studies typically account for a breadth of relevant defendant and legal characteristics, few studies incorporate prosecutor characteristics into analyses. A lesser explored area of research focused on prosecutor attributes and their effects on case outcomes.

Legal Actor Attributes and Case Outcomes

The above studies focus on defendant- and case-level factors that influence outcomes, however, comparatively few studies examine the influence of criminal justice actors' identities on case outcomes. Of these studies, most of focused on police officer and judge attributes. Prior research on police officer attributes and arrest decisions is mixed and often depends on the context in which arrests are made (Headley & J.E. Wright, 2020; Novak et al., 2011). Analyses of judges demonstrate differences in decisions related to judge gender, race, ethnicity, political affiliation, and prior career experience (Boldt et al., 2021; Boyd et al, 2010; Boyd & Nelson, 2017; Collins & Martinek, 2011). Even fewer examine prosecutor traits due to limited availability of data. These studies also control for these factors without a focus on the effects of these as main predictors of differences in charging, dismissals, and dispositions (e.g., Arndt, 2021; King et al., 2010).

Police Officer Attributes. A large body of literature focuses on the factors that influence arrest decisions and use-of-force incidents with a focus on suspect characteristics (e.g., Arndt et al., 2020, Brandl & Stroshine, 2013; D'Alessio & Stolzenberg, 2003; Kochel et al., 2010; Skogan & Frydl, 2004; D.A. Smith & Visher,

1981). A smaller subset of this research examines the effect of officer characteristics such as race, ethnicity, and gender on arrest decisions.

Recent studies examine the effects of officer and suspect race on arrest decisions or instances use-of-force (Brown & Frank, 2007; Jetelina et al., 2017). Some find no differences between use-of-force incidents White officers and non-White officers (Jetelina et al., 2017). Others find Black officers are less likely to initiate arrests and use force, particularly against minority citizens (Ba et al., 2021). Some research shows White officers may also be more likely to initiate arrests in general, but Black officers are more likely to arrest Black suspects (Brown & Frank, 2007).

For studies focused on the arrest decisions of women police officers, early studies show women are less likely to initiate contact with citizens and are also less likely to arrest citizens (Balkin, 1988; Sherman, 1975). Later studies offer evidence that organizational factors are also important that officer gender in determining outcomes of police-citizen interactions. Research examining the use of controlling versus supporting behaviors among female officers is contingent upon the presence of supervisor or peers. Rabe-Hemp (2008) found women were more likely to use controlling behaviors when supervisors were present. This changed when only peers were present during citizen-officer encounters (Rabe-Hemp, 2008). This implies theories of gendered policing do not fully explain police decisions at arrest without considering situational factors.

Novak and colleagues (2011) examined arrest decisions in an urban jurisdiction, finding gender did not directly influence the probability of arrest. However, female officers were more likely to arrest Black citizens than male officers, and citizens that did not show deference were also more likely to be arrested when the arresting officer was

female (Novak et al., 2011). Some studies find men on the force do not view women as being as strong, capable, or able to maintain authority (Martin, 1996; Martin, 1999). In this environment, the urge to conform may push female officers to align their actions with male colleagues to ensure their colleagues do not question their competency and decision making, which is a possibility in prosecutors' officers as well. Similarly, this may explain why non-deferential behavior is more likely to result in arrest for female officers. Prosecutors are the gatekeepers of the legal system (Kersetter, 1990) and are required to make consequential decisions in the courtroom, in front of defense counsel, judges, witnesses, and victims. Thus, they need to be firm and direct, while being perceived as credible and professional in front of other colleagues.

Judge Attributes. A sizeable body of research also examines the effects of judge identities on sentencing and other judgements. In an early study, Gibson (1983) argued analyses of judges should underscore the importance of the effects of social characteristics on early career experiences and decisions solidify roles, perceptions, and decision-making patterns later in judges' careers (Gibson, 1983; Myers, 1988). He calls the importance of early rulings "personalized *stare decisis*", which refers to attitudes rather than legal precedent informing judges' decisions, further solidifying their perceptions of certain cases (Gibson, 1978; Gibson, 1983).

Gibson (1978) presents several possible models of judicial discretion that include objective case facts in addition to judges' perceptions of their role and their attitudes. Attitudes and role orientations are developed by early life, their time in law school, and career experiences. He also emphasizes the importance of different lived experiences of minorities and women; these undoubtedly vary from the experiences of White or male

colleagues. However, he also posits that judges are an elite class compared to the broader population. Thus, it is also possible race and gender are not as influential, which was shown in an earlier study (Uhlman, 1977).

Later studies include judge characteristics (Boldt et al., 2021; Boyd et al, 2010; Boyd & Nelson, 2017; Collins & Martinek, 2011; Hettinger et al., 2006; Knepper, 2018; Kulik et al., 2003; Scott 2006; Spohn et al., 1981; Steffensmeier & Herbert, 1999). Knepper (2018) specifically examined the effects of judge gender on civil judgements regarding employment discrimination. A larger body of literature examines the effects of judge party affiliation as predictors of case decisions and civil judgements (Ashenfelter et al., 1995; C. Liu, 2020).

Other research assesses the impact of judges' race and ethnicity, finding differences in sentencing decisions for Black and White judges (Spohn, 1990; Steffensmeier & Britt, 2001). B.D. Johnson (2006) examined both incarceration decisions and sentence lengths, finding non-White judges are less like than white judges to sentence Black and Hispanic judges to custodial sentences. However, he also found Black defendants received significantly longer sentences when they were sentenced by non-White judges (B.D. Johnson, 2006).

Prior research also examines the effects of judge gender on case outcomes. Spohn, Gruhl, and Welch (1981) found no effect of judge gender on case outcomes. This was an early study of women as judges; more recent and sophisticated analyses of judge gender demonstrated gender differences. Steffensmeier and Herbert (1999) examined differences in sentences for cases handled by women judges using partitioned models for sentence lengths by judge gender, finding they were more likely to give lengthier sentences than

male judges when cases involved repeat offenders. In this context, the focal concerns that guide prosecutorial and judicial discretion affect women more than men.

More recent studies have assessed the role judges' gender plays at sentencing (Bielen & Grajzl, 2020; Boyd & Nelson, 2017; Freiburger, 2020; Wei & Xiong, 2020; Van Slyke & Bales, 2013). Van Slyke and Bales find defendant gender may also moderate the effect of judge gender; male judges may opt for a more lenient sentence for white-collar offenses than a female judge would particularly if the defendant is a woman (Van Slyke & Bales, 2013). The "status shield" that has widely been associated with disparities for white-collar crimes may also affect gender as well. This refers to the leniency afforded to physicians and other professionals who commit these crimes. They may still be viewed as benevolent and serving a greater good at sentencing. Van Slyke and Bales provide support for the importance of gender in determining how important the status shield is in determining sanctions for male and female defendants.

Boyd and Nelson (2017) assessed differences in male and female judges' decision in a Colorado state court. They also assessed the impact of public opinion about the cases specifically for women judges. Analyses of marijuana cases from 2004-2009 and a 2006 state initiative to legalize marijuana revealed that, overall, judges do not sentence differently based on their gender with one caveat. Female judges were more likely to give lenient sentences for female defendants than male judges were during the study period (Boyd & Nelson, 2017). This finding dovetails with Steffensmeier and Herbert's (1999) as the female judges in their studies were more affected by defendants who they felt posed the most threat, namely those with prior records and a history of violence. The female judges in the Colorado study may have perceived male defendants as more

dangerous, more likely to reoffend, or having fewer social responsibilities compared to female defendants.

Analyses in other countries have also revealed the importance of judge gender at sentencing. In a study conducted in Belgian courts, Bielen and Grajzl (2020) observed adjudication data for sex crimes. In Belgium, sex crimes are handled by a panel of judges to reduce the salience of defendant and judge attributes on outcomes for these offenses. In an Antwerp court, three judges are assigned to one defendant with the most experienced judge presiding over the case. Judges in Belgium are also granted more discretion than American judges. Besides the penal code, there are no sentencing guidelines for any offense category. The panel is responsible for convicting and sentencing the defendant, which addresses the authors' assertion that the selection bias of convicted defendants in American studies of judicial discretion at sentencing (Bielen & Grajzl, 2020).

The sample consisted of 976 defendants (97% men and 3% women) and 29 judges (17 women and 12 men). The analyses demonstrated the opposite of the previous studies; they concluded that women were punished more harshly when the presiding judge was female. This finding is likely due to the small number of female defendants charged with sex crimes compared to male defendants, and that women are typically victims as opposed to perpetrators of these crimes. Their finding provides support for the evil woman thesis which predicts harsher punishments for female defendants, particularly those who commit stereotypically masculine offenses (Nagel & Hagan, 1983). Female presiding judges also had slightly higher sentence severity scores than male judges when the victim was female (Bielen & Grajzl, 2020). These findings suggest female judges will

be harsher on female defendants charged with sex offenses, while also vigorously pursuing longer sentences in which victims are female.

Another study in China examined the effects of judge gender in sentences using data gathered from two cities, Handan and Deyang (Xie & Xiong, 2020). Sanctioning in China is similar to Belgian courts because panels, as opposed to individual judges, determine the conviction and sentence. There is also a presiding judge that has the most authority at sentencing, so the other judges are involved as a formality (Xie & Xiong, 2020). Few studies examine sentencing disparities in China due to the importance of the “Iron Triangle” of prosecutors, judges, and the police. Xie and Xiong ultimately found support for the importance of the “Iron Triangle” eclipsing judges’ attributes and any potential affects they may have on sentencing decisions.

The authors used multilevel models to compare cases handled by male and female judges. To account for contextual factors, the authors used a combined model with both men and women judges, as well as separate models. The first set of models examined the decision to incarcerate, and the second set examined sentence lengths. Overall, women were less likely to incarcerate than men on the bench, but sentence lengths were consistent. In a model with offense types separated, a pattern of disparities did emerge. Men were more likely to sentence defendants caught stealing more harshly than women. Another extralegal factor that affected sentencing was the city: defendants in Handan were more likely to be incarcerated and receive longer sentences than defendants in Deyang (Xie & Xiong, 2020). This was a much stronger predictor of incarceration and sentencing than judge gender.

A recent study examined the effects of judge gender and race on bail decisions using pretrial detention data gathered from 22 federal district courts spanning from 2003 to 2013 (Boldt et al., 2021). Boldt and colleagues' study consisted of an unconditional model of judge characteristics and pretrial detention and bail decisions, then a full model testing the effect of judicial characteristics on pretrial decisions with defendants nested within judges. Defendant characteristics including race, gender, ethnicity, criminal history, and case specific information including offense type and severity were added the full models. These showed a significant effect of judge race and gender on pretrial detention decisions. Notably, Black judges were more likely to release white defendants with few conditions compared to white judges. Furthermore, results showed female judges had higher bail amounts for male defendants compared to male judges. They were also less likely to detain female defendants compared to male judges (Boldt et al., 2021). These studies demonstrate an important contribution to research examining legal actor identities and their effect on case outcomes.

Prosecutor Attributes. Recently, researchers have examined how prosecutor attributes and caseload affect decision making, shifting the focus from defendant characteristics (Baker & Hassan, 2020; LaPrade, 2020; Kim et al., 2015; Sloan, 2020; Stemen & Escobar, 2018). These studies emphasize the importance of the prosecutor identities on their decisions which has been not explored in the bulk of prosecutorial discretion scholarship. More recent studies have contributed this body of scholarship by demonstrating the salience of prosecutors that were largely understudied compared to defendant characteristics.

Stemen and Escobar (2018) examined how important the prosecutor or jurisdiction is in determining plea negotiations. Using hierarchical linear modeling (HLM), they nested felony cases in Wisconsin counties within prosecutors¹. This method allows researchers to account for prosecutor caseload and the composition of their caseloads. For example, prosecutors in the homicide division have only a few cases compared to prosecutors that handle misdemeanors, yet their workloads are likely similar. Due to this consideration, the authors used prosecutor-level variables (gender, bar admission date, percent of caseload consisting of felony cases, and percent of caseload consisting of violent cases), county-level variables (size, political affiliation of the DA, percent of population below the poverty line)², and case-level variables (extralegal defendant attributes, criminal history, and case specifics).

These factors were hypothesized to influence plea bargaining; however, few of the prosecutor-level variables were significant. Despite this, their results underscore the relevance of prosecutor-level variables in guilty pleas; prosecutors who handled felony cases were more likely to seek incarceration sentences indicating their perception of cases evolved as they handled more serious offenses. County factors were also not salient predictors of dismissals or pleas to reduced charges, and the only county factor that was significant for non-custodial sentences was whether the office is in a larger county (Stemen & Escobar, 2018). Their results may also not be generalizable as there is evidence of variation in prosecutors' attitudes across and within offices (Frederick &

¹ Cases were defined by matching unique identification numbers matched with filing dates. The sample was also limited to prosecutors who handle at least 90 cases.

² Percent of the population that is Black and violent crime rate were excluded because of collinearity, although the authors acknowledged these are theoretically important predictors to consider.

Stemen, 2012). Thus, additional analyses may show variation in case outcomes that can be explained by different prosecutor-level attributes.

Individual prosecutor characteristics are also posited to influence case outcomes (Baker & Hassan, 2020; LaPrade, 2020; L. Liu, 2022). Earlier studies of prosecutorial discretion typically focus on defendant and case factors due to data limitations; many older data sources do not contain prosecutor information like their gender, race, ethnicity, tenure in the office, and other relevant information. Prosecutor variables are used as controls in some research (e.g., Arndt, 2021), however; few studies focus on the legal actors' identities as drivers of decision making. In response to this more open data-oriented culture, researchers can assess the link between prosecutor characteristics and their influence on case outcomes. Several studies examine judicial attributes like race and gender on sentencing outcomes (e.g., Bielen & Grajzl, 2020; Boyd & Nelson, 2017; Steffensmeier & Herbert, 1999; Van Slyke & Bales, 2013), however, there is still a dearth of scholarship examining the role of prosecutor attributes on earlier case outcomes.

LaPrade (2020) examined the importance of State Attorney characteristics in Florida, finding gender influences at various decision points. Offices with female State Attorneys were significantly more likely to use incarceration. Additionally, White State Attorneys were more associated with less reliance on incarceration compared to Black and Hispanic State Attorneys. However, for cases not prosecuted, there were no significant State Attorney predictors aside from political affiliation and years in office (LaPrade, 2020). The results from these models demonstrate the importance of several prosecutor attributes on case outcomes. Sloan (2020) used conditional random assignment of prosecutors to cases to determine whether there were differences in case

outcomes between Black and White prosecutors for Black and White defendants. Results demonstrated no differences in conviction rates for prosecutor race categories; Black defendants had higher odds of conviction for both groups of prosecutors. Similarly, opposite-race prosecutor and defendant combinations were also not significantly related to differences in sentencing outcomes (Sloan, 2020).

More recent research has examined the race of prosecutors and their influence on consequential case decisions. L. Liu (2022) assess the importance of shared line prosecutor and defendant characteristics on case outcomes. Based on social identity perspective and internalized racism, she examined differences in case outcomes for pairs of prosecutors and defendants. Nine logistic regression models, three with White defendants and prosecutors as the reference group, three with interaction effects for prosecutor and defendant race, and three with interaction effects and Black and Hispanic defendants as the reference group were used to examine diversion, dismissal, and charge reductions.

L. Liu (2022) found Black prosecutors were more likely to dismiss cases compared to White and Hispanic defendants. However, prosecutor race was not related to the odds of diversion; only defendant race was significant in the diversion model. Black defendants were more likely to be diverted than White defendants. In subsequent models with interaction effects, the results reveal two important findings. Minority prosecutors demonstrated leniency to defendants who are the same race or ethnicity, but they were more punitive toward defendants of a different race or ethnicity.

Gunderson (2022) similarly examined the effects of prosecutor race on incarceration using National Prosecutors Survey and Bureau of Justice Statistics data for

cases handled between 2001 and 2007. Results reveal several findings: first, female prosecutors are associated with lower incarceration for Black defendants and female defendants. Also, Latinx prosecutors are significantly associated with lower populations of Latinx people in jails. Her analyses demonstrate the importance of prosecutor's attributes on incarceration rates.

Multilevel Models: When and Why?

Much of the research on case processing decisions uses single-level regression to assess differences for various outcomes. However, criminal justice decisions do not occur in a vacuum; individuals are often grouped under one larger unit. People make decisions in different contexts such as neighborhoods, family structure, or courtroom hierarchy that are often not captured in empirical analyses. Thus, people who live in certain neighborhoods, are members of the same family, or appear before the same judge are more likely to experience similar outcomes than people that do not.

The generic example of this interdependence is schools, which are comprised of classrooms, which contain students. In this case, using linear regression to assess student performance may lead to a type 1 error, finding an association between individual students' characteristics exert influence on test performance that may not be statistically significant when considering school-wide factors (Dedrick et al., 2009). There is also a possibility of type 2 error or finding a false negative result when there is a significant relationship between individual-level predictors and outcomes. Dickinson & Basu (2005) shows single-level regression models failed to demonstrate significance at the $p < .05$ level, but multilevel models with the same data were significant when accounting for macro-level factors (Dickinson & Basu, 2005).

In response to these methodological issues, criminology and criminal justice scholars have begun employing multilevel modeling. There are both theoretical and practical justifications for the use of multilevel modeling in studies of crime and criminal justice outcomes. It is important to note that multilevel models are not the opposite of regression models; rather, they are an extension of regression (Bickel, 2007). This method of analysis allows social scientists to produce research that is more intuitive due to theoretical assumptions that include both individual and contextual characteristics.

Multilevel models measure the change in the dependent variable with incremental changes in the independent variable at both the individual level and the contextual (second) level. These models emerged as an alternative to regression using corrective test like the Durban-Watson, Chow, or Hausman tests to address the violations of regression assumptions such as interdependence (Bickel, 2007). Clustering violates this assumption of independence because cases that are grouped under one cluster should be more similar to each other than cases grouped under a different cluster. Importantly, multilevel models do not require these corrective tests and they allow researchers to model theories that require examination of individual relationships as well as contextual relationships.

Not only are multilevel models advantageous for mathematical reasons, but they are also better for testing certain theories. There are specific theoretical frameworks in which multilevel modeling is an appropriate technique. For example, racial threat theory and power theory which assess micro-level events across macro-level contexts such as neighborhood, county, or jurisdiction. This method allows researchers to account for clustering, or the possibility that events that occur within a neighborhood, for example, are more similar than events that take place in different neighborhoods (Bryk &

Raudenbush, 2002). Similarly, representative bureaucracy theory may be better understood using multilevel models. For example, grouping cases under prosecutors allows researchers to model the effects of prosecutor attributes, or level 2 variables, on outcomes for defendants.

Specifically, multilevel models can be used in research examining criminal justice decisions and sanctions depending on the predictors used in the analysis. Much of the research examining case outcomes utilizes multivariate single-level regression, which relies on the assumption that each decision regarding a defendants' case occurs independently of other cases. Most scholarship in this area specifically examines racial and ethnic differences at various critical decision points, including case screening, charging, plea bargaining, and sentencing. Of these studies, many provide support for the persistence of racial and ethnic disparities despite sentencing guidelines and mandatory minimum sentences).

The earliest and perhaps most cited study examining the differences between regression and multilevel models was Robinson's (1950) study of state literacy rates and the immigrant population. His findings demonstrate the ecological fallacy that occurs when using aggregate data to draw conclusions about individuals. When using aggregate data to compare literacy rates and immigrant population rates, Robinson found that areas with higher immigrant populations had higher literacy rates. However, when he used individual-level data to test the same research question, he found the opposite (Robinson, 1950). Subsequent scholarship has cited Robinson's work as a poignant example of the pitfalls of misattributing aggregate data to individual-level conclusions (Kingston & Malamuth, 2011; Pollet et al., 2015).

Furthermore, multilevel models serve as a remedy to measure both individual and contextual variables in empirical analysis (Stapleton, McNeish, & Yang, 2016). There are several examples of data examined using single-level regression and various multilevel models, each finding different results (Dickinson & Basu, 2005; Kingston & Malamuth, 2011; Pollet et al., 2015). While the decision to use multilevel models is largely contingent on the data available to researchers and their research questions, the use of single-level regression in criminal justice is far more common than analysis utilizing multilevel models. Outside of the field, there are numerous studies that assess the differences between these methods and prescribe best practices for researchers examining both individual and macro-level data.

Dickinson and Basu (2005) demonstrate the differences in results generated by single-level regression models and hierarchical linear modeling (HLM) by examining the relationship between the number of hours of physician counseling received and the number of alcohol-free weeks patients had. There is also information about the clinics, which serve as contextual variables such as the location of the clinic and whether they are considered urban or rural clinics. The authors included seven models: an HLM random effects ANOVA model, two separate linear regression models, an HLM random intercept model, an HLM random coefficients model, an HLM intercept as an outcome model, an HLM intercept and slope as outcomes model (Dickinson & Basu, 2005). Both regression models failed to reach significance at the $p < .05$ level, while the models using HLM demonstrated the importance of patient counseling in increasing the number of alcohol-free weeks depending on the clinic.

The more complex multilevel models, one using the intercept as the outcome and the other using the slope and intercept as outcomes, showed statistically significant results. For these models, the slope is the number of hours of patient counseling per alcohol-free weeks. When the intercept was the outcome, the difference in alcohol-free weeks was about three weeks, with patients in rural clinics having more alcohol-free weeks. Additionally, variation in whether clinics were urban or rural explained 84% of the variation in alcohol-free weeks. When the slope and intercept were outcomes, the variability in the slopes was not significant and the intercept remained significant, meaning patient counseling is not significantly related to alcohol-free weeks in rural clinics, but the difference between rural and urban clinics is statistically significant. This implies patient counseling may be more important in urban clinics than in rural clinics, which was not revealed through the traditional regression models (Dickinson & Basu, 2005).

Multilevel Models in Criminal Justice Research. Select criminal case processing studies have addressed this shortcoming of earlier studies by using multilevel models to account for the possibility that cases vary across different clusters of prosecutors or judges (e.g., B.D. Johnson, 2006; B.D. Johnson, 2018; Myers & Talarico, 1987; Stemen & Escobar, 2018; Ulmer & B.D. Johnson, 2004). These models are also advantageous because researchers can include neighborhood demographic and socioeconomic variables as second-level predictors of case outcomes. Myers and Talarico (1986) found sentences were not only influenced by defendant characteristics, but also by the characteristics of the county. Defendants sentenced in counties with high Black populations, which are defined as 25-49% Black, were sentenced more harshly than

defendants in other counties. Most notably, this effect was true for both white and Black defendants in these counties.

Ulmer and B.D. Johnson (2004) found variation in custodial sentences and sentence lengths by county in Pennsylvania. Using racial threat as a theoretical framework, they analyzed county demographic composition, caseload, jail capacity, and court size to determine whether these contextual factors significantly influence case outcomes in addition to defendant and offense specific information. Results from their analysis demonstrate in addition to criminal history, contextual factors like jail capacity and court size were significantly associated with higher odds of incarceration. When jail space is available, judges are more likely to sentence defendants to custodial sentences. Courts with higher caseloads are also associated with less punitive custodial sentence outcomes due to scarce resources, but not related to sentence lengths. County racial and crime predictors are, however, not significantly related to odds of custodial sentences. Racial composition of the county, however, is related to longer sentences for Black and Hispanic defendants. This finding supports racial threat influencing sentences.

In later work, B.D. Johnson (2006) examined both county and judge effects on sentencing in Pennsylvania, finding differences in sentence lengths depending on the county in which the case was processed or the judge who handled the case. Additionally, women judges sentenced defendants to shorter periods of incarceration compared to cases handled by men. Minority judges were also less likely to give Black and Hispanic defendants custodial sentences, but there were no significant differences in sentence lengths for cases handled by judges. Other contextual factors that were significant include the size of the court, county violent crime rates, and jail capacity were all associated with

variation in custodial sentences and sentence lengths. Larger courts sentenced more leniently due to resource constraints that encourage plea bargaining and other means of expedited case dispensation.

Frederick and Stemen (2012) employ HLM as part of their larger report in conjunction with focus groups and interviews with prosecutors in multiple jurisdictions. For case screening, they used two-level models split by offense category (person, property, drug, public order, weapons, domestic violence, and DUI) The first levels of each model include case information such as offense severity, criminal history, victim and defendant information, and custody status. The prosecutor characteristics used for the second level of analysis include their tenure, supervisory experience, caseload, and gender. While prosecutors explain variation in case screening decisions, few of the predictors were statistically significant. Even factors that prosecutors expressed influenced their decisions in accompanying interviews, like caseload, were not significant. Other analyses of district caseload using HLM regression find that it significantly influences prosecutorial discretion for charge changes and dismissals (Hartley & Tillyer, 2018).

Kim, Spohn, and Hedberg (2015) further contributed to this body of scholarship using multilevel models for case outcomes by including prosecutor information. They argue prosecutors collaborate with judges to resolve cases, so they likely account for variation in sentences. Results show that sentence lengths vary depending on the prosecutor and judge cases are assigned. Importantly, the findings support the prosecutor's role in sentencing because the focus of sentencing research is largely focused on judicial discretion.

Prosecutors are assigned to cases similarly to how judges are assigned cases. Multilevel models allow cases to be clustered within groups of prosecutors using their identification numbers provided by the office. Prior research suggests prosecutor attributes influence case outcomes (Frederick & Stemen, 2012; B.D. Johnson, 2006; Kim et al., 2015; Stemen & Escobar, 2018), so these models are better suited to address the importance of prosecutors compared to single-level logistic regression models. These specific models are split to account for different levels of variance for male and female prosecutors. In models not split by prosecutor attributes (e.g., Kim et al., 2015), the assumption that levels of variance for different groups of prosecutors would be the same (in this case, male and female) is violated. This study addresses these issues with new data from a Florida State Attorney's Office to evaluate the role of prosecutor gender during case processing.

CHAPTER 4

CURRENT STUDY

Gaps in the Current Literature

This study contributes to prosecutorial discretion literature in two ways. First, most research assessing disparities during criminal case processing is defendant-centered due to data limitations. Select studies that use multilevel models have demonstrated the significance of various contextual factors including caseload information (Stemen & Escobar, 2018), judges and prosecutors' attributes (Kim et al., 2015), or county-level factors (Franklin, 2010a). Prosecutors and judges are granted substantial discretion; therefore, their attributes may exert as much or more influence than defendant attributes on outcomes.

There are other areas of research demonstrating the importance of decision makers' identities on outcomes, finding minorities and women benefit from more diverse decision-making entities (Furlotti et al., 2019; Y. Liu et al., 2014; Powell & Butterfield, 2002). However, only a few studies have assessed this in relation to criminal justice outcomes. Most of these are largely focused on judges' attributes including race (e.g., Spohn, 1990), political affiliation (e.g., Cohen & Yang, 2019), and gender (e.g., Boyd & Nelson, 2017), with a few exceptions focused on prosecutors (e.g., Baker & Hassan, 2020). This dissertation contributes to this emerging body of research focusing on prosecutor gender.

The second contribution of this study lies in the methods used to analyze case outcomes. Single-level regression models can either under or overestimate the effects of predictors on outcome variables (Dickinson & Basu, 2005). Some criminal justice studies

without data that allow researchers to cluster cases under prosecutors or judges acknowledge the potential biased results (e.g., Wooldredge et al., 2015: p. 203). Multilevel models have both intuitive and statistical appeal for social science research. Criminal cases are handled by different prosecutors and judges, which means cases handled by the same decision makers are more likely to have similar outcomes compared to cases handled by another decision maker (Johnson, 2010). These models can more precisely measure the importance of contextual factors by grouping observations that occur under certain conditions, demonstrating more predictive ability than single-level models alone (Bickel, 2007). For this dissertation, the conditions that are hypothesized to affect cases processing are the gender of prosecutor assigned to each defendant.

Research Questions and Hypotheses

This dissertation aims to examine the influence of prosecutors' gender on racial/ethnic and gender disparities in prosecutorial decision making. Specifically, four outcomes of interest include: (1) charge changes at case filing; (2) prosecutor-led dismissals (3) plea dispositions; and (4) plea dispositions that resulted in custodial sentences. These are four highly consequential decisions for defendants over which prosecutors have full (outcomes 1 and 2) or partial (outcomes 3 and 4) control. These decisions are also highly interdependent. For example, a decision to reduce charges at filing can influence plea offers: if prosecutors believe that the defendants received a "great deal" at screening, they may be less inclined to offer a charge reduction during plea negotiations. Furthermore, guilty pleas can influence both the type of sentence as well as the length of the custodial sentence.

The four outcomes form four distinct research questions, each with underlying hypotheses, specific to defendants' race/ethnicity and gender:

Research Question 1. Does prosecutors' gender influence disparities in charge reductions?

Hypothesis 1a: Black and Hispanic defendants will be less likely to receive a charge reduction than White defendants.

Hypothesis 1b: Male defendants will be less likely to receive a charge reduction than female defendants.

Hypothesis 1c: Racial, ethnic, and gender disparities in charge reductions will be larger in cases handled by male prosecutors.

Research Question 2. Does prosecutors' gender influence disparities in prosecutorial dismissals?

Hypothesis 2a: Black and Hispanic defendants will be less likely to have their cases dismissed than White defendants.

Hypothesis 2b: Male defendants will be less likely to have their cases dismissed than female defendants.

Hypothesis 2c: Racial, ethnic, and gender disparities in dismissals will be larger in cases handled by male prosecutors.

Research Question 3. Does prosecutors' gender influence disparities in the cases resolved through guilty pleas?

Hypothesis 3a: Black and Hispanic defendants' cases will be more likely to be resolved through guilty pleas.

Hypothesis 3b: Male defendants will be more likely to be resolved through guilty

pleas than female defendants.

Hypothesis 3c: Racial, ethnic, and gender disparities in plea dispositions will be larger in cases handled by male prosecutors.

Research Question 4. Does prosecutors' gender influence disparities in the imposition of custodial sentences for cases resolved through guilty pleas?

Hypothesis 4a: Black and Hispanic defendants will be more likely to receive a jail or prison sentence than White defendants.

Hypothesis 4b: Male defendants will be more likely to receive a jail or prison sentence than female defendants.

Hypothesis 4c: Racial, ethnic, and gender disparities in jail and prison sentences will be larger in cases handled by male prosecutors.

In line with representative bureaucracy, I argue that women prosecutors may be more likely to exercise their discretion in a way that reduces unwarranted racial disparities. This theory suggests that women and other traditional marginalized groups in public office are more likely to advocate for other minority groups; therefore, greater concern for disadvantaged groups in our society may translate into more favorable outcomes for defendants from marginalized groups.

The work of Kranz (1974) and Lim (2006) are main underpinnings of the current study's hypotheses. In this study, female prosecutors' caseloads will be less likely to have unwarranted disparities because they are more attuned to marginalization of certain groups. There is also evidence of representation (Gunderson, 2022), evidenced by analyses of female county attorneys, which were associated with lower use of incarceration for Black defendants. Female prosecutors may be able to more aptly

recognized and address unwarranted disparities by using their discretion at various points in case processing.

Data

The data used in this study were collected as part of a larger MacArthur Foundation grant-funded research project about prosecutorial efficiency, effectiveness, and fairness. The dataset includes data on multiple points of case processing, from arrest to sentencing, and contains all cases disposed of by a large Florida prosecutor's office in 2017 and 2018 (N = 44,356). Male prosecutors handled 19,426 cases and female prosecutors handled 24,930 cases during the 2017-2018 period. Data were extracted primarily from the case management system of the prosecutor's office and supplemented with defendants' pretrial detention status information provided by the county's Sheriff's Office. The resulting dataset includes robust case information related to charging, dispositions, defense counsel, dispositions, sentencing, criminal history, and defendant sociodemographic information. Importantly, prosecutor identification numbers (ID) and demographics are also available in the data.

Dependent Variables

(1) Charge Reduction. The first dependent variable in this analysis measures whether each case received a charge reduction at the point of case filing. This is when a case is brought to the prosecutor's office by the police department, and a prosecutor decides whether to file it and, if so, whether to reduce charges, keep them the same, or increase their severity (the latter being very uncommon, see Kutateladze, 2018). Charge reductions include higher level felonies downgraded to lower-level felonies, felonies downgraded to misdemeanors, and more serious misdemeanors downgraded to less-

serious ones. In this study, a charge changes are coded (*no decrease* = 1, *increase*³ and *no change* = 0) indicates that the severity of the top charge filed on a given case was the same or different than the severity of the top charge referred by law enforcement. Given that charge reductions may be a vehicle for effecting lower punishments, they constitute a more favorable outcome than a charge increase or charge status (Kutateladze, 2018).

(2) Dismissal. The second dependent variable used in the analysis captures prosecutorial dismissals, also referred to as “*nolle prosequi*”, that occur after cases are filed. Prosecutorial dismissal outcomes are coded dichotomously (*yes* = 1). There are other ways cases can be dismissed, including judicial dismissals. However, these are infrequent in this dataset and are excluded from the sample. Prosecutorial dismissals constitute a less punitive for a defendant than prosecutorial decision to pursue charges or offer diversion, which does not guarantee a case dismissal.

(3) Plea Disposition. The third dependent variable measures whether the case was resolved through a guilty plea (*yes* = 1) as opposed to a dismissal or trial. Studies examining guilty pleas find minority defendants are more likely to receive less favorable plea dispositions (e.g., Metcalfe & Chiricos, 2018), however few analyses include prosecutor characteristics as predictors of differences in plea dispositions.

(4) Guilty Plea with Custodial Sentence. The final dependent variable measures whether the case was resolved through a guilty plea that resulted in a custodial sentence (*yes* = 1) as opposed to less punitive sanctions, such as probation, community service,

³ Charge increases are quite rare in this dataset (only one percent of cases involve charge increases). Given the lack of mixed effects multinomial regression syntax, generalized structural equation models with *mlogit* options are the only way to measure three categories of charge change outcomes (Pope, n.d.). However, the rarity of charge increases means the model is not a good fit for this datapoint. Therefore, charge increases are added to the reference category.

fines, and/or court costs. Studies examining guilty pleas find minority defendants are more likely to receive less favorable plea dispositions (e.g., Metcalfe & Chiricos, 2018), however few analyses include prosecutor characteristics as predictors of differences in custodial plea dispositions. Additionally, prosecutors have considerable influence over sentence types defendants receive (Engen, 2008; Miethe, 1987; Vance & Oleson, 2014; Vance et al., 2019). Thus, including these variables is important when examining differences in plea negotiations.

Independent Variables

The primary predictor of the outcomes of interest is *prosecutor gender* (*male* = 1). To be included in the models, filing prosecutors must have handled at least 20 cases because they are clusters at the second level of analysis (see Analysis Plan). This was determined by checking the number of cases associated with each ID. Each prosecutor in the office is given an ID, which helps identify unique prosecutors. Unfortunately, the dataset did not contain prosecutor race or ethnicity variables; nor were there any identifying characteristics that could be used to link prosecutors' IDs to their names to add race and ethnicity as variables. Additionally, there were no measures of prosecutors' years of experience as prosecutors, or the number of years each prosecutor has been employed at the office. Since my research focuses on disparities associated with *prosecutor gender*, consistent with research hypotheses concerning these disparities, two defendant predictors were included in the analyses.

First, *defendant gender* is also dummy-coded (*male* = 1). There were no values included for defendants who do not identify with either available gender category. Second, *defendant race* was measured as a mutually exclusive set of dummy variables

that indicate whether the defendant is Black, Hispanic, White, or Other (*yes* = 1). Hispanic defendants were classified using the U.S. Census list of frequently occurring Hispanic surnames (Comenetz, 2016). A surname is labeled “Hispanic” if at least 75% of people with that surname in the United States self-identify as Hispanic; these defendants were coded as Hispanic (*yes* = 1). The “Other” category includes Asian, Pacific Islander, and Native American defendants.

Control Variables

The analyses account for various legal and extralegal factors which may influence the outcomes of interest. *Defendant age* is measured using four dichotomous variables that indicate whether the defendant is: under 25 years, 25-34 years, 35-44 years, and 45+ years (*yes* = 1). An ordinal measure of age is used to show the nonlinear effects of age (e.g., Steffensmeier et al., 1998).

I also estimate two related proxies of prior record: *prior conviction* and *prior prison*.⁴ The number of *prior convictions* range from zero to 14, while the number of *prior prison* sentences range from zero to three. *Pretrial detention* status is another dichotomous variable which indicates whether the defendant was detained (*yes* = 1) at any point from case filing to disposition.

Three important measures of offense severity are also included—*offense type*, *top charge severity*⁵, and *number of charges*. These are highly relevant factors for the current

⁴ The dataset does not contain variables capturing the offense defendants were convicted for, nor the number of years defendants have spent in prison, which would have provided proxies for the severity of prior offenses.

⁵ Municipal ordinances, felony punishable by life, and capital felony cases are excluded from the sample.

inquiry due to their potentially strong influence on all decision points, and especially on sentencing. *Offense type* is measured through a set of dummy measures: (a) person, (b) drug, (c) property, and (d) public order and traffic offenses (*yes* = 1). Offenses were categorized into these four groups using statutory definitions, and with insights from line prosecutors. *Top charge severity*⁶ is measured using a series of five dichotomous variables that include 1st, 2nd, and 3rd degree felonies, and 1st and 2nd degree misdemeanors, with 2nd degree misdemeanors as the reference category. The severity is calculated separately for the top filed charge and top disposition charge. Finally, I account for the *number of charges* at case referral, filing, or disposition, depending on the outcome of interest. A maximum of five charges were recorded at each decision point.

Another variable added as a control includes a dichotomous measure of whether the case was initiated by *probable cause arrest or warrant* which includes both arrests and arrest warrants (*yes* = 1). Prosecutors may view defendants who are arrested as more dangerous than those who are issued a citation or a notice to appear, which may influence how they perceive these defendants and affect their decision making.

Given the possible influence of the type of legal representation on prosecutorial and judicial decision making (Kutateladze et al., 2014), there is also a control variable for the effects of defense counsel type given the relevance of this factor on case outcomes (Roach, 2014). This is a dichotomous measure called *indigent defense counsel* (*yes* = 1).

⁶ For all models, charge severity was recorded as a dichotomous variables ranging from second degree misdemeanors to first degree felonies. However, for the file change model, the variable included is whether the arrest for a felony or misdemeanor, with misdemeanor arrests as the reference category. After three iterations to calculate the lowest standard error with the original dummy arrest charge severity measures, the model shown a discontinuous or flat curve resulting in an error. I removed all predictors and added them back into the model one by one. The error came up again when adding in any combination of arrest charge severity variables into the model.

This variable encompasses multiple types of indigent defense including court appointed, public defenders, and *pro se* (no defense counsel) defendants.

Analysis Plan

The current study examines prosecutors' decisions at various points in case processing controlling for legal and extralegal characteristics. The first set of findings presented show the descriptive information about dependent, independent, and control variables. These variables show the rates for caseload characteristics for male and female prosecutors separately. Binary analyses consider whether there are differences between cases handled by male and female prosecutors.

Considering each prosecutor handles multiple cases, the nested nature of the dataset necessitated a multilevel analysis. After excluding 97 prosecutors who had handled fewer than 20 cases, there were 106 eligible prosecutors with associated IDs⁷. Mixed effects logistic regression models are used to measure differences in charge reductions, dismissals, guilty pleas resulting in custodial sentences, and custodial sentence types (jail versus prison). The first level contains defendant and case variables, and the second level contains prosecutor identification numbers. The mixed effects logistic regression models are used to measure differences in charge changes from referral to filing, dismissals, guilty pleas resulting in custodial sentences, and custodial sentence types (jail versus prison).

The analyses are organized according to the four outcomes examined in this study. For each outcome, there are two models: (a) an unconditional model, which

⁷ An additional 11 prosecutor IDs were dropped for the last model (guilty pleas with custodial sentences). This was the result of public order offenses and cases not resolved through pleas (trials or dismissals) being removed from the analysis, leading to additional prosecutors with less than 20 cases in the sample.

examines the variation in the outcome associated with prosecutors rather than cases; and (b) a random effects model with case and defendant variables added to the analysis. Both unconditional and random effects models are split by prosecutor gender. Cases handled by male and female prosecutors are analyzed separately. Prior research provides some evidence that male and female criminal justice actors' decision making is not always aligned (Boldt et al., 2021; Johnson et al., 2011; Songer & Crews-Meyer, 2000); thus, split models are appropriate to detect any differences in levels of variance in case outcomes between male and female prosecutors.

CHAPTER 5

DESCRIPTIVE AND BINARY RESULTS

Descriptive Statistics

Table 1 includes descriptive statistics for charge changes, dismissals, and custodial sentences resulting from plea dispositions, and custodial sentence type (N = 44,356). For the descriptive analyses, the samples are not split by prosecutor gender because the rates are virtually the same for male and female prosecutors' caseloads. For the multivariate analyses, the models are split. Cases handled by men comprise 44% of the caseload for filing prosecutors (N = 19,426) and the remaining 56% of cases are handled by women (N = 24,930)⁸. The lifespan of certain cases may not be long enough for them to change hands. To account for missingness present for disposition prosecutor IDs, only filing prosecutor IDs are used as clusters.

Binary Analyses

Case Outcomes. Roughly 12.3% of cases resulted in charge reductions from arrest to filing⁹ and 4% resulted in dismissals. Prosecutors have discretion to alter the charges referred to them by law enforcement, and in the study jurisdiction, charge reductions are relatively common at case filing but seldom used after it. For the two later decision points, the descriptive statistics are also consistent for male and female prosecutor samples. 92.7% of cases resulted in plea dispositions, which is consistent with literature acknowledging the rarity of trials (Devers, 2011) and the low dismissal rate in

⁸ For the last model, custodial sentences resulting from plea dispositions, the number of cases included in the sample is 24,584. Male prosecutors handled 10,509 cases and female prosecutors handled 14,075 cases.

⁹ Only 1.1% of cases result in charge increases from arrest to filing for male prosecutors, therefore these are included in the reference category.

this jurisdiction. Of these cases resulting in plea dispositions (N=24,584), 87.2% resulted in custodial sentences as opposed to diversion, probation, fines, or other non-incarceration sanctions.

Independent and Control Variables. In addition to the dependent variables, summary statistics for all prosecutors' cases are presented in Table 1. While the unconditional and multivariate models are split by prosecutor gender, the binary and descriptive analyses are not split due to striking consistency in summary statistics for male and female prosecutor caseloads. About 71.6% of cases involve male defendants. For defendant age, 22.4% are younger than 25 years old, 37.8% are between 25 and 34 years old, 20.9% are between 35 and 44 years old, and 18.9% are 45 years or older. Over half (51.2%) of the sample is comprised of Black defendants, 40.4% are White, 6.1% are Hispanic, and 2.2% are "other" (Asian, Pacific Islander, or Native American).

Turning to controls for relevant case and offense information, 60.1% of cases were initiated by arrest or arrest warrants. Defendants in this sample have an average of 2.9 prior convictions and 0.2 prior prison sentences. Still, a large portion of the sample have no prior convictions, but prior convictions range from zero to 14. Prior prison sentences range from zero to three. Cases have an average of 1.5 arrest charges, 1.3 filed charges, and 1.3 disposition charges, all with a range of one to five. About 30.6% of cases have defendants detained at any point during case processing and 84.1% are represented by indigent defense counsel.

Drug offense arrests comprise 16.5% of the sample. Nearly 13.4% of cases involve defendants arrested for person offenses and 9.3% were arrested for property offenses. The remainder of the sample (60.8%) were arrested for public order/traffic

related offenses. The top filed charge offense type breakdown is 16.7% for drug offenses, 12.2% are for person offenses, 9.3% are for property offenses, and the remaining 61.9% are for public/order traffic offenses. Finally, disposition charges are broken down into 16.7% drug offenses, 12.2% person offenses, 9.2% property offenses, and 62.0% public order/traffic offenses.¹⁰

Most cases had misdemeanors as the top arrest charge. The specific arrest charge severity (e.g., 2nd degree misdemeanor) are excluded from this sample due to a flat or discontinuous curve encountered after three iterations calculating standard errors. This problem was remedied after combining the offense severity types into two general misdemeanor and felony categories. Instead, the arrest involved any felony as the top charge is included in the mixed effects logistic regression model. 26.1% of cases had felony charges as the top arrest charge and the 73.9% of cases were misdemeanors.

For top filed charge severity frequencies, 42.7% of cases have 2nd degree misdemeanors as the top filed charge. About 40.8% of cases have 1st degree misdemeanors as the top filed charge. Turning to felonies, 10.9% of cases have 3rd degree felonies as the top filed charge. 2nd degree felonies comprise 4.8% of the same and the remaining .7% of cases have 1st degree felonies as the top filed charge. The frequencies for disposition charge severity are 45.7% 2nd degree misdemeanors and 37.9% 1st degree misdemeanors. For felonies, 11.0% are 3rd degree felonies, 4.8% are 2nd degree felonies, and .7% are 1st degree felonies.

¹⁰ Importantly, public order and traffic offenses were removed from the guilty plea custodial sentence models due to the low frequency of cases that result in custodial sentences. The new reference category in this model are drug offenses. This also removes a large portion of 2nd degree misdemeanors, so the reference category for this variable in these models is 1st degree misdemeanors which comprise the largest portion of the sample.

Table 1. Descriptive Statistics for Prosecutor Caseload in 2017-2018
(N=44,356)

	Mean/%	SD	Min/Max
DEPENDENT VARIABLES			
Charge Reduction			
Decrease	12.3%	.33	0 – 1
No Change or Increase	86.7%	.33	0 – 1
Dismissal			
Yes	4.0%	.20	0 – 1
No	96.0%	.20	0 – 1
Plea Disposition			
Yes	92.7%	.26	0 – 1
No	7.3%	.26	0 – 1
Custodial Plea Disposition			
Yes	87.2%	.33	0 – 1
No	12.8%	.33	0 – 1
INDEPENDENT VARIABLES			
Defendant			
Male	71.6%	.45	0 – 1
Female	28.4%	.45	0 – 1
<25 years old	22.4%	.42	0 – 1
25-34 years old	37.8%	.48	0 – 1
35-44 years old	20.9%	.41	0 – 1
45+ years old	18.9%	.39	0 – 1
Black	51.2%	.50	0 – 1
White	40.4%	.49	0 – 1
Hispanic	6.1%	.24	0 – 1
Other	2.2%	.15	0 – 1
CONTROL VARIABLES			
Case Facts & Criminal History			
Case originated through arrest or warrant	60.1%	.49	0 – 1
Prior convictions	2.85	3.40	0 – 14
Prior prison sentences	0.19	.58	0 – 3
Number of arrest charges	1.50	.89	1 – 5
Number of filed charges	1.31	.70	1 – 5
Number of disposition charges	1.30	.70	1 – 5
Other Legally Relevant Information			
Detained at anytime	30.6%	.46	0 – 1
Indigent counsel	84.1%	.37	0 – 1
Arrest Offense Type			
Drug offense	16.5%	.37	0 – 1
Person offense	13.4%	.34	0 – 1
Property offense	9.3%	.29	0 – 1

Public order/Traffic offense	60.8%	.49	0 – 1
Filed Offense Type			
Drug offense	16.7%	.37	0 – 1
Person offense	12.2%	.33	0 – 1
Property offense	9.3%	.29	0 – 1
Public order/Traffic offense	61.9%	.49	0 – 1
Disposition Offense Type			
Drug offense	16.7%	.37	0 – 1
Person offense	12.1%	.33	0 – 1
Property offense	9.2%	.29	0 – 1
Public order/Traffic offense	62.0%	.49	0 – 1
Severity of Top Arrest Charge			
Misdemeanor	73.9%	.44	0 – 1
Felony	26.1%	.44	0 – 1
Severity if Top Filed Charge			
2 nd degree misdemeanor	42.7%	.49	0 – 1
1 st degree misdemeanor	40.8%	.49	0 – 1
3 rd degree felony	10.9%	.31	0 – 1
2 nd degree felony	4.8%	.21	0 – 1
1 st degree felony	.7%	.09	0 – 1
Severity of Top Disposition Charge			
2 nd degree misdemeanor	45.7%	.50	0 – 1
1 st degree misdemeanor	37.9%	.49	0 – 1
3 rd degree felony	11.0%	.31	0 – 1
2 nd degree felony	4.8%	.21	0 – 1
1 st degree felony	.7%	.08	0 – 1

CHAPTER 6

MULTIVARIATE RESULTS

Charge Reduction

Unconditional Models. Table 2 shows the results of unconditional models for charge reductions attributable to male versus female prosecutors. Among cases handled by males, 45.6% of the variation in charge reduction is associated with prosecutor, as opposed to case- or defendant-level, characteristics. Comparable explained variation for cases handled by females is higher, at 52.4%. Even without controlling for defendant- or case-level characteristics, these two models still explain a strikingly large amount of variation in charge reduction decisions, suggesting that prosecutors exercise vast discretion at this early case processing stage.

Table 2. Unconditional Models for Prosecutor ID and Charge Reduction

	Male Prosecutor Model (N=19,426)			Female Prosecutor Model (N=24,930)		
	Exp(B)	CI	p > z	Exp(B)	CI	p > z
Constant	.15	[.09, .25]	<.001	.14	[.08, .22]	<.001
Random Effects	Estimate	SE	p > z	Estimate	SE	p > z
Prosecutor	1.66	.20	<.001	1.90	.20	<.001
Variance explained by prosecutor ID only (ICC)		45.6%			52.4%	

Male Prosecutor Random Effects Model. Table 3 includes the results for the multivariate logistic regression models for charge reductions. In the male prosecutor model, none of the defendant (gender, age categories, race, and ethnicity) characteristics are significant predictors of charge reductions. However, the model demonstrates case

characteristics play a significant role in charge reductions at case screening. Furthermore, compared to cases initiated by citations or complaints, cases initiated through arrests or warrants are significantly associated with the odds of charge reductions ($OR=2.58$, $p<.001$). As expected, each prior prison sentence is associated with a decrease in the odds of charge reductions ($OR=.86$, $p=.001$). Furthermore, compared to public order/traffic offenses, person offenses are associated with lower odds of charge reductions ($OR=.34$, $p<.001$). The same pattern emerged for drug offenses ($OR=.24$, $p<.001$) and property offenses ($OR=.16$, $p<.001$).

Defendants detained at any point pending trial are less likely to receive charge reductions ($OR=.57$, $p<.001$) which aligns with previous research finding detainees are disadvantaged during case processing (Sacks & Ackerman, 2012; Wooldredge et al., 2015). As compared to a private lawyer, indigent defense counsel representation is associated with a 35% increase in the odds of charge reductions ($OR=1.35$, $p<.001$). Compared to misdemeanors, felonies have much higher odds of a charge reduction ($OR=234.8$, $p<.001$) because the opportunities for downward departure are greater with felonies. Although 1st degree misdemeanors can be reduced to 2nd degree misdemeanors, such reductions occur in only 1% of cases.

The intraclass correlation coefficient for this model is 7.3%, meaning that, when accounting for other factors discussed above, over 7% of the variation in charge reductions is due to the prosecutor. Compared to the unconditional model for male prosecutors (Table 2), adding covariates accounted for differences in the odds of charge reductions. The influence of factors such as prior criminal history, offense severity, and other legal information is important, leading to a sharp but expected decrease in variation

Table 3. Mixed Effects Logistic Regression Models for Charge Reduction

	Male Prosecutor Model (N=19,311)			Female Prosecutor Model (N=24,787)		
	Exp(B)	95% CI	p > z	Exp(B)	95% CI	p > z
INDEPENDENT VARIABLES						
Defendant						
Male	.98	[.85,1.13]	.76	.92	[.82,1.05]	.20
<25 years old	.96	[.81,1.13]	.63	.87	[.76,1.01]	.07
35-44 years old	.94	[.81,1.10]	.44	.87	[.77,.99]	.04
45+ years old	.88	[.74,1.05]	.14	.83	[.72,.96]	.01
Black	1.12	[.98,1.27]	.08	1.05	[.94,1.16]	.42
Hispanic	.85	[.61,1.18]	.33	1.16	[.89,1.51]	.25
Other	1.48	[.82,2.46]	.19	.99	[.59,1.66]	.97
CONTROL VARIABLES						
Case Facts & Criminal History						
Arrest or warrant	2.58	[1.91,3.49]	<.001	2.68	[2.01,3.56]	<.001
Prior convictions	1.00	[.98,1.01]	.60	1.03	[1.01,1.05]	<.001
Prior prison sentences	.86	[.78,.94]	.001	.76	[.70,.82]	<.001
Number of charges	1.00	[.97,1.01]	.96	1.00	[.99,1.05]	.97
Person offense	.34	[.27,.41]	<.001	.57	[.49,.68]	<.001
Drug offense	.24	[.21,.28]	<.001	.30	[.26,.35]	<.001
Property offense	.17	[.14,.21]	<.001	.28	[.23,.35]	<.001
Other Legally Relevant Information						
Detained at any time	.57	[.50,.65]	<.001	.45	[.41,.51]	<.001
Indigent counsel	1.35	[1.16, 1.57]	<.001	1.55	[1.36,1.77]	<.001
Severity of Top Arrest Charge						
Felony	234.76	[179.94,307.87]	<.001	175.66	[137.77,223.96]	<.001
Constant	.004	[.003,.006]	<.001	.004	[.003,.006]	<.001
Variance explained by prosecutor ID and IVs (ICC)		7.3%			4.7%	

between prosecutors.

Female Prosecutor Random Effects Model. The results for female prosecutors largely mirror what was reported above for male prosecutors. However, there are two defendant characteristics that are statistically significant in the female prosecutor model.

Defendants ages 35 to 44 years old have lower odds of charge reductions ($OR=.87$, $p=.04$), and defendants ages 45 years and older have lower odds of charge reductions ($OR=.83$, $p=.01$) than younger defendants. While a large body of research finds younger defendants are punished more severely (e.g., Steffensmeier et al., 1998), female prosecutors in this office may assume older defendants who have not desisted from criminal behavior as they age are more dangerous than younger offenders who may stop as they mature.

Compared to cases initiated by citations or complaints, cases originated from arrests or arrest warrants are over two times more likely to result in charge reductions ($OR=2.68$, $p<.001$). Furthermore, each prior conviction is associated with a 3% increase in the odds of a charge reductions ($OR=1.03$, $p<.001$). Similarly, prior prison sentences are also associated with lower odds of charge reductions ($OR=.76$, $p<.001$). This suggests prosecutors are reluctant to downgrade charges for defendants with incarceration history. Also aligned with the male prosecutor model, all offense type categories were less likely to result in charge reductions compared to public order/traffic offenses (person offenses: $OR=.57$, $p<.001$; drug offenses: $OR=.30$, $p<.001$; property offenses: $OR=.28$, $p<.001$).

Defendants who are detained at any point have lower odds of charge reductions ($OR=.45$, $p<.001$), demonstrating that detained defendants may be more disadvantaged at this decision point, irrespective of prosecutors' gender. In this female prosecutor model, indigent counsel is associated with a 55% increase in the odds of charge reductions ($OR=1.55$, $p<.001$), which is consistent with the male prosecutor model. Unexpectedly, the number of charges at filing did not affect the probability of charge reduction ($OR=1.00$, $p=.97$). Finally, felonies are salient for charge reductions ($OR=175.7$, $p<.001$).

The intraclass correlation coefficient for this model is 4.7%, which means slightly less variation in charge reductions is due to the prosecutor for the female filing prosecutor model than for the male filing prosecutor model. More defendant- and case-level characteristics are statistically significant in this model, which explains why less variation is due to variation between prosecutors in the female prosecutor model.

Dismissal

Unconditional Models. Table 4 shows the results of unconditional models for dismissals attributable to male versus female prosecutors. Compared to the model for charge changes, prosecutors explained much less of the variation in dismissal decisions. For cases handled by males, only 9.8% of the variation in dismissals is explained by prosecutors. Compared to the male filing prosecutor inter class correlation, the intraclass correlation for the female prosecutor model is only 5.6%. In this case, the unconditional models show that male prosecutors exert more influence on dismissal decisions than their female counterparts. These lower intraclass correlation coefficients could be due to the lack of variation in the dismissal outcomes, as compared to the other outcomes included in the analyses. In this jurisdiction, prosecutors do not exercise much discretion in dismissing cases. As shown in Table 1, overall, only 4% of filed cases result in dismissal, while most cases are disposed of through guilty pleas or trials.

Table 4. Unconditional Models for Prosecutor ID and Prosecutorial Dismissal

	Male Prosecutor Model (N=19,426)			Female Prosecutor Model (N=24,930)		
	Exp(B)	CI	p > z	Exp(B)	CI	p > z
Constant	.05	[.04, .06]	<.001	.04	[.04, .05]	<.001
Random Effects	Estimate	SE	p > z	Estimate	SE	p > z
Prosecutor	.60	.09	<.001	.44	.08	<.001
Variance explained by prosecutor ID only (ICC)		9.8%			5.6%	

Male Prosecutor Random Effects Model. The findings for this model are presented in Table 5. In the male prosecutor model, the only defendant covariates that reached statistical significance was for Black defendants and defendants in the “other race” category. Black defendants have a 21% increase in the odds of a dismissal compared to white defendants ($OR=1.21, p=.03$), which is consistent with previous studies finding prosecutors often acknowledge police bias and over policing by dismissing cases against Black defendants (Kutateladze et al., 2014; J. Wu, 2016). Defendants in the “other race” category have 75% higher odds of dismissals compared to White defendants ($OR=1.75, p=.02$). The finding for Hispanic defendants was unexpected given prior research suggesting Hispanic defendants are punished more severely than White defendants (Demuth & Steffensmeier, 2004; Steffensmeier & Demuth, 2000).

Cases originated through arrests or arrest warrants have 34% higher odds of dismissals compared to other sources of case referral ($OR=1.34, p=.02$). Prior convictions ($OR=1.02, p=.08$), prior prison sentences ($OR=.92, p=.26$), and the number of filed charges ($OR=.91, p=.07$) do not reach statistical significance. Person offenses are

nearly twice as likely to result in dismissals ($OR=2.94, p<.001$); yet, neither drug offenses ($OR=1.15, p=.30$) nor property offenses ($OR=1.04, p=.77$) are significantly associated with dismissal outcomes ($OR=1.15, p=.30$). Higher likelihood of dismissals for person offenses suggests that prosecutors may have difficulty getting witnesses or victims to cooperate, which would be necessary for securing conviction in these cases.

Being detained is associated with an estimated 82% increase in the odds of dismissal, as compared to those who are released on recognizance or bond ($OR=1.82, p<.001$). Being represented by indigent defense is associated with a decrease in the odds of dismissals ($OR=.35, p<.001$). For offense severity, the results reveal several interesting findings. Data showed that, as compared to 2nd degree misdemeanors, the odds of dismissing 1st degree misdemeanors are 35% greater ($OR=1.35, p=.02$). None of the felony levels (1st, 2nd or 3rd degree) is associated with case dismissal, compared to 2nd degree misdemeanors. While more serious offenses may be more of a threat to public safety, they also typically present complex evidentiary issues difficult to tackle within case processing timelines, even if they are much longer for felonies. In Florida, on average, most misdemeanor criminal cases resolve within three months, and most felony criminal cases last about 180 days. Second degree misdemeanors may be easier to prove but prosecutors may dismiss these cases because they do not feel they entail the same public safety concerns as more serious offenses.

The intraclass correlation for this model is 3.5%, meaning roughly three percent of the variation in dismissal decisions is due to the filing prosecutor in this model. This suggests there is little difference between cases handled by one prosecutor compared to cases handled by another in this model. This is not surprising given the lower ICC for the

unconditional model at 11 percent. Given the rarity of case dismissals in this prosecutorial office (see Table 1), it was expected that prosecutorial idiosyncrasies would not affect this decision in a meaningful manner.

Female Prosecutor Random Effects Model. The results for the female filing prosecutor dismissal model are shown alongside the male prosecutor model in Table 5. Only one defendant variable reaches statistical significance. Compared to similarly situated White defendants, Black defendants are 36% more likely to have their cases dismissed ($OR=1.36, p<.001$). In the female prosecutor model, this effect is stronger, and the odds ratio is higher than in the male prosecutor model ($OR=1.21, p=.03$). One of the age categories also emerged as statistically significant: older defendants (45+) were markedly more likely to have their case dismissed than the youngest pool of defendants ($OR=1.36, p=.02$).

Like the male prosecutor dismissal model, cases originated through arrest are not significantly associated with the odds of charge changes ($OR=1.06, p=.57$). Another finding not present in the male prosecutor model is related to criminal history proxies. Prior conviction and prison sentence variables are not significantly associated with the odds of case dismissals. Neither the number of charges nor offense type categories are statistically significant.

Pretrial detention is associated with an estimated 31% increase in the odds of a dismissal compared to defendants released on recognizance or bond ($OR=1.31, p<.002$). For defense counsel type, cases with indigent defense counsel have significantly lower odds of dismissals ($OR=.43, p<.001$). Defendants without resources to afford bail or retain counsel may be disadvantaged later during case processing (e.g., Martinez,

Petersen, & Omori, 2020). The offense severity predictors in this model are very different from that for the male prosecutor model. All categories are significant predictors of differences in the odds of dismissals. Compared to 2nd degree misdemeanors, 1st degree misdemeanors have twice the odds of dismissals ($OR=2.04, p<.001$). Also, 3rd degree felonies ($OR=1.45, p=.03$) and 2nd degree felonies ($OR=1.92, p=.002$) both have higher odds of dismissals compared to 2nd degree misdemeanors.

The intraclass correlation coefficient for this model is 1.7%, meaning less than two percent of the variation in dismissal decisions are attributed to the female prosecutor, which is even lower than the coefficient for the male prosecutor model. While this model is statistically significant, this low intraclass correlation suggests that dismissal decisions for one prosecutor's caseload are fairly similar to the decisions made by colleagues. This suggest that dismissal decisions are highly regulated by internal office guidelines and policies. It is not uncommon for dismissal decisions to require supervisory approval, which further reduces variations associated to prosecutor characteristics.

Table 5. Mixed Effects Logistic Regression Models for Dismissal

	Male Prosecutor Model (N=19,311)			Female Prosecutor Model (N=24,787)		
	Exp(B)	95% CI	p > z	Exp(B)	95% CI	p > z
INDEPENDENT VARIABLES						
Defendant						
Male	.84	[.72,1.01]	.07	1.01	[.87,1.19]	.81
<25 years old	.90	[.74,1.11]	.34	.90	[.74,1.08]	.25
35-44 years old	.94	[.76,1.13]	.46	.97	[.81,1.17]	.78
45+ years old	1.00	[.81,1.23]	.99	1.23	[1.18,1.57]	.02
Black	1.21	[1.02,1.41]	.03	1.36	[1.14,1.51]	<.001
Hispanic	.91	[.64,1.29]	.59	1.11	[.83,1.51]	.46
Other	1.75	[1.08,2.83]	.02	1.13	[.69,1.85]	.62
CONTROL VARIABLES						
Case Facts & Criminal History						
Arrest or warrant	1.34	[.98,1.58]	.02	1.10	[.89,1.36]	.39
Prior convictions	1.02	[1.00,1.05]	.08	1.01	[.98,1.04]	.29
Prior prison sentences	.92	[.82,1.08]	.36	1.00	[.89,1.13]	.96
Number of charges	.91	[.82,1.01]	.07	.88	[.80,.98]	.01
Person offense	2.94	[2.36,3.65]	<.001	2.81	[2.35,3.36]	<.001
Drug offense	1.15	[.89,1.47]	.30	.95	[.76,1.19]	.64
Property offense	1.04	[.78,1.41]	.77	.94	[.71,1.23]	.65
Other Legally Relevant Information						
Detained at any time	1.82	[1.53,2.15]	<.001	1.31	[1.13,1.52]	.002
Indigent counsel	.35	[.29,.41]	<.001	.43	[.37,.51]	<.001
Severity of Top Arrest Charge						
1 st degree misdemeanor	1.35	[1.05,1.74]	.02	2.04	[1.67,2.67]	<.001
3 rd degree felony	.95	[.66,1.38]	.78	1.45	[1.04,2.02]	.03
2 nd degree felony	1.19	[.80,1.78]	.40	1.92	[1.24,2.60]	.002
1 st degree felony	1.34	[.67,2.73]	.41	1.63	[.83,3.21]	.16
Constant	.05	[.03,.06]	<.001	.03	[.02,.04]	<.001
Variance explained by prosecutor ID and IVs (ICC)		3.5%			1.7%	

Plea Disposition

Unconditional Models. Table 6 shows the results of unconditional models for plea dispositions (as opposed to dismissal, trial, or diversion) attributable to male versus female prosecutors. Among cases handled by males, 11.5% of the variation in plea dispositions is attributed to prosecutors, as opposed to case- or defendant-level, predictors. Explained variation for cases handled by females is very similar—11.2%. While these models do not control for defendant- or case-level characteristics, they still explain a nontrivial amount of variation in guilty plea dispositions. Prosecutors have considerable discretion during plea negotiations, so some variation in guilty pleas between prosecutors at this decision points is expected.

Table 6. Unconditional Models for Prosecutor ID and Plea Disposition

	Male Prosecutor Model (N=19,426)			Female Prosecutor Model (N=24,930)		
	Exp(B)	CI	p > z	Exp(B)	CI	p > z
Constant	10.13	[8.21,12.50]	<.001	10.12	[8.50,12.03]	<.001
Random Effects	Estimate	SE	p > z	Estimate	SE	p > z
Prosecutor	.65	.09	<.001	.64	.07	<.001
Variance explained by prosecutor ID only (ICC)		11.5%			11.2%	

Male Prosecutor Random Effects Model. The results for guilty pleas are displayed in Table 7. In this model, male defendants have considerably higher odds of pleading guilty ($OR=1.32, p<.001$) as compared to similarly situated female defendants. None of the other defendant-level variables are statistically significant, or even approach

the threshold for significance. As expected, prior record played an important role in guilty plea dispositions. Each additional prior conviction is associated with a 3%-increase in the odds of a plea disposition ($OR=1.03$, $p=.003$), which suggests prior convictions

Table 7. Mixed Effects Logistic Regression Models for Plea Disposition

	Male Prosecutor Model (N=19,311)			Female Prosecutor Model (N=24,787)		
	Exp(B)	95% CI	p > z	Exp(B)	95% CI	p > z
INDEPENDENT VARIABLES						
Defendant						
Male	1.32	[1.16,1.50]	<.001	1.17	[1.05,1.31]	.01
<25 years old	1.09	[.94,1.28]	.26	1.01	[.89,1.15]	.86
35-44 years old	1.04	[.89,1.21]	.64	1.15	[1.00,1.32]	.05
45+ years old	1.05	[.89,1.24]	.58	1.02	[.88,1.17]	.81
Black	.93	[.81,1.05]	.22	.91	[.82,1.01]	.09
Hispanic	1.26	[.95,1.67]	.11	1.16	[.92,1.47]	.21
Other	.92	[.59,1.42]	.71	1.58	[1.02,2.48]	.04
CONTROL VARIABLES						
Case Facts & Criminal History						
Arrest or warrant	.85	[.71,1.05]	.09	1.02	[.89,1.23]	.57
Prior convictions	1.03	[1.01,1.05]	.003	1.02	[1.00,1.04]	.01
Prior prison sentences	1.11	[1.00,1.26]	.06	1.16	[1.05,1.28]	.003
Number of charges	1.04	[.97,1.13]	.40	1.08	[1.01,1.16]	.03
Person offense	.47	[.39,.57]	<.001	.53	[.46,.62]	<.001
Drug offense	.64	[.53,.76]	<.001	.42	[.36,.48]	<.001
Property offense	.89	[.71,.1.11]	.30	.81	[.66,.98]	.03
Other Legally Relevant Information						
Detained at any time	.72	[.63,.82]	<.001	.89	[.79,.99]	.04
Indigent counsel	1.89	[1.65,2.18]	<.001	1.63	[1.44,1.84]	<.001
Severity of Top Arrest Charge						
1 st degree misdemeanor	.67	[.55,.83]	<.001	.65	[.55,.78]	<.001
3 rd degree felony	.38	[.29,.51]	<.001	.32	[.25,.40]	<.001
2 nd degree felony	.63	[.45,.88]	.01	.61	[.45,.81]	.001
1 st degree felony	.54	[.31,.95]	.03	.75	[.45,1.28]	.28
Constant	12.59	[9.76,16.24]	<.001	12.75	[10.11,16.08]	<.001
Variance explained by prosecutor ID and IVs (ICC)		2.3%			4.4%	

exert some pressure on defendants to plead guilty. The effect for prior prison sentence was greater, although this effect was only marginally statistically significant ($OR=1.11$, $p=.06$).

Data also suggest that different offense types have varied likelihood of guilty plea dispositions within the male prosecutor sample. Compared to public order offenses, person ($OR=.47$, $p<.001$) and drug ($OR=.64$, $p<.001$) offenses had markedly lower likelihood of guilty plea dispositions. Being detained at any time during case processing is also associated with lower odds of plea dispositions ($OR=.72$, $p<.001$). This finding is contrary to previous research finding defendants are more likely to plead guilty if they are in custody during case processing (Peterson, 2020). The type of legal representation also matters; cases with indigent defense counsel have higher odds of receiving a plea disposition ($OR=1.98$, $p<.001$).

All offense severity predictors reached the statistical significance threshold. Overall, more serious offenses are less likely to culminate in guilty plea dispositions. Specifically, compared to 2nd degree misdemeanors, 1st degree misdemeanors have lower odds of plea dispositions ($OR=.67$, $p=.001$). Similarly, 3rd degree ($OR=.38$, $p<.001$), 2nd degree ($OR=.63$, $p=.01$), and 1st degree ($OR=.54$, $p=.03$) felonies are all markedly less likely to be disposed of through guilty pleas, as opposed to trial/dismissal. These findings are expected given the rarity of trials for low-level offenses, such as 2nd degree misdemeanors (Natapoff, 2011). The final finding from Table 7 is the interclass correlation coefficient, which is 2.3%. This value is lower than expected considering prosecutors' influence over the plea-bargaining process. However, it also speaks to the salience of prior convictions and offense severity at this point in case dispensation.

Female Prosecutor Random Effects Model. The results for this model are presented alongside the male prosecutor model in Table 8. Consistent with the finding in the male prosecutor model, male defendants are 17% more likely to have their criminal case result in plea dispositions ($OR=1.17, p=.01$), although note that the effect of defendants' gender was much greater for cases handled by male prosecutors. Defendants' race did not play an important role in plea dispositions. Yet two findings are still notable. First, being Black was associated with a lower odds of plea disposition, although this finding was only marginally statistically significant ($OR=.91, p=.09$). Second, cases with defendants in the "other race" category have higher odd of plea dispositions ($OR=1.58, p=.04$), although given that this category captures varied racial/ethnic groups, interpreting the finding is difficult.

Prior record plays an important role in plea dispositions, although the effect of prior prison sentence was much greater than that for prior conviction. Specifically, every prior prison sentence is associated with an estimated 16% increase in the odds of guilty pleas ($OR=1.16, p=.003$), and every prior conviction is associated with a 2% increase in this outcome ($OR=1.02, p=.01$). The number of charges also influence plea dispositions. Every additional charge is associated with an estimated 8% increase in the odds of plea dispositions ($OR=1.08, p=.03$). This finding suggests that defendants with more charges might be more likely to accept plea offers rather than risk trial conviction. The more charges they have, the more probable that conviction may seem to defendants.

The offense severity predictors are consistent with the male prosecutor model with one exception. Like the male prosecutor model, cases involving person ($OR=.53, p<.001$) and drug ($OR=.42, p<.001$) offenses have lower odds of being disposed through

guilty pleas. However, in this model, property offenses are also statistically significant ($OR=.81, p=.03$). Pretrial detention is associated with lower odds of plea dispositions ($OR=.89, p=.04$). Compared to private counsel, indigent counsel is significantly associated with an increase in the odds of plea dispositions ($OR=1.63, p<.001$). For offense severity measures, the results are consistent with the male prosecutor model with one exception. Compared to 2nd degree misdemeanors, 1st degree misdemeanors have lower odds of plea dispositions ($OR=.65, p<.001$). Furthermore, 3rd degree felonies ($OR=.32, p<.001$) and 2nd degree felonies ($OR=.61, p=.001$) also have lower odds of plea dispositions. However, 1st degree felonies are not significantly associated with plea dispositions ($OR=.75, p=.28$).

Guilty Plea with Custodial Sentence

Unconditional Models. Table 8 shows the results of unconditional models for plea dispositions resulting in custodial sentences (as opposed to plea dispositions with non-custodial sentences of fine, probation, or community service), attributable to male versus female prosecutors. Among cases handled by males ($N=6,453$)¹¹, 42.3% of the variation in plea disposition resulting in custodial sentences is attributed to prosecutors, as opposed to case- or defendant-level, predictors. Comparable explained variation for cases handled by females ($N=8,327$) is 43.1%. As such, the interclass correlation coefficients for this decision points are quite high. Prosecutors have ample discretion over charges and plea offers, increase their influence over custodial sentences resulting from guilty pleas.

¹¹ Cases that were not resolved through pleas are removed from the analyses in addition to public order offenses.

Table 8. Unconditional Models for Prosecutor ID and Guilty Pleas with Custodial Sentences

	Male Prosecutor Model (N=6,453)			Female Prosecutor Model (N=8,327)		
	Exp(B)	CI	p > z	Exp(B)	CI	p > z
Constant	8.92	[5.29, 14.97]	<.001	9.94	[6.37,15.51]	<.001
Random Effects	Estimate	SE	p > z	Estimate	SE	p > z
Prosecutor	1.58	.21	<.001	1.58	.18	<.001
Variance explained by prosecutor ID only (ICC)		42.3%			43.1%	

Male Prosecutor Random Effects Model. The findings for the male disposition prosecutor custodial sentence model are reported in Table 9. The model for custodial versus non-custodial sentences suggests case relevant information is also important in determining sentence type. These legal factors play a more pronounced role at the sentencing stage, as compared to earlier decision points where prosecutors—as opposed to judges—have more discretion.

In this model, male defendants are 19% more like than female defendants to receive custodial sentences ($OR=1.19, p=.07$). However, this is only a marginally significant predictor of sentence type. The only other defendant variables are statistically significant predictors of differences in odds of receiving custodial sentences are the two older defendant age categories. Defendants ages 35 to 44 years old ($OR=1.39, p=.01$) and 45 years or older ($OR=1.57, p<.001$) both have higher odds of receiving custodial sentences compared to other sanctions.

Nearly all case-level characteristics emerged as statistically significant. Cases that resulted from arrest/warrants have roughly 25 times the odds of receiving custodial sentences, compared to cases resulting from other referral sources ($OR=25.88, p<.001$). Furthermore, every additional prior conviction is associated with an estimated 16% increase in the odds of custodial plea dispositions ($OR=1.16, p<.001$). The effect of prior prison sentences was even larger with 23% higher odds of receiving a custodial sentence after pleading guilty ($OR=1.23, p=.04$). Each additional charge is also associated with a 36% increase in the odds of receiving custodial sentences ($OR=1.36, p<.001$).

For offense type, person and property offenses are significantly associated with the odds of receiving a custodial sentence, as compared to drug offenses. After controlling for offense severity and other covariates, person offenses ($OR=1.24, p=.03$) and property offenses ($OR=2.72, p<.001$) have much higher odds of resulting in custodial sentences compared to those who pled guilty for drug offenses as the top disposition charge.

Defendants who are detained at any point in case processing are seven times more likely to receive custodial sentences ($OR=7.10, p<.001$), which aligns with studies finding pretrial detention adversely affects defendants' case trajectories (Donnelly & MacDonald, 2018; Heaton, Stevenson, & Mayson, 2017). Defendants with indigent defense counsel have 66% higher odds of receiving a custodial sentence compared to defendants with private counsel ($OR=1.66, p<.001$). At this stage in case processing, defendants with private counsel likely receive better plea offers compared to indigent defendants, leading to more favorable outcomes that do not result in incarceration.

For offense severity, all predictors, except 1st degree felonies, are significantly associated with increased odds of custodial sentences, compared to 2nd degree misdemeanors. Higher likelihood of custodial sentences for more serious cases should be expected. The present analysis shows that, compared to 1st degree misdemeanors, second degree misdemeanors have lower odds of receiving custodial sentences, although this predictor does not reach statistical significance ($OR=.76, p=.12$). As expected, 3rd degree felonies ($OR=15.44, p<.001$), and 2nd degree felonies ($OR=27.57, p<.001$) have considerably higher odds of custodial sentences through plea dispositions. First degree felonies also have much higher odds of receiving custodial sentences ($OR=10.19, p=.02$). The intraclass correlation for this sample is 12.7%, which means that even with case and defendant predictors, over 12% of the variation in custodial sentence decisions are due to the variation in prosecutors assigned to the cases.

Female Prosecutor Random Effects Model. The results for this model are presented in Table 9, demonstrating some similarities with the male prosecutor model described above. The only statistically significant predictor associated with the odds of custodial sentences is related to defendant age. Compared to defendants ages 25 to 34 years old, defendants ages 35 to 44 years old have 43% increased odds of receiving a custodial sentence ($OR=1.43, p<.001$) and defendants 45 years or older have 59% higher odds of receiving custodial sentences.

Consistent with the male prosecutor model, cases originated through arrests have considerably higher odds of resulting in custodial sentences compared to other sources of case referral ($OR=18.04, p<.001$). Prior convictions ($OR=1.20, p<.001$) are also positively associated with the odds of receiving custodial sentences. Unlike the male

prosecutor model, each prior prison sentence is not significantly related to the odds of receiving a custodial sentence ($OR=.96, p=.64$). Each increase in the number of charges is associated with a 32% increase in the odds of receiving custodial sentences ($OR=1.32, p<.001$).

For offense severity, person and property offenses are significantly associated with the odds of receiving a custodial plea disposition compared to drug offenses. Person offenses are more likely to result in custodial sentences ($OR=1.22, p=.03$). Property offenses have even higher odds of receiving a custodial sentence than drug offenses ($OR=1.91, p<.001$). Defendants who are detained at any point have roughly seven times higher odds of receiving a custodial sentence ($OR=7.65, p<.001$). Cases involving indigent counsel also have higher odds of receiving custodial sentence ($OR=1.67, p<.001$).

Compared to 1st degree misdemeanors, 2nd degree misdemeanors have lower odds of receiving custodial sentences after pleading guilty. Also consistent with the male prosecutor model, 3rd degree felonies ($OR=15.08, p<.001$) and 2nd degree felonies ($OR=19.42, p<.001$) have substantially higher odds of custodial sentences compared to 1st degree misdemeanors. First degree felonies have an odds ratio of nearly zero in this model, indicating the odds of receiving a custodial sentence after pleading guilty is exponentially higher for 1st degree felonies compared to 1st degree misdemeanors. This is expected given the serious nature of these offenses compared to misdemeanors. Additionally, the total number of 1st degree misdemeanors in the dataset is low ($N=256$) and the number of 1st degree misdemeanors that do not result in custodial sentences is minimal and only handled by male prosecutors. The intraclass correlation for this sample

Table 9. Mixed Effects Logistic Regression Models for Guilty Pleas with Custodial Sentences

	Male Prosecutor Model (N=6,437)			Female Prosecutor Model (N=8,309)		
	Exp(B)	95% CI	p > z	Exp(B)	95% CI	p > z
INDEPENDENT VARIABLES						
Defendant						
Male	1.19	[.98,1.43]	.07	1.01	[.86,1.20]	.89
<25 years old	.92	[.75,1.14]	.44	1.05	[.87,1.27]	.58
35-44 years old	1.39	[1.11,1.76]	.01	1.43	[1.17,1.75]	.001
45+ years old	1.57	[1.24,1.99]	<.001	1.59	[1.29,1.95]	<.001
Black	.97	[.82,1.15]	.71	1.08	[.93,1.26]	.30
Hispanic	.84	[.57,1.24]	.37	.81	[.56,1.16]	.25
Other	1.11	[.51,2.41]	.80	1.03	[.52,2.05]	.93
CONTROL VARIABLES						
Case Facts & Criminal History						
Arrest or warrant	25.88	[19.29,34.69]	<.001	18.04	[14.15,22.99]	<.001
Prior convictions	1.16	[1.12,1.19]	<.001	1.20	[1.16,1.22]	<.001
Prior prison sentences	1.23	[1.01,1.48]	.04	.96	[.83,1.12]	.64
Number of charges	1.36	[1.15,1.60]	<.001	1.32	[1.14,1.53]	<.001
Person offense	1.24	[1.02,1.51]	.03	1.22	[1.02,1.46]	.03
Property offense	2.72	[2.17,3.40]	<.001	1.91	[1.56,2.37]	<.001
Other Legally Relevant Information						
Detained at any time	7.10	[5.46,9.24]	<.001	7.65	[6.08,9.64]	<.001
Indigent counsel	1.66	[1.26,2.19]	<.001	1.67	[1.31,2.12]	<.001
Severity of Top Arrest Charge						
2 nd degree misdemeanor	.76	[.53,1.08]	.12	.90	[.64,1.25]	.53
3 rd degree felony	15.44	[9.06,26.32]	<.001	15.08	[9.17,24.78]	<.001
2 nd degree felony	27.57	[8.37,90.87]	<.001	19.42	[7.03,53.62]	<.001
1 st degree felony	10.19	[1.42,73.34]	.02	-	-	-
Constant	.02	[.01,.03]	<.001	.03	[.02,.05]	<.001
Variance explained by prosecutor ID and IVs (ICC)		12.7%			12.3%	

is 12.3%, suggesting that a nontrivial amount of the variation in custodial sentence decisions are due to prosecutors handling these cases.

CHAPTER 7

DISCUSSION

The importance of the American prosecutor is widely cited in discussions of criminal case outcomes, yet there is still much to be learned about the influence of prosecutors' identities on these outcomes. This dissertation contributes to this body of scholarship by using prosecutor gender to gauge its effects on four outcomes of interest including (1) charge reductions at case screening, (2) prosecutor-led dismissals, (3) plea dispositions, and (4) post-guilty plea custodial sentences. This dissertation uses data collected as part of a MacArthur Foundation-funded research and technical assistance project (visit ProsecutorialPerformanceIndicators.org for more information). The dataset includes 44,356 felonies and misdemeanors, processed by a mid-size Florida prosecutor's office in 2017-2018. Mixed effects logistic regression models revealed a great number of notable findings, some of them were expected considering prior research, while others were unexpected.

The intraclass correlation coefficients in the unconditional charge reduction models showed that roughly half of the variation in the odds of *charge reductions* is attributable to prosecutor characteristics, with the variance explained being slightly greater for female prosecutors (52.4%) than for male prosecutors (45.6%). However, for the remaining unconditional models, the variation in outcomes explained by variation in the prosecutors assigned to cases is much less than what was observed for the charge reduction models. Furthermore, when covariates are added to the models, the effect of prosecutors is even lower—ranging from two to five percent—for all models. This finding suggests that defendant and, especially, case-level characteristics exert much

greater influence over the decision points analyzed, as compared to the effects of prosecutor characteristics.

Overall, the analyses did not find noticeable differences in decision-making patterns for female versus male prosecutors. Explained variances by prosecutor IDs were consistent across prosecutor gender groups, before or after controlling for defendant and case-level factors. This finding is consistent with prior research on prosecutors. For example, Meldrum, Stemen, and Kutateladze (2021) examined punitive attitudes among 316 prosecutors nationally and found no effects of prosecutor gender. Similarly, Kutateladze and Andiloro (2014) examined the influence on prosecutor gender on custodial sentence offers in New York County and found no effects (see Table 57, p. 194). Yet, research also demonstrates that female judges tend to make more “liberal” decisions when it comes to death penalty or obscenity cases (Songer & Crews-Meyer, 2000), and male and female judges are punitive in different ways (Kutateladze & Crossman, 2009).

Overall, the results do not show support for representative bureaucracy theory. There are several potential reasons for this lack of support. First, prosecutors may be socialized once they begin working in the office, making their individual identities less salient during case processing. The effects of socialization have been noted in previous research (e.g., Hatmaker, 2013; Hong, 2017; Taormina, 2008). Given the lack of information about prosecutors’ years of experience, the effects may have been different for more experienced versus less experienced prosecutors (e.g., Baker & Hassan, 2020). Female prosecutors may a traditionally male decision-making style as they may view this as a vehicle for promotion and receiving respect from their colleagues (e.g., Hatmaker,

2013). While the prosecutorial field is becoming gender-balanced, historically, that was not the case. As such, many women might have been forced to adopt a typically male ways of approaching their work.

Some studies examining the influence of prosecutor tenure show no effect on outcomes (Stemen & Escobar, 2018), while others find some offenses are less likely to be charged as years of experience increase (Frederick & Stemen, 2012). R.F. Wright and Levine found support for “young prosecutor’s syndrome”. Their analysis showed less experienced prosecutors were less likely to dismiss or reduce charges, and they were more likely to pursue trials instead of negotiating pleas with defense council (R.F. Wright & Levine, 2014). Younger or less experienced prosecutors may be more inclined to pursue all cases to increase trial experience.

While representation has been shown to be important in positions with more discretion, organizational socialization can occur when there is a rigid hierarchy with specific rules are guidelines bureaucrats are expected to follow (e.g., Taormina, 2008). In prosecutors’ offices, this is possible the conflict between prosecutors wanting to advocate for their communities while still appearing to be competent and working within the guidelines set forth by leadership. Prosecutors have discretion but are also bound by laws and officewide policies and procedures. For example, in Florida, offenses involving a gun have automatic mandatory minimum sentences depending on whether the gun was visible, discharged, or hit a victim during the commission of a crime (Fla. Statute § 775.087). Laws like this restrain discretion that would allow prosecutors to ameliorate unwarranted disparities or address the needs of vulnerable victims.

Defendant and Case-Level Predictors

For the first decision point, charge reduction at case screening, none of the defendant race, ethnicity, or gender predictors are significantly associated with the odds of charge reductions, in either model for prosecutor gender. However, expectedly, many case-level predictors emerged as statistically significant. Importantly, charge reductions, while occurring in 12% of cases, are largely reserved for felonies. For example, although 1st degree misdemeanors can be reduced to 2nd degree misdemeanors, such reductions only occur in 1% of cases. Considering 1st degree misdemeanors cases make up a sizeable portion of the sample, this undoubtedly influences the overall results from this model because felonies offer the prosecutors greater opportunities to reduce in severity.

Defendant race/ethnicity effect was limited. This predictor played no role in charge reduction, guilty pleas,¹² or custodial sentences; yet it was a significant predictor of dismissal decisions. Cases were more likely to be dismissed when a defendant was Black, whether these cases were handled by male or female prosecutors. This finding is consistent with previous research (J. Wu, 2016). For example, using data from Manhattan District Attorney's office, Kutateladze et al. (2014) found that Black defendants were more likely to benefit from case dismissal. Interestingly, however, while this dissertation finds that Hispanic defendants are *less* likely to have their case dismissed (see male prosecutors' model), Kutateladze and colleagues' research finds that Latinos are *more* likely to experience a case dismissal. This discrepancy may be due to geographical differences and varied statuses of the Latinx population in Florida versus New York.

¹² Prior studies show that minority defendants are less likely to plead guilty (Metcalfe & Chiricos, 2018; Testa & Johnson, 2020).

Higher odds of case dismissal for Black defendants suggests that these cases might have been filed on the weaker evidentiary basis than what was filed against White defendants. Filing most cases allows prosecutors to maintain good working relationships with local police departments. Eliminating them at later stages may call lesser attention to the issue, allowing them to reduce caseload without damaging working relationships with police officers. This finding also suggests these cases could have been rejected at screening because they were not viable. As Kutateladze and colleagues write (2014), prosecutorial offices should “raise the question of whether having higher dismissal rates for defendants of color is an indicator of leniency or whether they might simply serve as a mechanism for declining to prosecute cases whose viability is in doubt or that could have been rejected at screening” (Kutateladze et al., 2014: p. 5).

Prior record has emerged as a strong predictor of all outcomes of interest, except for dismissal. Those with prior convictions and/or prior prison sentences were markedly *less* likely to experience charge reductions, and *more* likely to receive plea disposition and custodial sentences following such dispositions. This finding does not come as a surprise because the effect of prior record on prosecutorial and sentencing decisions is well-documented (e.g., Spohn & Welch, 1987; Franklin & Henry, 2020). Individuals with prior record are viewed as more culpable and less likely to benefit from rehabilitation, leading to more punitive outcomes. Furthermore, state laws and many internal guidelines and policies disadvantage individuals with prior record. These may limit prosecutors’ ability to downgrade charges, offer non-custodial pleas, or consider diverting a defendant. For example, Kutateladze and Andiloro (2014) discuss plea guidelines in the New York County District Attorney’s office, which heavily rely on prior record, although line

prosecutors have the option to depart from the guidelines with approval from supervisors in some cases (Kutateladze & Andiloro, 2014: p. 115).

Pretrial detention showed significant effects on all four outcomes of interest, and these effects were consistent across female and male prosecutor models. Defendants in pretrial detention were *less* likely to benefit from charge reductions, *more* likely to have their case dismissed, *less* likely to receive plea dispositions, and *more* likely to receive custodial sentences of jail or prison. Although the strong and positive effect of pretrial detention on custodial sentences has been well documented (e.g., Kutateladze et al., 2014; Oleson et al., 2016; Wooldredge et al., 2015), this study's finding that pretrial detainees have significantly lower odds of plea dispositions runs counter to research suggesting that pretrial detainees plead guilty more often and faster than those who are released on bail (Petersen, 2020; Sacks & Ackerman, 2012). However, it is possible that these defendants are less likely to receive a plea offer. Similarly, some prosecutorial officers may have policies of not to offer plea deals in rape and other violent cases. Unfortunately, the current dataset does not capture how often plea offers were made, and then accepted or declines by a defendant—the topic which merits further investigation.

Furthermore, while the number of charges in each case did not influence the charge reduction outcome at screening, it emerged as a significant predictor of the three remaining dependent measures. Defendants with more charges are *less* likely to experience case dismissal, and *more* likely to receive the plea disposition as well as custodial sentences following plea deals. These findings are intuitive. To begin, having more charges gives prosecutors greater ability to prove at least some of them, which increases the likelihood of conviction and decreases prosecutorial willingness to dismiss

the case.¹³ Additionally, the number of charges would increase plea dispositions because it incentivizes defendants to plead guilty, and potentially get additional charges reduced or dropped in return of guilty pleas. Finally, more charges would translate into more punitive sentences because of sentencing scoresheet used in Florida which requires prosecutors to account for all charges (although some discretion is still permitted).

Defendants charged with person, property or drug offenses all had lower odds of charge reductions, but higher odds of dismissal compared to public order/traffic offenses. While the finding for dismissals is surprising based on the potential severity of person or drug offenses, suggesting prosecutors pursue “low hanging fruit”, or cases that are straightforward and easy to prove. Cases that rely heavily on victim and witness testimony, or require forensic evidence are more difficult for prosecutors to prove. Since many criminal cases do not have forensic evidence (O’Brien, 2010), the prosecution of these cases may rest on victim or witness testimony. If victims or witnesses are not willing or able to testify, then dismissals may occur because cases are not viable.

Another influential predictor of the outcomes of interest was the defense counsel type, which compared indigent defense to private counsel. In fact, this variable was statistically significant in all models examined. As compared to defendants represented by private lawyers, those represented by public defender or assigned counsel were *more* likely to have their charges reduced, *less* likely to have cases dismissed, and *more* likely to receive guilty plea dispositions and, subsequently, custodial sentences. Generally, the effect of type of defense was greater in sentencing as compared with previous decision

¹³ Note that *number of charges* approached by did not reach the statistical significance threshold in the male prosecutor model ($OR=.91, p=.07$).

points, which is consistent with prior research. Kutateladze and Leimberg (2018) found that the type of defense counsel was most salient at sentencing, and defendants represented by private defense attorneys were less likely to plead guilty and face incarceration. This study suggests that type of representation may reflect varied qualities of defense, with those represented by private lawyers generally securing more beneficial dispositions. Considering that low-SES defendants would not be able to afford private counsel, the quality of defense creates another mechanism for inequality and injustice.

Study Limitations

While this study broaches important research questions about the role of prosecutor gender in case outcomes, there are several limitations that need to be addressed. First, there are only two prosecutor-related variables in this dataset: prosecutor gender and IDs. The dataset does not have prosecutors' race, years of experience, law school, marriage status, or other information that may influence their decisions in addition to their gender.

Collecting information such as prosecutor tenure and other potentially relevant information for line attorneys will add to this body of research focusing on legal decision makers. Analyses of judges demonstrate the importance of such attributes including judge race and prior military experience are salient predictors of sentencing outcomes (e.g., Johnson, 2006), so studies of prosecutorial discretion should also incorporate this information into their analyses. Prosecutor race and ethnicity may play a critical role at various points in case processing. For example, minority prosecutors may be more attuned to disparate policing, leading them to be more analytical at case screening or when dismissing cases. Minority attorneys may also appease defendants' hesitations

during plea negotiations because they may be mistrustful of the legal process and view it as overwhelmingly white (e.g., Testa & Johnson, 2020).

Victim information is also not included in these models despite access to this information in the dataset. The victim variables are a series of dummy coded variables that are not mutually exclusive. Therefore, it is difficult to make meaningful comparisons using these variables. Future data collection should consider the importance of capturing more detailed information that can be used for similar analyses given the importance of victim identities on case outcomes (Baker & Hassan, 2020).

An additional limitation is the focus on one jurisdiction in Florida. There may be differences even within the state, in addition to differences across circuits in different states. Studies of sentencing outcomes across various jurisdictions and states (e.g., Gunderson, 2022; Kim et al., 2015) demonstrate differences in the importance of judicial and prosecutor predictors across counties. There are also recent analyses of State Attorney characteristics and their relationship with case outcomes, showing differences (LaPrade, 2020) For example, LaPrade (2020) found jurisdictions with Republican State Attorneys used incarceration less than Democrat State Attorneys. Attorneys with more years in office were also more likely to use incarceration.

This study also lacks variability in dismissal outcomes (only about 4% of cases were dismissed). Additionally, the differences between male and female prosecutors' rates of both dependent variables and independent variables is negligible. In Baker and Hassan's (2020) study, the differences in the rates of case acceptance were substantial (roughly 10%) between male and female prosecutors. This may account for their findings that men and women handled cases differently in some offenses and speaks to the issue

of examining only one jurisdiction, because a larger, more urban circuit or multiple circuits may yield different results.

Conclusion

Prosecutors are widely cited as important actors in the American court system, yet little is known about how their identities influence case processing outcomes. In recent years, a new wave of elected prosecutors has acknowledged the prosecutor's role in reducing systemic disparities and reliance on incarceration. More women and minorities are running for elected prosecutor positions that have been traditionally held by white men (Reflective Democracy Campaign, 2022). Importantly, there are also initiatives in some jurisdictions and organizations to increase diversity at all levels in the office (California District Attorneys Association Foundation, 2019). This shift is contrasted with the public outrage over the murders of George Floyd and Breonna Taylor, as well as the overrepresentation of Black and Hispanic people in jails and prisons (Cooper et al., 2021). Even with a more diverse wave of elected prosecutors, unwarranted disparities in the criminal justice system persist. While representation is important for communities, this conflict suggests there is more to be done to ameliorate disparities.

There are two possibilities for the findings presented in this study. First, some minority or female prosecutors may not adopt the attitudes of the rest of their communities. It is also possible they want to make certain decisions but are restrained by supervisors, their desire to belong in work social groups, or they want to advance in office ranks. As a result, their decisions may be more aligned with the traditional orientation of prosecution, which is centered on punitiveness. Furthermore, prosecutors at the state level are inundated with cases and face limited staff resources. Despite the

discretion afforded to prosecutors, they are bound by the law and policies in their offices and affected by organizational constraints.

State laws and office policies may influence case processing more than well-meaning or diverse groups of prosecutors. During the protests that took place in the summer of 2020, public consciousness of the systemic inequities women, minorities, and LGBTQ+ people face grew, which paved the way for discussion about the role of the system, not individual prosecutors, in perpetuating disparities or maintaining the status quo of mass incarceration.

The second possibility is that the findings from this dissertation are not generalizable to other jurisdictions. Case outcomes from another study site may produce findings that suggest prosecutors' individual identities are important predictors of differences in case outcomes. Recent research examining State Attorneys (LaPrade, 2020) and line attorney (Arndt, 2021; Baker & Hassan, 2020; L. Liu, 2022) suggests there are differences in various case outcomes that can be attributed to prosecutors' gender or racial identities. Prosecutors in offices with fewer policies that restrict individual prosecutors' discretion may find ways to actively represent marginalized communities, either through avoiding overzealous prosecution of minorities or pursuing cases with vulnerable victims.

Overall, some limitations can be addressed by improving data collection practices and focusing specifically on prosecutor attributes. This idea is slowly beginning to take hold in certain states and jurisdictions, which is demonstrated by laws passed to require detailed publicly available data (Weiss, 2019). In Florida, where the data was gathered for this dissertation, the state legislature passed a law requiring all criminal justice

agencies to report anonymized data (Lapowsky, 2018). While this shift in transparency is still in progress, legislation aimed at increasing public awareness of what prosecutors' offices do is beneficial for both policy and research. Additionally, subsequent studies will be able to bridge the gaps in scholarship focusing on prosecutor identities on case processing.

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