NORTHWESTERN UNIVERSITY

Bias and Perceptions in the Criminal Justice System: Three Empirical Approaches to Policing, Terrorism, and Plea Bargaining

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

for the degree

DOCTOR OF PHILOSOPHY

Field of Sociology

By

Zach Sommers

Evanston, Illinois

December 2018

ABSTRACT:

Bias pervades all stages of the American criminal justice system. The system is a human creation, run by fallible people who bring prejudices and biases to their work just like everyone else. The first step to ridding the system of those biases is to fully understand the way they manifest themselves and the perceptions that drive them. This dissertation endeavors to help develop a fuller understanding of bias and perceptions in three distinct areas of criminal law and criminology: police investigation outcomes, terrorism, and plea bargaining and charging decisions. Each chapter analyzes original data to bring a fresh perspective to the literature. Chapter 1 finds that certain legal characteristics of a homicide, such as the use of a gun, and extralegal characteristics, such as gender, are the strongest predictors of case clearance. Chapter 2 concludes that suspects with stereotypically Muslim or Arabic sounding names are more likely to labeled terrorists than suspects with more traditionally Christian American names. Lastly, Chapter 3 reveals that experimental subjects assigned the role of prosecutor—but not public defender—treat white defendants more harshly than black defendants when it comes to charging decisions and plea bargaining negotiations.

ACKNOWLEDGEMENTS

I would like to thank the members of my dissertation committee, without whom this dissertation not have been possible. Their guidance and patience proved invaluable to the development of this project, and for that I am grateful. I would especially like to thank Prof. Laura Beth Nielsen, the chair of my committee, whose unconditional support and sense of humor helped me survive the rollercoaster ride that is the graduate school experience. I would also like to thank the members of my graduate cohort and my colleagues in the JD-PhD program for motivating me every day to try and match their impressive scholastic achievement. I am indebted to Prof. Shari Diamond, the coordinator of the JD-PhD program, for her genuine investment in each and every student in the program.

I would like to extend a thank you to my parents, who have stressed the importance of education for my entire life and who have been my most reliable cheerleaders throughout. I will be forever thankful for the sacrifices they have made for the sake of my schooling. I also am grateful for my brothers, my lifelong role models both as academics and as men, and for the wonderful sisters-in-law, nieces, and nephews that they have brought into my life. To 4010 and the ChiNati crew, thank you for being the best distractions anyone could ask for. Even though she cannot read this—or anything—I also am grateful for my dog Wembley, who loyally remained by my side during countless hours of otherwise solitary data collection and analysis. Last, of course, is Jillian. After years of graduate study, the one conclusion of which I am most certain is that no man has ever been luckier to call a woman his wife. Jillian, you inspire me to be the best version of myself each and every day. Thank you for your patience throughout this marathon of a process. I promise not to pursue any other graduate degrees.

To my parents, for inspiring me to make the world a better place.

And to Jillian, for making my world a better place.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Today's era in American politics has fundamentally changed the discourse on facts and truth. Politicians and public figures regularly make statements that are plainly untrue and justify their comments with nonsensical ideas like "alternative facts." In that type of environment, an adherence to data and empirics becomes even more important than usual—the antidote to lies and deception is facts and truth. Unfortunately, truths and untruths alike can color people's perceptions, as empirical reality is not a prerequisite for a compelling narrative. Perceptions tainted by inaccuracies can lead to a type of bias that impacts all facets of life but is particularly pernicious in the context of the criminal justice system.

The American criminal justice system is built upon the ideal that all who come in contact with it will be treated equally and fairly before the law. Decades of legal and social science research have painstakingly identified ways in which that ideal falls short in practice. Ample scholarship has demonstrated that differential treatment and outcomes exist at virtually every stage of the criminal justice process, and yet there still remain many aspects of the system that would benefit from additional study. The three studies comprising this dissertation aim to further understanding of perceptions and bias in the criminal justice system by introducing new data and extending underutilized empirical methodologies to three different contexts: police investigation outcomes, perceptions of terrorism, and prosecutorial charging decisions and plea bargaining. The empirical emphasis of the three studies also serves as another check on the post-truth era of modern political discourse.

The depth of the existing literature varies across the three areas of interest of this dissertation. The first study examines police homicide investigation outcomes, or clearance rates. Clearance rate scholarship, while growing in recent years, is relatively limited in its development. Data collection issues have consistently hindered the subfield, as has a uniform

empirical approach to the issue. For example, the bulk of existing work has failed exclusively on overall clearance rates at the expense of other measures, such as time to clearance. Past studies also have largely overlooked the possibility that differences in the amount of news coverage cases receive could affect clearance rates. This study helps fill that void by incorporating internet news coverage data into an analysis of Chicago homicide clearance rates and time to clearance. The analysis finds no statistically significant effect of news coverage, but does find several other significant characteristics, including the use of a gun in the crime and victim gender.

The second study of the dissertation explores the roles that race and religion play in perceptions of terrorism. Like the research on police investigation outcomes, terrorism research has been limited by unique data collection hurdles. Much of the work in the field has consequently taken a more theoretical bent, and the empirical work that does exist has been characterized by large scale observational studies of macrolevel trends. This study takes a different approach and employs experimental vignette methodology to allow for more direct causal inferences. By manipulating the name of a suspect in a fictional act of terror, the study finds that perceptions of race and religion influence how Americans react to terrorism.

The third and final study investigates the effect of defendant race on plea bargaining and charging decisions. Unlike the terrorism and clearance rate literatures, the scholarship on plea bargaining and charging is relatively well developed. However, one element that is conspicuously missing from the literature is data collected directly from decision-makers. This study attempts to remedy that shortcoming by proxy through the use of an experimental design that assigns laypeople the roles of prosecutor and public defender. The surprising results indicate that hypothetical prosecutors actually treat white defendants more harshly than black

defendants during charging and plea bargaining, whereas public defenders exhibit no differences across defendant race.

These three studies tackle issues in three disparate areas of the criminal justice system. Yet, when considered together, the findings of all three studies demonstrate the varying effects of different types of perceptions and biases in the criminal justice system. This dissertation also highlights the importance of collecting original data and expanding the methodological toolkit commonly used in a given subfield. Only through dogged dedication to empirics and science will truth win out.

CLEAR AND PRESENT DANGER: THE ROLE OF INTERNET NEWS COVERAGE AND GUNS IN CHICAGO HOMICIDE CLEARANCE RATES

Chapter 1

ABSTRACT:

Social scientists know relatively little about the factors that affect clearance rates, the most common measure of police investigation success. The limited body of research in this area has produced mixed results, with some studies finding that factors like victim race and gender, or extralegal characteristics, play a major role in homicide clearance rates, while others have concluded that factors like the type of weapon used, or legal characteristics, are more relevant. This study aims to help clarify that ambiguity with the analysis of a unique dataset compiled regarding homicide in the city of Chicago. It extends the existing literature by examining the role of internet news coverage of homicide cases in police investigation outcomes, both in terms of overall clearance rate and length of time until clearance. The results indicate that both extralegal and legal characteristics of a murder, and in particular victim gender and the use of a firearm, are predictors of investigation outcomes. The paper concludes with a discussion of the policy implications of the findings.

INTRODUCTION

Murder has long captured human imagination. Stretching as far back as the story of Cain and Abel, the taking of another's life has been a dominant theme in human narrative and history. In modern times, the allure of the murder mystery persists, as demonstrated by the popularity of television shows like *Making a Murderer* and podcasts like *Serial*. In addition, news organizations latch on to the captivating elements of murder, leading to the common trope that "if it bleeds, it leads." In recent years, increases in the homicide rates of several major cities in the United States have garnered extensive coverage by the news media. News corporations and non-profit organizations, such as Homicide Watch Chicago, have taken it upon themselves to track every homicide in some of these urban hubs.

Conversely, one trend in violent crime that has received less media attention is the declining success of the police officers investigating these homicides (Riedel 2008). By tracking investigation outcomes, typically in the form of clearance rates, researchers have documented that police have been solving fewer homicides over the past few decades (Cassell and Fowles 1998; Litwin and Xu 2007; Xu 2008). Estimates suggest that the national homicide clearance rate in the U.S. has dropped from 94% in 1961 to less than 62% today (Wellford and Cronin 1999; FBI 2016). Other countries have also seen similar declines (Maguire et al. 2009). Somewhat surprisingly, although some scholars have noted this steep decline, there has been a relative dearth of empirical research seeking to explain this trend. This gap in the literature is due in part to data limitations in the area, but also likely to the muddled landscape of clearance rate research writ large. There is little consensus with respect to which characteristics of a homicide make it more likely to be solved, with two primary schools of thought having emerged. The first school posits that extralegal characteristics, such as the race and gender of the victim, play a major role in whether a homicide is cleared. The second school counters that extralegal

characteristics do not significantly influence investigations, and that the legal characteristics of a case, like whether a gun was used to commit the crime, are the most relevant features of a murder. Until there is a better understanding of the elements of a homicide that are most likely to lead to a successful police investigation, it will remain difficult to explain the recent decline in clearance rates.

The murkiness in the literature is partially the result of the fact that much of the scholarship has taken a relatively uniform approach to the problem. To illustrate, very little work has been done that includes news coverage as a potential extralegal characteristic of a case, despite the fact that intuitively, it seems plausible that media coverage of a given case might lead to added urgency on the part of police departments to solve that case. Moreover, the studies that have looked at the intersection of news media and policing, both in the context of clearance rates and more broadly, have almost uniformly ignored internet news. Instead, they have almost exclusively assessed the role of newspaper or television news. Finally, much of the research on clearance rates restricts its analysis to the threshold issue of whether a case was cleared, rather than the length of time it takes to clear a case. While such a perspective is useful to a certain degree, a more comprehensive understanding of the issue is impossible without surveying the factors that influence the speed with which police close their investigations.

Consequently, this study aims to add clarity to the debate on the role of extralegal and legal characteristics on homicide clearance rates by making three noteworthy methodological contributions: 1. Focusing on the impact of news coverage in homicide investigation outcomes, 2. Using internet news as the medium of interest, and 3. Broadening the scope of the inquiry to include both overall clearance rates and time to clearance. More specifically, this project incorporates online news coverage into its analysis of every homicide investigation that took place in the city of Chicago during calendar year 2016. By more rigorously testing the role of

internet news media on police investigations success and length, the analysis adds a level of nuance largely missing from the existing literature. The results of the study indicate that in 2016 in Chicago, victim gender and the use of guns were the two best predictors for clearance rate and length of time until clearance. Homicides that garnered increased news coverage initially appeared to be more likely to be cleared, but that effect disappeared after controlling for two key legal characteristics of the cases.

Part I of the paper summarizes the relevant research conducted previously in this sphere. Part II describes the data and methodology used in the analysis. Next, Part III presents the results of the project before Part IV discusses the policy implications and Part V concludes.

I. Literature Review

A. Clearance Rates

Police departments track the outcomes of their investigations using clearance rates. A department generally considers a case cleared, and thus an investigation to be successful, when an arrest is made. There is also a small minority of "exceptional means" clearances in which an offender is identified but arrest is impossible, such as when the offender has died (FBI 2016). Clearance rates are a somewhat imperfect measure of investigation success because an arrest does not automatically lead to a conviction of any kind, let alone a conviction of the actual offender (Wellford and Cronin 1999). However, tracking cases all the way through to conviction would present daunting data collection challenges, while also introducing a multitude of factors, such as prosecutorial discretion and decision-making by juries and judges, that are extraneous to police investigations. Consequently, clearance rates remain the barometer of choice of both government agencies and academics when attempting to measure police efficacy.

Research probing homicide clearance rates is somewhat limited, largely due to data limitations in the Federal Bureau of Investigation's (FBI) Unified Crime Report (UCR), the empirical basis for most of the work in this area. Until somewhat recently, the UCR, which only provided clearance data in aggregate form, did not allow for analysis of clearances of individual cases. This shortcoming made comparisons impossible between cases that had been cleared and those that had not. In the mid-2000s, however, the UCR transitioned to a new summary system, the National Incident-Based Reporting System (NIBRS), that made possible analysis of clearance data on an individual level (Addington 2007). As a result, there has been an increase in relevant studies over the past decade.

The bulk of the empirical research examining clearance rates centers on the issue of whether extralegal victim characteristics influence the success rate of law enforcement investigations, a view first prominently articulated by Donald Black (1976). According to Black, elements like a homicide victim's race, class, gender, and age play a role in the urgency with which a case is pursued. Victims with more power and influence in society, per Black, are more highly valued, which in turn leads to more rigorous efforts by police to solve their cases. For example, Black's theory suggests that non-white or female homicide victims would garner less attention from police due to their lack of social capital. In the years following Black's assertion, follow-up studies have both supported and contradicted his argument. Researchers have found that that a variety of extralegal characteristics can impact investigation outcomes, such as race (Lee 2005), gender (Lee 2005; Regoeczi, Kennedy, & Silverman 2000), and age (Addington 2007; Riedel and Rinehart 1996), including in the specific context of homicides in Chicago (Alderden and Lavery 2007).

On the contrary, other studies have found that those types of factors do not play a major role in investigation success (Ousey and Lee 2010; Puckett and Lundman 2003). Instead, the

authors contesting Black's theory have tended to claim that variation in homicide clearance rates is due at least in part to the legal characteristics of murders, such as the type of weapon used, the relationship between the offender and victim, or organizational factors on a more macro level (Keel, Jarvis & Muirhead 2009; Puckett and Lundman 2003; Alderden and Lavery 2007). Furthermore, some authors also reject the logic of extralegal characteristics influencing clearance rates on the basis that all homicides are noteworthy events, and thus there is pressure to solve each and every murder case (Ousey and Lee 2010). Still, according to the most comprehensive review of the literature in this area, the evidence on the whole, while mixed, provides at least some support for the notion that more arrests are made when homicide victims are young, female, and white (Riedel 2008).

In addition to the work exploring the factors that help determine whether police clear a murder case, there also is a limited body of scholarship surveying the factors that affect how long it takes police to clear a case. The findings again are mixed, with two noteworthy studies finding a limited effect of victim race and gender on time to clearance (Addington 2007; Roberts 2007) and a third finding a significant effect with both race and gender (Lee 2005). Finally, there is also evidence that the factors that affect clearances differ depending on whether the case is easily solvable, known as a 'dunker,' or a more challenging case, known as a 'whodunit,' or those that are more challenging to crack (Simon 1991). Analyses that take time to clearance into account can more accurately represent the role that these factors play (Addington 2008).

B. The Effect of News Media on Clearance Rates

Very little scholarship has touched on the issue of whether media coverage impacts police investigation outcomes. The single study most directly on point (Lee 2005) focuses on the role of a variety of extralegal variables, including coverage in the *Los Angeles Times*, on

homicide clearance rates in Los Angeles in the early 1990s. The two-part analysis results in seemingly contradictory findings. First, perhaps predictably, news coverage increases the chances that a given homicide investigation is cleared. On the other hand, a survival analysis illustrates that each additional news story about a murder is associated with a seven percent *increase* in the time it takes to solve case. The author briefly speculates that perhaps the second finding can be explained by the tendency of news organizations to cover uniquely challenging cases.

A handful of other studies have broached the issue of news coverage and clearance rates in a more tangential way. Researchers have found that in the specific realm of tracking down known fugitives, television news coverage can increase likelihood of apprehension and decrease time spent on the lam (Miles 2005). Others have concluded that in a broader sense, pressure from news coverage can influence general policing strategies and policy (Davies 2007). Interestingly, there is a rich body of literature exploring the relationship between the media and police in terms of influence in the reverse direction: in other words, how the police affect the media. In general, scholars have asserted that law enforcement uses the media not only as an investigative tool to solicit tips and distribute suspect information, but also to shape public opinion (Mason 2012; Mawby 1999). Furthermore, scholarship has shown the media to be very effective as a public relations tool not only in the realm of policing, but also in law more broadly (Graziano, Schuck, & Martin 2010; McCann et al. 2001).

The lack of inquiry into the relationship between news and clearance rates is also surprising because of the wealth of research on the role of race, gender, and other demographic characteristics on representations of violent crime in the news. In general, this body of literature has demonstrated that the news media presents victims and perpetrators differently based on their race, both in terms of individuals' likelihood of appearing on the news in those roles (Dixon

2003; Romer et al. 1998), and also in terms of the tone of the stories in which those individuals appear (Chiricos and Eschholz 2002; Entman and Rojecki 2000). Overall, people of color are portrayed more negatively than their white counterparts in news stories about crime. With respect to gender, women and girls might be expected to be underrepresented in news stories about crime because they have traditionally occupied a lower level of the social hierarchy. Instead, research has revealed that women and girls are actually overrepresented as crime victims in the news (Benedict 1993), possibly due to our culture's ready acceptance of narratives of 'damsels in distress' (Stillman 2007). However, a major limitation of crime and media research is the near-total absence of studies concentrating on internet news (Sommers 2016).

II. Data and Methodology

A. Homicide Data

In order to test the effect of extralegal characteristics, including news coverage, and legal characteristics on clearance rates, a sample of homicides had to be chosen that was sizeable enough to allow for sufficient variation in case outcomes and victim characteristics but also small enough for the sampling strategy to be coherent. To thread that needle, the city of Chicago was chosen as the focal point of the analysis. In recent years, the city unfortunately has experienced a surge in homicides that peaked in 2016. The homicide rate climbed enough to provide a sufficient sample size over the course of that single year, thus allowing the analysis to be narrowly tailored to a relatively short period of time and small geographic area. Moreover, in order to conduct the news coverage analysis, the homicide data had to include identifying information for each victim, rendering useless large datasets like the NIBRS or the Murder

Accountability Project.[1] In response to the spike in violence in Chicago, several news organizations and non-profits in the city began tracking every homicide in the city and maintaining publicly accessible databases, further solidifying Chicago as an ideal location for study.

To define the population of homicides, a Freedom of Information Act (FOIA) request was filed with the Chicago Police Department (CPD). Per the request, the Department provided the name of every homicide victim in the city from calendar year 2016, along with clearance status and date of clearance, if cleared.[2] That information was then supplemented with information for each victim as reported by the *Chicago Sun-Times*'s Homicide Watch, which identifies race, gender, age, date of death, and cause of death for each individual. The Homicide Watch also aggregates *Sun-Times* stories for each victim, which allowed for the coding of a variable to indicate the number of other individuals killed in the same incident.[3] Lastly, the number of days between the date of death and date of clearance was calculated for the cases that had been cleared.

B. News Coverage Data

To supplement the CPD data, news coverage data about each homicide was culled from a two-stage targeted search of internet news websites using Google. The searches were designed to identify all news stories about each homicide. The first stage consisted of a series of general

[1] In addition, studies analyzing NIBRS or UCR data also must overcome issues with low response rates and missing data, due to the fact that UCR reporting is not required of police departments (e.g., Addington 2008). By taking an alternative approach, this study avoids both of those issues entirely.

[2] The data were provided by CPD on March 9, 2018. As a result, that date serves as the end point for the analysis. Any news stories occurring after that date, as well as any clearances reported by a news agency after that date, were omitted.

[3] Headlines uniformly identified the number of individuals killed and/or injured in the incident.

Google searches based on the victim's name.[4] For unique names, no other supplemental information was needed. Most names, however, were not unique enough to isolate news stories regarding the homicide. Therefore, the next step in the search consisted of adding the word Chicago and a one-word descriptor of the cause of death to the search string. For example, the search might read: "John Doe" Chicago shot. If that search also proved too broad, "death" or "homicide" were added to the search term. Lastly, in the rare instances that additional detail was still needed, the neighborhood or part of the city in which the homicide took place was added. In order to avoid the accidental exclusion of news stories, each step of the progression was only pursued if absolutely necessary. In other words, the protocol erred on the side of being over-inclusive, rather than too restrictive.[5]

Once the appropriate search terms were identified, irrelevant results[6] were filtered out[7] to permit the coding of four measures[8] of news coverage: total number of news articles, total number of distinct news sources,[9] total number of national[10] and international news sources, and

[4] The spelling of names was often inconsistent across the CPD data and the Homicide Watch database. In those cases, searches using both spellings were conducted.
[5] Likewise, Google may not be the most precise tool for identifying news coverage, but it has the significant benefit of casting a wide net. In other words, using Google maximized the chances of coming across any given news article. Additionally, even if Google proved to be a blunt instrument in this regard, because the same protocol was used for each homicide in the dataset, the comparative magnitudes of news coverage are still useful and empirically valid.
[6] When possible, all search results were sorted through. Some searches, however, returned hundreds or thousands of search results, even when specified at the most detailed level of the protocol. In these cases, the search was considered complete when three consecutive pages of search results contained no relevant news stories.
[7] To be included in the study, a news story was required to be written in English and to identify the victim by name in the body of the story (i.e., not solely in a picture caption) in some context other than a list of victim names.
[8] Although four measures were coded for, issues of multicollinearity resulted in only one being included in the statistical analysis. See *infra* Part II(B) for more detail.
[9] The line demarcating news sources from non-news sources can be blurry when it comes to the online world. For the purposes of this study, a news source was defined as an entity that produces its own professional news content. Thus, all blogs were excluded, as were news aggregation websites and the websites of non-profit organizations operating outside of the news media sphere.
[10] National news sources were defined by their target audience and the subject matter of their news stories and are typically easily distinguished from local news sources. For example, CNN.com is a prototypical national news source, whereas abc7ny.com is a prototypical local news source.

total number of non-Chicago/non-national/non-international news sources.[11] Because the inquiry of interest centers on the impact of news coverage on police investigation outcomes, all stories written post-clearance were excluded. The second stage of the search was identical to the first except that it made use of the Google News search function, which restricts its searches to news organization websites. Using both the general Google search function and Google News search maximized the chances of all relevant news stories being identified.

C. Regression Analyses

Two pairs of logistic regression models are used to analyze the data. The first two nested models explore the effects of various legal and extralegal characteristics on the likelihood of a clearance. In Model 1, the dependent variable is a binary variable for case closure, with a key independent variable of media coverage and controls for victim race, gender, and age. The more complex Model 2 also incorporates two major legal characteristics of each case as independent variables: use of a gun and the number of victims.

The second pair of models shifts gears to examine the amount of time until clearance. The dependent measure for Model 3 is a dummy variable sorting each homicide into two groups: those cleared within the first seven days and those that are not, either because they are uncleared or because they were cleared at a later date. Model 4 contains a similar dependent variable but expands the range to all cases cleared within the first thirty days. Both models use the same independent variables and controls as Model 2 in order to test their effect on time to clearance.

[11] The purpose of this variable was to capture any stories that received a substantial amount of regional news coverage without ever breaking through to the national context.

III. RESULTS

A. DESCRIPTIVE STATISTICS

The results of the FOIA request identified 769 distinct homicides in the city of Chicago during calendar year 2016. Table 1 details the racial composition[12] of the victims as compared to the overall racial demographics of the population of the city of Chicago, per the 2010 U.S. Census.

Table 1. Racial Composition of Overall Chicago Population and Chicago Homicide Victims

Race	Overall Chicago Pop.	Chicago Homicide Victims
Black	832,940 (30.9%)	595 (78.4%)
Latinx	784,419 (29.1%)	124 (16.3)
Other	239,908 (8.9%)	10 (1.3%)
White	870,678 (32.3%)	30 (3.9%)

n (Overall Chicago Population) = 2,695,598
n (Chicago Homicide Victims Race) = 759

Table 1 demonstrates that homicide in Chicago is a disproportionately African-American phenomenon. Despite making up less than one-third of the city's population, blacks comprised more than three-fourths of its homicide victims in 2016. On the other hand, there are proportional fewer Latinx, Other, and White victims. Table 2 presents a similar demographic breakdown of homicide by gender. Unsurprisingly, men and boys are significantly overrepresented in the population of victims, while girls and women are substantially underrepresented when compared to overall numbers.[13]

[12] Although Latinx individuals often consider their Latin roots to be an ethnic identity rather than a racial one, police departments and news organizations typically treat them as a distinct racial group. Consequently, this analysis does as well.

[13] Race and gender information was available for most of the victims, but not all, which explains the differing number of individuals included in Tables 1 and 2.

Table 2. Gender Composition of Overall Chicago Population and Chicago Homicide Victims

Gender	Overall Chicago Pop.	Chicago Homicide Victims
Female	1,388,233 (51.5%)	64 (8.4%)
Male	1,307,365 (48.5%)	697 (91.6%)

n (Overall Chicago Population) = 2,695,598
n (Chicago Homicide Victims gender) = 761

Table 3 shifts the focus to the clearance rates found both overall and across different demographic groups. The overall rate of 28.4% is markedly lower than the national clearance rate and the rates of many other large American cities. There also are differences in clearance rates by race, with blacks seeing the lowest rates of investigation success and whites seeing the highest. Furthermore, cases with female victims are more than twice as likely to be solved as their male counterparts, although interestingly, the rate for black males is higher than the overall rate for all males.[14] These statistics, though superficial, suggest that extralegal characteristics are playing a role in murder investigation outcomes in Chicago.

Table 3. Chicago Homicide Clearance Rate by Victim Population Subgroup

Group	Clearance Rate
Overall	28.4%
Black	26.9%
Latinx	28.2%
Other	40.0%
White	50.0%
Female	64.1%
Male	25.1%
Black Male	28.2%

n (Overall) = 769
n (Black + Latinx + Other + White) = 759
n (Female + Male) = 761
n (Black Male) = 550

[14] Black males are the single biggest race x gender group in the population (n =550).

Table 4 presents the summary statistics of the news coverage analysis in terms of the number of news articles found. There was substantial increase in the amount of coverage of cleared cases, suggesting that the news industry might indeed have an effect on police investigations. The number of articles varied somewhat across racial groups, with Latinx victims receiving the most and Other victims the least. The gender disparity was even more pronounced, with female victims appearing in almost two-and-a-half times more stories than males.

Table 4. Average Number of News Articles by Victim Population Subgroup

	Average Number of Articles
Overall	7.84
Cleared	10.53
Not Cleared	6.99
Black	7.46
Latinx	10.46
Other	5.89
White	7.76
Female	17.17
Male	7.20
Black Male	6.89

n (Overall) = 727
n (Black + Latinx + Other +White) = 717
n (Female + Male) = 719
n (Black Male) = 526

B. Regression Analyses

Two logistic regression analyses allow for a more rigorous probe of the trends identified in the descriptive statistics. Table 5 depicts the results of Model 1, the first logistic regression

analysis, which explores the effects of news coverage[15] and victim demographic characteristics on likelihood of clearance.[16] The coefficients are expressed as odds ratios, which means that any coefficient greater than one signifies an increased likelihood of clearance, while coefficients lower than one denote decreased chances of a clearance.

Table 5 indicates that each additional news article about a murder victim is associated with a small but statistically significant increase in the probability of a clearance. Race and age, on the other hand, illustrate no statistically significant effect. Gender does, however, with cases involving female victims being 3.898 times more likely to be solved than those involving males. To introduce each case's legal characteristics into the analysis, Model 2 builds upon Model 1 by incorporating variables for both gun use and the number of victims killed in each crime. Table 6 presents the results of both Model 1 and Model 2.[17]

[15] Although the data collection included four measures of news coverage, statistical checks indicated that there are substantial issues with multicollinearity of the four variables. In other words, the measures—the number of news articles, the number of news sources, the number of national and international news course, and the number of non-Chicago/non-national/non-international news sources—are highly correlated with one another, which compromises any regression analysis that incorporates more than one of the measures as independent variables. As a result, only the total number of news stories is included as a variable in the regression analysis to limit any statistical bias. The results do not differ if one of the other three news coverage variables is inserted in place of the number of news articles, nor do they change when including an index variable taking all four measures into account.

[16] The standard errors in the regression analysis are clustered by homicide to account for the fact that the details of each homicide event are likely to affect both the police investigation and decisions of news organizations about which individual victims to cover. In other words, the two victims in a double homicide are not treated as independent events by police and the media, and so it makes sense to account for the overlapping features of those individuals' cases. Conversely, the data are coded on the individual level in order to retain the demographic factors of each victim. Coding by homicide, rather than individual victim, would make the inclusion of victim characteristics more complicated.

[17] Table 6 includes the BIC, or Bayesian Information Criterion, which is a measure of overall model fit that is particularly useful for nonlinear regression models as a substitute for R^2, a measure of fit for linear models. A lower BIC value suggests better overall fit, confirming that Model 2 is indeed more analytically complete than the simpler Model 1.

Table 5. Logistic Regression of Probability of Clearance on News Coverage and Victim Demographic Characteristics

	Model 1 (SE)
Number of Articles	1.015* (0.011)
Latinx	1.109 (0.287)
White	1.439 (0.778)
Other	1.767 (1.182)
Female	3.898*** (1.262)
Age	1.017 (0.008)
Constant	0.145*** (0.040)
Observations	716

Coefficients Expressed as Odds Ratios.
Standard Errors Clustered by Homicide.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black (Race), Male (Gender).

The inclusion of the legal characteristic variables changes the results substantially. The number of news stories no longer is a statistically significant predictor of clearance. Both of the legal characteristic variables prove statistically significant, as the use of a gun to commit a murder makes it nearly 1/10th as likely to be cleared, whereas each additional victim in a homicide leads to an increase in the odds of clearance of 2.579. As with Model 1, age and race remain insignificant predictors in Model 2.

Table 6. Logistic Regressions of Probability of Clearance on News Coverage, Victim Demographic Characteristics, and Legal Case Characteristics

	Model 1 (SE)	Model 2 (SE)
Number of Articles	1.015* (0.011)	1.003 (0.009)
Latinx	1.109 (0.287)	1.072 (0.285)
White	1.439 (0.778)	1.208 (0.725)
Other	1.767 (1.182)	2.440 (1.715)
Female	3.898*** (1.262)	2.471** (0.851)
Age	1.017 (0.008)	1.004 (0.009)
Gun		0.119*** (0.044)
Number of Victims		2.579*** (0.755)
Constant	0.145*** (0.040)	1.499 (0.694)
Observations	716	715
BIC	799.024	743.148

Coefficients Expressed as Odds Ratios.
Standard Errors Clustered by Homicide.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black (Race), Male (Gender).

The final element of the analysis examines the role of the same factors in the length of time until clearance. Table 7 illustrates the results of two additional logistic regression models. Model 3 compares the individuals whose cases were cleared within seven days with those that

were cleared beyond seven days or not at all. Model 4, on the other hand, instead compares cases cleared within the first thirty days with those cleared later or not at all.

Table 7. Logistic Regressions of Time to Clearance on News Coverage, Victim Demographic Characteristics, and Legal Case Characteristics

	Model 3 (SE)	Model 4 (SE)
Number of Articles	1.012	0.998
	(0.021)	(0.019)
Latinx	1.073	0.939
	(0.512)	(0.396)
White	1.907	1.759
	(1.722)	(1.160)
Other	3.366	1.915
	(3.890)	(2.134)
Female	1.255	2.370*
	(0.687)	(0.937)
Age	0.965	0.983
	(0.019)	(0.013)
Gun	0.276*	0.230***
	(0.168)	(0.099)
Number of Victims	0.643	1.010
	(0.231)	(0.323)
Constant	0.597	0.501
	(0.587)	(0.331)
Observations	715	715

Model 3 compares cases cleared within seven days with cases not cleared or cleared after seven days.
Model 4 compared cases cleared within thirty days with cases not cleared or cleared after thirty days.
Coefficients Expressed as Odds Ratios.
Standard Errors Clustered by Homicide.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black (Race), Male (Gender).

Model 3 reveals that the only statistically significant predictor of a case being solved within the first seven days is the use of a gun as the murder weapon, which results in the odds of a clearance being about one-fourth of those in a non-gun case. When expanding the timeframe to the first thirty days, gender joins gun use as a significant predictor, with female victims more than twice as a likely as males to have their cases solved. News coverage, race, and age are all nonsignificant factors across both models.

IV. Discussion and Policy Implications

A. Discussion of Results

Overall, the results paint a relatively clear picture of the factors that are most strongly associated with higher clearance rates: the use a firearm, gender, and to a lesser extent, the number of victims. In Model 2, guns significantly decrease the odds of a clearance, and in Models 3 and 4, they decrease the odds of a clearance within the first seven and thirty days, respectively. These findings are consistent with previous studies that have also found a negative effect of guns on clearance rates and are likely due to the fact that gun homicides can be perpetrated more quickly and anonymously than other forms of murder. In Chicago in particular, it is also likely that guns are more likely to be used in murders committed by gangs, which can be more difficult for police to solve because of the lack of cooperating witnesses.

There are two primary explanations for the gender disparities seen in the analysis. The fact that cases involving women and girls are more likely to be cleared and more likely to be solved within thirty days could imply that police in Chicago dedicate more time and resources to solving murders of female victims, whether due to the idea of damsels in distress or due to the simple fact that such cases occur much less frequently. Alternatively, it is also possible that murders of women and girls fundamentally differ from murders of men and boys in systematic

ways that make them easier to solve. For example, if female murder victims in Chicago are more frequently killed in domestic incidents, which is likely, the higher clearance rates in those cases might be explained by the fact that such murders in have been shown previously to be more easily solved. If true, then the findings with respect to gender are, in realty, a reflection of other legal characteristics of the cases that were impossible to capture in this analysis. This explanation is also arguably strengthened by the fact that the two other key extralegal characteristics, race and age, were statistically insignificant predictors in all four of the regression models.

The number of victims in each homicide event seemingly plays a role in overall clearance rate, but its lack of effect on time to clearance muddies the overall role of the variable. The fact that multiple homicides are linked to higher clearance rates could be a function of such incidents being easier to solve given the additional evidence provided by the presence of multiple victims. Police departments also might face more public relations pressure to solve murders with multiple victims, although that would imply that there should have been stronger evidence of an impact of additional news coverage on investigation outcomes. When considering the lack of effect of more than one victim on time to clearance, it is possible that multiple homicides make challenging cases easier to solve. If true, that effect could result in delayed clearances in cases that otherwise would go unsolved, which would explain the apparent disconnect between the findings in Model 2 with those in Models 3 and 4.

Like the results with multiple homicide, the findings with respect to news coverage convey a somewhat inconsistent story. Based on the descriptive statistics and Model 1, increased news coverage seems to be associated with better investigation outcomes. However, once the legal characteristic variables are incorporated into Model 2, the news coverage finding disappears. The results of the two models suggest that determinations of newsworthiness are

linked to events with multiple people and to killings not involving firearms. Put another way, news organizations seem to be more likely to run additional news stories about murders that do not involve guns or that claim the lives of multiple individuals.[18] Those factors, in turn, are strong predictors of clearance rate, which led to the statistically significant results of news coverage in Model 1 that subsequently dropped out in Model 2. The non-findings in Models 3 and 4 corroborate the assertion that news coverage did not have a significant impact overall on investigation outcomes.

B. Policy Implications

Overall, these results reveal that Chicago's low clearance rate could be improved by emphasizing policies that have the potential to either reduce gun violence or increase the police's ability to solve gun crimes. One of the primary culprits identified in gun violence in Chicago is the ease with which stolen firearms can be acquired. According to one report, Chicago police recovered at least 2,400 lost or stolen guns between 2012 and 2016 (Freskos 2018). Those recovered guns represent only a fraction of all stolen guns in the city, however, as demonstrated by the 4,745 guns that Illinois residents reported stolen in 2016 alone. Moreover, many stolen guns in Chicago were taken elsewhere and brought into the city, which makes curtailing the flow of illegal firearms even more challenging. One potential solution to the problem would be to enact a federal law mandating more secure storage of guns in order to make gun theft more difficult—but gun control of any kind is a messy and volatile proposition in today's political climate.

[18] This is borne out in the data, as homicides involving guns saw an average of 7.48 news articles, while non-gun homicides received 13.60 stories on average. Likewise, multiple homicides averaged 17.37 news articles as compared to 6.94 articles for single homicides.

Instead, the more realistic approach may be to try and increase police efficacy in solving gun homicides. One possible solution is the continued use and expansion of gunshot detection technology, such as ShotSpotter. Using a combination of sonar and cameras, ShotSpotter triangulates the exact location of gunshots and transmits the data instantaneously to police. After the technology was installed in Englewood, one of Chicago's most notoriously violent neighborhoods, the area saw a 43% decline in shootings the following year (Finn 2018). Neighborhoods in other cities have seen similar drops (Knight 2018), providing additional justification for the city of Chicago's plan to roll out additional ShotSpotter coverage in 2019.

Another strategy the city could pursue is making mandatory the submission of all firearms and bullet casings to a national database called the National Integrated Ballistics Information Network (NIBIN). The database takes a similar approach to bullet casings as fingerprint databases: guns leave distinctive markings on the casing of every fired bullet, and by compiling a database with enough entries, matches can begin to be made that link the same guns to different crimes. The database's efficacy is reliant upon police departments to submit firearm and ammunition, but as of now, only two states in the country require law enforcement to send guns and casings to NIBIN. Other states following suit could dramatically increase the utility of the database and provide additional leads for investigators to pursue (Givens 2018).

Increasing the rate with which police solve homicides using guns also has the added benefit of potentially lowering the rate of commission of those crimes. Because a relatively small number of individuals are responsible the majority of violent incidents (Bieler et al. 2016), giving CPD better tools to solve gun crimes would allow them to catch more of those individuals, which could initiate a feedback loop that results in lower rates of gun crime. Likewise, consistent with deterrence theory, if potential shooters more acutely fear apprehension by the police, they may be more disinclined to commit the crime in the first place. Higher

clearance rates also could increase community faith in the police, which might then increase the low rates of community cooperation that officers commonly lament as obstacles to clearances (Lowery and Bennet 2018). In short, even if policies aimed at directly reducing the amount of gun crime are politically impractical, increasing law enforcement's ability to solve those crimes likely will have the additional benefit of reducing future gun crimes as well.

V. CONCLUSION

This analysis provides an additional snapshot to the literature on clearance rates and adds the unique perspective of rigorously analyzing the role of online news coverage. The number of news stories about each homicide proved *not* to have a significant effect on clearance rates and time to clearance, but the interaction of coverage with legal characteristics warrants further exploration in future studies. An emphasis on news coverage, though unique, also serves as one of the limitations of the study. Data collection for that measure is a time- and labor-intensive process that limits the size and scope of the analysis. Including a wider geographical spread or a longer stretch of time becomes much more challenging, which limits the generalizability of the findings to a certain degree. Nonetheless, given the prior research establishing the persuasive power that the news media possesses, trading sample size for the inclusion of news coverage as a variable remains a worthwhile methodological strategy. In addition, the causal inferences that can be drawn from the analysis are limited by its observational design; but that is a limitation of all studies in this area, given the impossibility of experimental designs in the context of homicide.

Overall, the findings lend credence to the critics of Black's theory of police investigation priorities because the two major legal characteristics of the cases proved significant. The significant role of guns in particular has meaningful policy implications for the city of Chicago.

The results with respect to gender, the one extralegal characteristic that was most significant, also contradict Black because female victims, not males, saw more frequent and quicker clearances. Though this study adds another useful data point to the field, additional scholarship is certainly needed to continue to tease out the key factors influencing clearance rates. Only by continuing to develop the understanding of those factors will researchers be able to more adequately explain the decline in clearance rates in recent decades.

WHAT'S IN A NAME? AN EXPERIMENTAL ANALYSIS OF THE ROLE OF SUSPECT NAME AND VICTIM LOCATION IN PERCEPTIONS OF ACTS OF TERROR

Chapter 2

ABSTRACT:

Terrorism occupies an outsized role in American cultural consciousness, permeating public spheres ranging from politics to entertainment. Nonetheless, academic inquiry into terrorism remains somewhat limited due to challenges in data collection. This study attempts to help reinvigorate the field by extending an underused methodology, the vignette experiment, to the study of terror. Using two related experiments, this study explores the effects of suspect and victim characteristics on perceptions of acts of terror: particularly the circumstances that make violent acts more or less likely to be characterized as terrorism. Experiment 1 uses variations in suspect name to test for differences in perceptions across Arabic/Islamic suspects, American/Christian suspects, and generic/unnamed suspects. Experiment 2 manipulates the location of the victims of an act of terror to examine the effects of placing terrorism in a mosque, church, or concert hall. The results of Experiment 1 indicate that suspects with Arabic/Islamic names are more readily labeled as terrorists, while American/Christian suspects are more likely to be seen as mentally ill, thus arguably mitigating their responsibility for their actions. The results of Experiment 2 are more mixed, suggesting that suspect characteristics play a more prominent role in perceptions of terror than do those of victims. The paper concludes with a brief discussion of the implications of the results.

INTRODUCTION

Murder, just like most other aspects of human society, has evolved over time as technological advancements have greatly increased each individual's capacity to commit violence. High-powered firearms and explosives now allow single perpetrators to kill or injure scores of targets in short periods of time. When heavily armed perpetrators target non-combatants, they garner substantial media attention and renew political debates on issues relating to terrorism. Surprisingly, though, the academic literature on incidents of terror, while growing, is somewhat underdeveloped when compared to research on other similar issues, like one-on-one homicide.

This shortcoming in the literature is largely due to the unique challenges that face researchers of terrorism. Many barriers to terrorism data collection exist, such as the rarity of acts of terror, the difficulty of accessing perpetrators of those acts, and the messiness of pertinent data, which are also often vigorously protected by law enforcement or governmental agencies (Kyung, Gill, & Casella 2011). As a result, much of the work on terrorism has been restricted to the realm of theory or the repeated empirical analysis of the same small number of datasets. Remedying that shortcoming requires the implementation of new strategies for data collection and analysis. One potential solution is the incorporation of vignette experiments, which have unique benefits that are especially well suited to the study of terrorism and the examination of how everyday citizens think about the issue.

This paper argues that the marriage of an underutilized methodological approach with an understudied substantive area has the potential to increase understanding of terrorism, an all-too-common, yet insufficiently understood phenomenon. The study consists of two vignette experiments designed to increase understanding of judgments and perceptions relating to terrorism, and in particular, the factors that affect when a suspected criminal is labeled a terrorist.

Both experiments make use of vignettes designed to mimic short news briefs describing a recent terroristic bombing. The first experiment varies the name of the suspect in the bombing and finds that respondents use the label of terrorist more frequently and react more negatively overall to a suspect with a stereotypical Arabic or Islamic name than one with a stereotypically American and Christian name or no name at all. The second experiment varies the location of the bombing to explore the effects of situating the incident in a church, mosque, or concert hall. The findings in this experiment are more mixed, suggesting that the characteristics of the suspect play a more determinative role in perceptions of terrorism than do the characteristics of the victims—and that even as little as a name is sufficient to color views of a suspect.

Part I of the paper summarizes the prior literature in the area of terrorism and details the relevant benefits of vignette experimental methodology. Part II then describes the data and methodology of the two experiments. Next, Part III lays out the results of each experiment before Part IV discusses the results and their policy implications. Lastly, Part V concludes the paper.

I. Literature Review

A. Terrorism

Definitional ambiguities are pervasive in research on terrorism. Determining what actions qualify as terrorism and which perpetrators get labeled terrorists can be complicated and politically charged. Groups deemed to be terrorist organizations by others often resist that characterization themselves—so who is right? Defined broadly, terrorism can be thought of as "a campaign of violence designed to inspire fear – a campaign to terrorize" (Jenkins 1974, p. 2). Terrorism is comprised of acts of violence committed against civilian targets outside of the traditional bounds of war. More specifically, acts of terrorism are commonly carried out against

civilians in a very public manner in order to achieve specific goals or demands (Jenkins 1974). The inherent ambiguity in differentiating terrorism from other acts of mass violence unsurprisingly leads to differences in opinion on whether certain acts should be labeled terrorism. To illustrate, one point of contention in the field is whether state actors can commit terrorism, which most social scientists, if not politicians, tend to believe (e.g., Krueger and Malečková 2003). Similarly, case study evidence suggests that the race and religion of violent actors might affect whether they are classified as terrorists (Yin 2013).

With those definitional matters in mind, much of the early social science work on terrorism took a historical or case study perspective. The first syntheses of cohesive theories of terrorism began to take hold in the 1980s (e.g., Crenshaw 1981). Research at that time predictably aimed first to identify the causes of terrorism. Two overarching conditions were initially put forth to explain the rise of terrorism. First, in a broad sense, modernization has helped terrorists, as advances in transportation and communication allow terrorists to increase their reach, both in terms of physical space and influence. Second, features specific to different countries or areas where terrorists operate typically enable local terrorist groups to carry out their attacks. For instance, places where the government does not have the capacity or chooses not to prevent terrorism will obviously see higher numbers of terrorist attacks (Crenshaw 1981).

With respect to more specific causes, early work focused more on politically motivated terrorist groups. As a result, theorized causes included: an influential population subgroup's desire for political change or independence; that subgroup's perception of an inability to adequately participate politically; and some sort of major precipitating event that incites terrorism as a response, such as a violent crackdown on a protest. Scholars have argued that situations leading to terrorism must be viewed through the lens of the terrorist group to truly understand why it determined that terrorism was a legitimate tool. Put another way, these

scholars assert that terrorism can, or maybe even should, be analyzed as a rational behavior by the perpetrators. For example, in situations in which there is a large power differential between the government and the subgroup, terrorism can arguably be seen as a logical, albeit evil, choice for pursuing the group's goals (Crenshaw 1981). Only recently have criminologists consistently begun to explain terrorism using other types of theories as well, such as strain theory (Chermak and Gruenewald 2014), subcultural theory (Pisoiu 2014), and social disorganization theory (Fahey and LaFree 2014).

Other social scientists have similarly framed their research with the idea that terrorism is usually a means to an end, not the end itself. Terroristic tactics and the resulting publicity inspire fear that can lead to outsized influence. For example, casualty counts resulting from terrorism pale in comparison to the cumulative carnage caused by other forms of violence (Jenkins 1974). Still, evidence suggests that Americans vastly overestimate the chances that they or an average American will be harmed by terrorism (Lerner et al. 2003).

In addition to research on the causes of terrorism and motivations of terrorist groups, there is also a limited body of literature addressing an individual's choice to become a terrorist. Individual terrorist motivation is a difficult topic to study, but early attempts suggest that many terrorists are surprisingly "normal," represented by a wide array of different personality types. Overall, evidence suggests that the most common shared link among individual terrorists is their actual participation in terrorism. Another common motivation seems to be vengeance (Crenshaw 1981), which differs from the structural factors, like economic climate or opportunity, that are often cited as causes of other types of crime. When the link between terrorism and factors like poverty and education is tested, little direct connection is found (Krueger and Malečková 2003; Russell and Miller 1983; Taylor 1988). In fact, there is evidence that wealthier and more educated people are actually more likely to partake in terrorism. One potential explanation for

that finding is that terrorism can be considered a form of political participation—which would be consistent with theory that considers terrorism to be a rational choice (Krueger and Malečková 2003).

Individual terrorist motivations are further complicated when considering suicide terrorists, given that the attacker must be driven by something that will not impact his own life. Some of the existing research suggests that suicide terrorism is a strategically logical course of action that helps gain political or governmental concessions for the group (Pape 2003). The picture arguably gets murkier when considering the recent rise of religious groups like the Islamic State, but some commentators argue that ISIS is not actually a terrorist group. Instead, they claim that ISIS is a pseudo-state with a conventional military that also engages in terroristic operations, meaning that traditional terrorism theory may not apply (Kurth Cronin 2015).

While much of the scholarship on terrorism has predictably focused on the perpetrators, there also is a limited body of literature examining public perception of the crime. Reflecting the trend in terrorism research on the whole, much of the initial work in this sub-area was purely theoretical and lacking in an empirical basis (Nitcavic and Dowling 1990). More recent empirical forays have explored the effect of word choice in news stories (Dunn, Moore, & Nosek 2005) and of group identity (Shamir and Shikaki 2002) on perceptions of terrorism.

Lastly, another subset of the existing literature has tended to rely on large, publicly available event databases (Sandler 2014). These studies, which represent the bulk of the empirical work on terrorism, have explored broad, macro-level trends like the economic impact of terrorism (e.g., Kunreuther, Michel-Kerjan, & Porter 2003) or the effectiveness of counterterrorism strategies (e.g., Dugan & Chenoweth 2012).

Overall, terrorism research is less comprehensive than might be expected. The existing literature has taken a somewhat scattershot approach, and the empirical basis for the

understanding of terrorism has been significantly constrained by the difficulties of collecting data in this sphere.

B. Vignette Methodology

Vignette studies get their names from the crucial methodological instrument that distinguishes them. A vignette is "a short, carefully constructed description of a person, object, or situation, representing a systematic combination of characteristics" (Atzmüller and Steiner 2010, p. 128). While traditionally offered as written text or descriptions, vignettes can alternatively be presented in various other forms such as videos or pictures (Aguinis and Bradley 2014). In general, proponents of vignette studies argue that they are particularly useful for "captur[ing] meanings, beliefs, judgments and actions" on the part of respondents (Barter and Renold 2000, 308).

Most vignette studies in social science are conducted as part of factorial surveys (e.g., Rossi and Nock 1982). Consequently, vignettes are also sometimes referred to as factorial objects (e.g., Rossi and Anderson 1982). Factorial surveys, in which facets of experimental design are incorporated into survey research (Hox et al. 1991), use random selection to assign groups of respondents to specific sets or subsets of vignettes. Full factorial designs allow every respondent to be exposed to every vignette, but because studies often include a large number of vignettes, these designs are often impractical (Atzmüller and Steiner 2010).

Proponents of vignette methodology have identified quite a few benefits unique to the approach, several of which are especially useful for the study of terrorism. Those who design vignette experiments assert that the strategy compensates for some of the usual pitfalls of observational and cross-sectional research, particularly in terms of issues of causal inference. In general, experiments allow for stronger claims of causality than observational research, but the

gains in internal validity must be balanced with potential decreases in external validity. Vignette experiments, when well-constructed, can be very realistic while also allowing independent variables to be carefully manipulated. Thus, some sociologists argue that vignette experiments maximize both internal and external validity, leading to statistically sound causal inferences that can be generalized to real-world settings. In other words, vignette experiments maximize the benefits of both surveys and experiments (Aguinis and Bradley 2014; Taylor 2006; Hox et al. 1991).

A second benefit of vignette research, whether qualitative or quantitative, is that it often makes it easier for respondents to answer questions about or discuss sensitive topics that they otherwise might not be willing to broach in a more personally directed context. Respondents often find it less threatening to discuss challenging issues when they are framed as hypothetical or in the context of a vignette about a stranger or fictitious person (Schoenberg and Ravdal 2000; Hughes and Huby 2001). A third and somewhat related benefit of vignette studies is that they permit researchers to investigate some of the more subconscious elements of decision-making, which might be particularly relevant in studies considering sensitive topics. People are not always aware of the causes of their decision-making, and vignette designs likely can account for that fact better than traditional survey studies that explicitly ask respondents about their views (Wallander 2009).

With respect to the application of vignette studies to the study of terror, only a handful of researchers have made use of the technique. Empiricists have conducted vignette experiments to explore perceptions of safety while flying with individuals in different types of garb (Kane et al. 2015), deterrence strategies for terrorism (Abrahms 2014), and views on intervention in foreign genocide (Pierre 2013). One noteworthy but unpublished dissertation tried to disentangle anti-

Muslim bias in an age of radical religious terrorism, albeit without much success (Rannazzisi 2014).

II. Data and Methodology

This study consists of two similar vignette experiments, both of which recruited online survey respondents in the United States using Amazon Mechanical Turk (MTurk), an online marketplace that connects survey developers with potential respondents. Workers on MTurk voluntarily complete surveys in exchange for a small amount of financial compensation.[19] Both experiments were structured around a fictionalized news brief describing a suspect who detonated an explosive device, killing and wounding twenty others.

A. Experiment 1: Suspect Name

The first experiment is designed to investigate the effects of a terrorism suspect's name on perceptions of him. The motivating hypothesis of Experiment 1 is that suspects are viewed more negatively when they have stereotypically Islamic or Arabic names than when they have stereotypically English and Christian names. Consequently, respondents were randomly assigned into one of three conditions, each with a different suspect name: Ahmad Muhammad, William Christian, or a control with no name given that simply refers to "the suspect."[20] The inclusion of a control group adds a layer of complexity to the analysis that would be missing in a 2x2 study of only the Muhammad and Christian conditions. Any differences found between the Muhammad and Christian conditions can now also be compared to the control group to explore whether the disparities are due to a positive "markup" in one group or a negative "discount" in

[19] In this study, respondents were paid ten cents to complete the survey and were only eligible for payment if they successfully completed an attention check that asked a simple factual question about the story presented in the news brief.

[20] The surname Christian was chosen to parallel the religious connotations associated with the name Muhammad.

the other. In other words, if there are indeed differences in the perceptions of respondents in the Muhammad and Christian conditions that are consistent with the guiding hypothesis, the inclusion if the control group disentangles whether those findings are due to more negative perceptions of Muhammad, more positive perceptions of Christian, or a mixture of both.

Aside from references to the suspect's name, the news brief vignettes in each of the three conditions are identical. The vignette seen by respondents in the Muhammad condition reads as follows:

> Washington — Metropolitan Police Department officials apprehended a suspect this morning after he allegedly set off an explosive device in front of the District of Columbia Court of Appeals. MPD authorities have identified the suspect as Ahmad Muhammad. According to eyewitness accounts, Muhammad entered the plaza to the north side of the courthouse shortly before 8:45, set down a package in front of the building, and then walked away. About a minute later, the package detonated. One of the eyewitnesses on the scene was an MPD officer, who arrested Muhammad immediately. At least seven deaths have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

In the Christian condition, the reference to "Ahmad Muhammad" and the two references to "Muhammad" are replaced with "William Christian" and "Christian," respectively. In the control condition, the two references to "Muhammad" are replaced with "the suspect," and the following sentence is removed: "MPD authorities have identified the suspect as Ahmad Muhammad."[21] The event described in the vignette is intended to minimize the ambiguity with respect to whether it falls under the definition of terrorism, although as described in Part I, the lack of definitional consensus in this area makes that somewhat challenging. Still, a public bombing that targets civilians at a federal courthouse seems in line with common conceptions of

[21] A complete list of the Experiment 1 vignettes and relevant questions is presented in Appendix A.

terrorism, as in the words of President Barack Obama: "Any time bombs are used to target civilians, it is an act of terrorism" (Nielsen 2013). Any information relating to the suspect's motive, however, is intentionally omitted to leave enough subjectivity to allow for variation in the respondents' responses. A lack of motive is also consistent with real-life news reports on acts of mass violence when little is typically known about the suspect.

In all three conditions, respondents are instructed to read the vignette carefully before answering a short series of questions about the suspect. The questions are identical across conditions except for the name or label used to refer to the suspect: Muhammad, Christian, or the suspect. These questions, which comprise the dependent variables of interest, first ask respondents to characterize the suspect in their own words. For the purposes of the analysis, the responses to this open-ended question were coded into two dichotomous variables for mentions of terrorism and mentions of mental illness.[22] Next, respondents rate the suspect in terms of moral wrongness, mental illness, and likelihood of recidivism on a scale of 1-100. The respondents then indicate their preferred punishment for the suspect if convicted[23] and answer a question explicitly probing whether they would characterize the suspect's actions as an act of terror. Lastly, the survey concludes with a short series of demographic and attitudinal measures included as controls in the analysis: gender, race, age, religion, political[24] views, and views on the death penalty.[25]

[22] For the mental illness variable, mentions of similar words or phrases, such as "crazy," "unhinged," or "disturbed" were included. Likewise, mentions of a "Jihadist" or "extremist" were folded into the open-ended terrorism variable.
[23] Answer choices ranged from Probation to the Death Penalty. See Appendix A.
[24] To measure political views, respondents indicated whether they considered themselves Very Liberal, Somewhat Liberal, Moderate, Somewhat Conservative, or Very Conservative.
[25] A complete list of the demographic questions is presented in Appendix C.

EXPERIMENT 2: THE VICTIMS

The design of Experiment 2 is very similar to that of Experiment 1 but increases the emphasis on the victims, rather than the suspect. Experiment 2 is designed to test the hypothesis that there is a hierarchy of terrorism victims in America, with crimes against Christians being viewed as especially barbaric. Thus, the manipulation in Experiment 2 varies the location of the bomb, with the incident taking place at a mosque, a church, or a concert hall. The mosque condition vignette is below:

> Washington — Metropolitan Police Department officials are investigating after an unidentified suspect detonated an explosive device inside the Sultan Ahmed Mosque earlier this evening. According to eyewitness accounts, the suspect entered the mosque shortly before 6:45, set down a package by the main entrance, and then exited the building and walked away. About a minute later, the package exploded. The deaths of at least seven worshippers have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

The fictional mosque name is based off of a real mosque in Istanbul, Turkey. In the church condition, "Sultan Ahmed Mosque" is replaced with "Mt. Zion Church of Christ" and the second reference to "the mosque" instead reads "the church." The fictional church name is a combination of common church names in the United States. In the final control condition, the fictional building is identified as the "Washington Concert Hall" and then referred to again as "the concert hall."[26] The instructions for Experiment 2 respondents and the questions following the vignette are the same as those in Experiment 1.

[26] A complete list of the Experiment 2 vignettes and relevant questions is presented in Appendix B.

III. RESULTS

A. EXPERIMENT 1

Table 8 presents the demographic characteristics of the survey respondents in Experiment 1. Overall, 577 respondents successfully completed the survey in its entirety.[27] The demographics of the respondent sample map on relatively well to national trends. The two biggest deviations are that respondents skewed slightly female compared to the overall population of the United States and Latinx respondents are underrepresented in the sample.

Table 8. Demographics of Chapter 2, Experiment 1 Respondents

Female	327 (56.67%)
Male	248 (42.98)
Other	2 (0.35%)
Black	75 (13.00%)
East Asian	36 (6.24%)
Latinx	43 (7.45%)
Middle Eastern	2 (0.35%)
Native American	6 (1.04%)
White	379 (65.68%)
South Asian	9 (1.56%)
Other	27 (4.68%)
Age (Average)	36.71 Years

n = 577

The results of the logistic regression analyses of the effect of suspect name on the likelihood of being labeled a terrorist or mentally ill are presented in Table 9.

[27] 23 respondents (3.99%) who completed the survey failed the attention check and are excluded from the analysis.

Table 9. Logistic Regressions of Respondent Labeling Suspect as a Terrorist or Mentally Ill on Suspect Name Experimental Condition and Demographic Characteristics

	Terrorist, Prompted (SE)	Terrorist, Unprompted (SE)	Mental Ill., Unprompted (SE)
Condition			
Muhammad	1.645	5.375***	0.499
	(0.446)	(1.212)	(0.187)
Christian	1.268	1.735*	2.595***
	(0.341)	(0.401)	(0.774)
Race			
Asian	1.135	1.214	0.498
	(0.508)	(0.431)	(0.288)
Black	0.825	0.941	0.829
	(0.287)	(0.266)	(0.371)
Latinx	0.831	0.481	2.143
	(0.351)	(0.184)	(0.917)
Other	0.620	1.075	0.479
	(0.259)	(0.418)	(0.311)
Gender			
Male	0.993	1.526*	0.921
	(0.226)	(0.282)	(0.244)
Other	0.266	3.670	
	(0.382)	(5.292)	
Age	0.999	1.014	1.020
	(0.010)	(0.008)	(0.011)
Politics	0.953	1.096	1.154
	(0.098)	(0.091)	(0.136)
Religion			
Christianity	1.456	1.338	0.437**
	(0.381)	(0.290)	(0.134)
Other	0.964	1.0118	1.471
	(0.343)	(0.315)	(0.574)
Constant	3.933**	0.112***	0.062***
	(0.343)	(0.048)	(0.036)
Observations	577	577	575

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Control (Condition), White (Race), Female (Gender), None (Religion).

The first two rows of each model contain the key findings: the effect of the Muhammad and Christian conditions, when controlling for age, race, gender, political views, and religion,[28] on each of these three variables as compared to the control condition. The results are expressed as odds ratios, meaning that any statistically significant finding with a coefficient greater than one indicates a positive relationship between the independent and dependent variables, whereas a coefficient less than one indicates the opposite. The asterisks denote statistically significant findings and are thus the findings of interest.

The first model in Table 9 depicts the results of the question directly asking respondents if the suspect's actions constitute an act of terror.[29] Although the coefficient for the Muhammad condition approaches significance ($p < 0.068$), the experimental manipulation does not seem to have an effect when respondents are explicitly asked about labeling the act terrorism. In fact, none of the independent variables in this model are significant predictors. The second and third models of Table 9 examine the data from the open-ended question asking respondents to characterize the suspect in their own words.

The second model illustrates that both Muhammad and Christian condition respondents were more likely than their counterparts in the control condition to use language identifying the suspect as a terrorist.[30] Placement in the Muhammad condition increased the odds of experimental subjects using language referring to terror by more than five times the odds of the control condition subjects. Similarly, Christian condition respondents saw an increase of 73% in

[28] The race and religion controls are both modified in the analysis to collapse together groups that were infrequently represented, such as Native Americans and Middle Easterners in the race variable and Jewish and Hindu respondents in the religion variable, into the Other category.

[29] In the survey, respondents are given three possible choices: Yes, No, or Maybe. For the purposes of both experiments, the No and Maybe categories are collapsed into a single non-Yes category because so few respondents (1.91% in Experiment 1) selected No. As a check on the effects of that data organization strategy, a multinomial logit regression using all three categories confirmed the findings of the logistic regression with the collapsed categories.

[30] As an example, one of the responses that used this type of language characterized Muhammad as "A terrorist, who has a grudge against government and law, and no regard for other people."

their odds as compared to the control group.[31] In addition to the experimental condition findings, male respondents are also more likely to use language identifying the suspect as a terrorist.

The third and final model included in Table 9 examines the factors that influence whether participants use language that refers to the suspect as mentally ill in the open-ended question.[32] Participants in the Christian condition were significantly more likely to label the suspect as mentally ill than those in the control condition.[33] The coefficient indicating a negative effect for the Muhammad condition once again approaches significance ($p < 0.064$) but does not achieve a statistically significant effect.[34] Religion is the only other independent variable that is a significant predictor in this model, with Christian respondents mentioning mental illness significantly less than religiously unaffiliated respondents.

Table 10 contains the results for three linear regression models measuring the effect of the experimental conditions, controlling for race, age, gender, religion, and political views, on the three scaled dependent variables of interest: perceived moral wrongness, likelihood of recidivism, and mental illness of the suspect.[35] Positive coefficients indicate a positive relationship between the independent and dependent variables and represent the change in the

---

[31] Although both conditions led to an increase, the much larger effect size of the Muhammad condition when compared to the control group suggests that there might also be a statistically significant difference between the named-suspect groups. And indeed, additional analysis proves that to be the case: using the same controls, the odds for Muhammad condition respondents were 3.098 times the odds of the Christian condition ($p < 0.001$). To produce this analysis, the only change needed is to use the Christian condition, rather than control condition, as the reference group. Put another way, Table 9 shows the results of comparing the Muhammad and Christian conditions to the control conditions, but any two of the conditions can be compared to the third—that is just a different framing of the same analysis.

[32] This model contains two fewer respondents because neither of the two participants who identify as Other for gender used language referring to the suspect as mentally ill. Thus, the model excludes them because group affiliation in that category is a perfect predictor of the dependent variable.

[33] An example of this type of response describes Christian as a "Hostile, mentally ill person."

[34] Unsurprisingly, given the contrasting effects indicated by the coefficients for the experimental conditions, additional analysis confirms that the odds of using this type of language were significantly higher (5.202) when comparing the Christian condition to the Muhammad condition ($p < 0.001$).

[35] Just as there is a prompted and unprompted measure of whether the suspect is a terrorist, there is also a prompted and unprompted measure of whether the suspect is mentally ill. This variable is the prompted measure in which participants are explicitly asked to rate the extent of the suspect's mental illness.

number of points on the scale of the dependent variable.[36] Looking at the first model regarding judgments of how morally wrong the suspect's actions were, the experimental manipulation had no effect, as there were no statistically significant differences between the control group and the Muhammad or Christian groups. This finding is the result of predictably high rates of moral wrongness across all conditions, with respondents in each group rating the suspect's actions as highly morally wrong.[37] Male respondents were significantly more likely to rate the act as less wrong overall by 3.696 points, as were Latinx respondents (5.316 points) and individuals who identified their race as Other (7.179 points).

Unlike moral wrongness, the judged likelihood of recidivism is affected by the experimental manipulation. Individuals exposed to the Muhammad vignette rate the suspect as significantly more likely to commit a similar crime in the future than those who read the control vignette. Moreover, there is no statistical difference between control and Christian respondents.[38] Older and more conservative[39] respondents are also more likely to judge the suspect as a higher risk for recidivism. Lastly, placement in the Muhammad condition results in a significant decrease in the level of mental illness ascribed to the suspect when compared to the

---

[36] Thus, a statistically significant coefficient of 3.00 in the wrongness analysis would mean that a one-unit increase in the independent variable is associated with a 3-point increase in scale for perceived wrongness.

[37] Several of the scaled dependent variables in both experiments, including moral wrongness, were highly skewed left because so many of the responses were clustered at the high end of the scale. This type of non-normal distribution can be problematic for some of the assumptions required of linear regression analysis. Fortunately, samples of the size included in these two experiments tend to overcome this issue (Sainani, K. L. 2012). Still, nonparametric tests, or analyses that do not make the same assumptions as linear regression models, were run to confirm the results of the linear regressions in Table 10. A series of Mann-Whitney *U* tests produced results consistent with the findings in Table 10.

[38] Additional analysis reveals that when comparing the Muhammad condition to the Christian condition, although the effect is negative as expected (-2.323) the difference is not statistically significant ($p < 0.333$).

[39] Because of the design of the scale used to measure respondent political views (See Part II), a positive coefficient for the politics variable indicates a positive relationship between increased political conservatism and the dependent variable.

Table 10. Linear Regressions of Perceived Moral Wrongness, Likelihood of Recidivism, and Mental Illness of Suspect on Suspect Name Experimental Condition and Demographic Characteristics

	Wrongness (SE)	Recidivism (SE)	Mental Illness (SE)
Condition			
Muhammad	0.568	4.861*	-9.249**
	(1.384)	(2.304)	(3.219)
Christian	-1.394	2.538	4.359
	(1.433)	(2.385)	(3.332)
Race			
Asian	-1.693	2.076	1.812
	(2.236)	(3.722)	(5.200)
Black	-2.559	4.436	-6.630
	(1.794)	(2.986)	(4.172)
Latinx	-5.316*	4.097	3.588
	(2.238)	(3.725)	(5.204)
Other	-7.179**	-0.784	5.516
	(2.451)	(4.080)	(5.700)
Gender			
Male	-3.696**	-0.847	0.350
	(1.174)	(1.953)	(2.729)
Other	-1.227	-4.882	-9.615
	(9.822)	(16.348)	(22.84)
Age	-0.011	0.389***	-0.070
	(0.052)	(0.087)	(0.122)
Politics	0.464	2.350**	-1.756
	(0.524)	(0.873)	(1.220)
Religion			
Christianity	-1.620	-1.148	-0.168
	(1.359)	(2.262)	(3.161)
Other	-0.352	-0.567	-1.985
	(1.942)	(3.232)	(4.516)
Constant	99.226***	60.205***	65.686***
	(2.591)	(4.313)	(6.026)
R^2	0.047	0.061	0.044
Observations	577	577	577

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Reference groups, with category in parentheses: Control (Condition), White (Race), Female (Gender), None (Religion).

control group. As with the recidivism finding, there is no statistical difference between the Christian and control groups.[40]

Table 11 shows the final element of analysis for Experiment 1. The two multinomial logit models in Table 11 explore differences in the preferred punishment for the suspects if convicted. Both models use the survey participants who preferred a sentence of probation or a prison sentence of less than fifty years as the point of comparison. The first model illustrates that comparison with individuals who elected for a life sentence, and the second model does the same with those who would seek the death penalty. An additional control for views on the death penalty is included in these models, as those attitudes are likely highly relevant for this determination. The results are expressed as relative risk ratios, for which coefficients greater than one indicate a positive relationship and less than one indicate a negative.

Table 11 shows that the Muhammad condition leads to an increase in the likelihood of selecting both life in prison and the death penalty over less serious punishment when compared to the control condition.[41] The Christian condition, on the other hand, does not differ significantly from the control condition in the context of life in prison sentences, but does result in an increase in the selection of the death penalty. Finally, older respondents are also significantly more likely to select both punishments, and positive views of the death penalty are predictably associated with an increased likelihood of choosing capital punishment as the most appropriate sentence.

[40] Unlike the recidivism analysis, additional analysis finds that the difference between the Muhammad and Christian conditions (13.609) is statistically significant ($p < 0.001$).

[41] When comparing the Muhammad condition to the Christian condition, there is a statistically significant negative difference with respect to life in prison (0.506; $p < 0.05$) but not a significant difference with respect to the death penalty (0.654; $p < 0.263$).

Table 11. Multinomial Logit Regression of Preferred Punishment on Suspect Name Experimental Condition and Demographic Characteristics

	Life in Prison (SE)	Death Penalty (SE)
Condition		
Muhammad	2.874***	3.520***
	(0.922)	(1.337)
Christian	1.453	2.301*
	(0.428)	(0.842)
Race		
Asian	1.263	0.917
	(0.580)	(0.521)
Black	0.868	0.688
	(0.322)	(0.327)
Latinx	1.025	0.723
	(0.475)	(0.400)
Other	0.888	0.216
	(0.409)	(0.136)
Gender		
Male	0.774	1.699
	(0.199)	(0.523)
Other	0.750	0.000
	(1.095)	(0.000)
Age	1.033*	1.075***
	(0.014)	(0.016)
Politics	0.968	1.019
	(0.125)	(0.151)
Death Penalty	0.918	4.4543***
	(-0.109)	(0.751)
Religion		
Christianity	1.137	1.142
	(0.339)	(0.403)
Other	0.669	0.501
	(0.251)	(0.253)
Constant	0.926	0.000***
	(0.575)	(0.000)
Observations	577	577

Coefficients Expressed as Relative Risk Ratios, with Base Outcome of Less than Life in Prison.

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Reference groups, with category in parentheses: Control (Condition), White (Race), Female (Gender), None (Religion).

B. EXPERIMENT 2

The analysis and variables are the exact same in Experiment 2 as in Experiment 1 with the exception of the experimental conditions. Table 12 presents the demographic statistics of the survey participants in this experiment, which are similar overall to the demographics seen in Experiment 1 with the exception of a slight increase in women and in whites. Overall, 576 individuals participated in the study.[42]

Table 12. Demographics of Chapter 2, Experiment 2 Respondents

Female	352 (61.11%)
Male	224 (38.89%)
Black	64 (11.11%)
East Asian	41 (7.12%)
Latinx	46 (7.99%)
Middle Eastern	2 (0.35%)
Native American	6 (1.04%)
White	390 (67.71%)
South Asian	7 (1.22%)
Other	20 (3.47%)
Age (Average)	37.42 Years

n = 576

Turning to the analysis, Table 13 contains the logistic regressions concerning the characterization of the suspect as a terrorist or mentally ill. The effects of the experimental conditions are limited, as the only statistically significant finding across all three models[43] is that the Mosque condition results in a significant decrease in the odds of the suspect being labeled mentally ill.[44]

[42] 24 respondents (4.00%) who completed the survey failed the attention check and are excluded from the analysis.
[43] In the prompted terror analysis, the Mosque condition approaches significance but not does not achieve it (1.723; $p < 0.052$).
[44] Additional analysis reveals that the difference is not statistically significant when comparing the Mosque condition to the Church condition (1.784; $p < 0.597$).

Table 13. Logistic Regressions of Respondent Labeling Suspect as a Terrorist or Mentally Ill on Victim Experimental Condition and Demographic Characteristics

	Terrorist, Prompted (SE)	Terrorist, Unprompted (SE)	Mental Ill., Unprompted (SE)
Condition			
Mosque	1.723	1.515	0.428**
	(0.481)	(0.371)	(0.139)
Church	1.391	0.964	0.763
	(0.370)	(0.246)	(0.214)
Race			
Asian	1.252	1.550	0.417
	(0.541)	(0.553)	(0.262)
Black	2.648*	0.756	0.891
	(1.207)	(0.274)	(0.367)
Latinx	2.030	0.927	1.755
	(1.031)	(0.377)	(0.737)
Other	1.663	1.005	0.812
	(0.955)	(0.496)	(0.521)
Male	1.521	2.334***	1.158
	(0.381)	(0.492)	(0.301)
Age	0.981*	1.009	1.004
	(0.009)	(0.009)	(0.011)
Politics	1.017	0.938	1.236
	(0.107)	(0.090)	(0.142)
Religion			
Christianity	1.266	0.677	0.862
	(0.340)	(0.154)	(0.249)
Other	0.582	0.354*	0.806
	(0.240)	(0.173)	(0.436)
Constant	4.917***	0.210***	0.109***
	(2.306)	(0.094)	(0.058)
Observations	576	576	576

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Concert Hall (Condition), White (Race), Female (Gender), None (Religion).

Beyond that, black respondents are more likely to label the suspect a terrorist when explicitly asked, while older respondents are less likely. Conversely, in the open-ended question, male participants used language relating to terrorism more frequently and members of the Other religion category used it less.

With respect to the scaled dependent variables, Table 14 demonstrates that the experimental manipulation does, in fact, have an effect on perceived moral wrongness: the

Table 14. Linear Regressions of Perceived Moral Wrongness, Likelihood of Recidivism, and Mental Illness of Suspect on Victim Experimental Condition and Demographic Characteristics

	Wrongness (SE)	Recidivism (SE)	Mental Illness (SE)
Condition			
Mosque	3.428*	3.955	-1.717
	(1.713)	(2.333)	(3.209)
Church	1.741	4.559*	1.712
	(1.698)	(2.310)	(3.169)
Race			
Asian	-3.169	-2.117	-10.347*
	(2.636)	(3.568)	(4.913)
Black	-5.402*	3.101	-7.992
	(2.260)	(3.060)	(4.242)
Latinx	-4.611	6.660	-6.272
	(2.668)	(3.644)	(4.970)
Other	-0.630	0.590	-2.334
	(3.310)	(4.478)	(6.166)
Male	-0.274	-2.001	-3.314
	(1.486)	(2.026)	(2.792)
Age	0.101	0.290***	-0.075
	(0.060	(.081)	(0.111)
Politics	-0.336	-0.138	0.227
	(0.655)	(0.892)	(1.232)
Religion			
Christianity	1.067	-2.634	0.240
	(1.624)	(2.195)	(3.041)
Other	0.850	-2.256	3.030
	(2.816)	(3.808)	(0.564)
Constant	92.065***	70.106***	65.294***
	(3.019)	(4.104)	(5.667)
R^2	0.030	0.023	0.018
Observations	574	568	569

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Concert Hall (Condition), White (Race), Female (Gender), None (Religion).

mosque condition is judged to be more morally wrong than the control.[45] Meanwhile, black respondents gave significantly lower scores on the wrongness scale. When asked about the likelihood of recidivism, individuals in the church condition are significantly more likely to rate the suspect as a higher risk for repeat offending,[46] as are older individuals. The only significant predictor of the mental illness measure is a negative relationship among Asian respondents.

The final element of the analysis relates to the ideal punishment if the suspect is convicted. As evidenced by Table 15, there are no statistically significant predictors of choosing life in prison over a less severe punishment, and the only significant predictors of a preference for capital punishment are gender—males are more inclined to choose the death penalty—and support for the death penalty.

IV. Discussion

Overall, the results of Experiment 1 reveal that suspect name has a sizable effect on perceptions of an act of terror. Identifying the suspect as Ahmad Muhammad results in an increase in the likelihood that respondents label him a terrorist in the open-ended question, as well as increases in the perceived likelihood of recidivism and in the severity of preferred punishment. Interestingly, there is no statistical difference across all three conditions when respondents are directly asked if the act constituted terrorism, although the Muhammad condition does approach significance. Considering that non-finding in conjunction with the results of the open-ended question signals that respondents might be willing to define all three suspects as terrorists, but that they are especially likely to link Muhammad to that label. It is also possible

[45] Additional analysis reveals that the difference is not statistically significant when comparing the Mosque condition to the Church condition (-1.687; $p < 0.324$).
[46] Additional analysis reveals that the difference is not statistically significant when comparing the Mosque condition to the Church condition (0.604; $p < 0.796$).

that that proclivity is overridden by desirability bias in the direct question in a way that is not evinced by the open-ended question. Regardless, these findings all are consistent with the

Table 15. Multinomial Logit Regression of Preferred Punishment on Victim Experimental Condition and Demographic Characteristics

	Life in Prison (SE)	Death Penalty (SE)
Condition		
Mosque	1.366	1.407
	(0.599)	(0.663)
Church	0.945	1.121
	(0.393)	(0.500)
Race		
Asian	0.380	0.768
	(0.219)	(0.470)
Black	0.532	0.627
	(0.256)	(0.336)
Latinx	1460115	1720601
	(967000000)	(1140000000)
Other	0.369	0.738
	(0.233)	(0.535)
Male	1.761	3.010**
	(0.715)	(1.287)
Age	1.006	1.031
	(0.016)	(0.017)
Politics	1.057	1.066
	(0.190)	(0.203)
Death Penalty	0.808	3.491***
	(0.129)	(0.654)
Religion		
Christianity	1.804	1.334
	(0.706)	(0.561)
Other	3.136	1.821
	(2.543)	(1.549)
Constant	5.932*	0.009***
	(4.820)	(0.009)
Observations	576	576

Coefficients Expressed as Relative Risk Ratios, with Base Outcome of Less than Life in Prison.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Concert Hall (Condition), White (Race), Female (Gender), None (Religion).

motivating hypothesis that a suspect with an Arabic or Islamic sounding name would be perceived more negatively. Further buttressing that claim is the fact that Muhammad was rated lower on the scale for mental illness and that Christian was more likely to be labeled mentally ill in the open-ended responses. At first blush, characterizing a suspect as mentally ill may seem to be another form of negative perception, but the findings are likely evidence of mental illness being viewed as a mitigating factor. In other words, partially attributing a suspect's actions to mental illness suggests that the individual is less responsible, or arguably even less evil, than a suspect who is mentally sane and in full possession of his faculties. This line of thought is corroborated by the preferred punishment findings revealing that Muhammad should be punished more severely.

Somewhat surprisingly, William Christian also is more likely than the unnamed suspect to be labeled a terrorist in the open-ended question—but still significantly less likely than Muhammad—and to be given a hypothetical death sentence. These results likely reflect a hesitation among respondents to draw conclusions about a suspect with too little information. Although a name is certainly a minimal amount of additional information, it seems to be enough to let participants feel comfortable enough to draw inferences about the suspect's character. To illustrate, more than 10% of respondents in the control condition used the open-ended question to emphasize that the vignette did not contain a description of the suspect,[47] whereas slightly more than 0.5% of respondents in the other two conditions did the same.

With respect to the controls in Experiment 1, there is no identifiable pattern across race, gender, politics, or religion. Older respondents appear to be more suspicious of the suspect recidivating and also inclined to punish more harshly, two findings that seemingly go hand-in-

[47] As an example: "no description was stated in the article."

hand. Nevertheless, on the whole, the results provide solid support for the profound effects of a suspect's name.

The results of Experiment 2, on the other hand, are much more muddled. If the initial hypothesis regarding a hierarchy of victims holds true, then respondents should react more negatively to a bombing of a church. Instead, the results demonstrate that although the suspect in the mosque condition is less likely to be labeled mentally ill in the open-ended question, his actions are rated as significantly more morally wrong than the concert hall suspect. And though the church condition suspect is thought to be more likely to recidivate than the concert hall suspect, additional analyses reveal that the differences between the mosque and church conditions are statistically insignificant across every dependent variable. Consequently, the effect of the experimental manipulation in Experiment 2 appears to be limited. Furthermore, just as in Experiment 1, the controls in Experiment 2 exhibit no clear pattern. Older respondents again appear to more skeptical when it comes to the likelihood of recidivism, but the race and religion findings are likely due to small sample sizes in non-majority categories. The gender findings across both experiments intimate that men might be more inclined to use the label of terrorism for a violent act, perhaps indicating that terror is a more relevant issue in their minds. Taken together, the results of the two experiments imply that the location of the victims of an attack affects perceptions of the incident far less than the inferred character of the suspect.

On its face, the finding that Americans are more likely to label as terrorists individuals with Arabic or Islamic names is distressing. That type of bias violates general notions of justice that the American legal system is founded upon. But aside from more abstract notions of equality and justice, there are also concrete consequences of disparities in this context. For one, criminal acts linked to terrorism can be more severely sentenced. For example, in 1994, the United States Sentencing Commission, per a directive from Congress, created U.S. Sentencing

Guidelines Manual Section 3A1.4, which created a significant sentencing enhancement for individuals found guilty of committing crimes relating to terrorism. The section allows for dramatically longer sentences for individuals labeled terrorists. The resulting court cases and appeals have also produced a line of jurisprudence containing a consistent narrative thread that "terrorism is especially heinous" (Said 2014, p. 481). Hence, disparities in defining who is a terrorist take on greater meaning (Said 2014).

That characterization of terrorism as a unique evil is also reflected in the consequences of being included on the State Department's list of foreign terrorists. Individuals or groups included in this categorization can be subjected to economic sanctions, freezing of assets, and censoring on social media platforms (Byman 2018; U.S. Department of State 2018). Tellingly, there is no comparable list for domestic terrorism, reflecting the lack of emphasis placed on homegrown terrorists in the aftermath of 9/11 despite the fact that right-wing domestic terrorism and jihadi terrorism have been responsible for the deaths of a similar number of American over the last two decades (Byman 2018).

Lastly, the results of this study are particularly significant because of the obvious fact that the criminal justice system is a human institution created and run by people. While prosecutors, defense attorneys, judges, and other criminal justice actors have specialized skillsets and experiences, there is no reason to believe that they are uniquely resistant to the biases and partialities that affect all people. Consequently, the disparities exhibited in this study are no less likely to apply to criminal justice actors than any other Americans—and a system run by people that are predisposed to more readily classify certain individuals as terrorists is not one that can dispose of justice equally.

V. Conclusion

This study makes a distinctive contribution to the study of terrorism by extending the use of vignette experimental methodology to the field. The findings support the initial hypothesis that suspects are more or less likely to be characterized as terrorists depending on their demographics. Armed with as little as a name, survey respondents more readily use the label of terrorist for suspects they presume to be Arabic or Islamic. The role of victim demographics is less clear, as the evidence from Experiment 2 is far less consistent. Further experimental study in this area is certainly warranted to continue to develop a better understanding of how ordinary people think about terrorism. After all, by definition it is public perception that defines terrorists, as they cannot exist if the public is not terrified.

MORE THAN YOU BARGAINED FOR: RACE AND PLEA BARGAINING EXPERIMENTS

Chapter 3

ABSTRACT:

While much of the American criminal justice system is rigidly governed by highly specified rules and procedures, some of the most consequential decisions of a criminal case are made in the less structured spaces of charge and plea bargaining negotiations. Prosecutors are granted significant discretionary leeway when making charging decisions or negotiating plea deals with opposing counsel. Previous research has explored whether that prosecutorial authority is susceptible to racial bias, but data collection difficulties have often limited the scope or explanatory power of charge and plea bargaining studies. This study adds to the field by extending experimental design to the charge and plea bargaining literature. The study consists of two vignette experiments that assign online survey respondents to the role of prosecutor or public defender in order to study the effects of defendant race on charging decisions and plea bargaining tactics. The results unexpectedly reveal that experimental prosecutors assigned to the case of a white defendant are more likely to file charges, opt for more serious charges, and make an initial plea bargaining offer that includes jail time. Respondents assigned to the role of public defender, on the other hand, display no differences across experimental conditions.

INTRODUCTION

The American criminal justice system grants prosecutors wide-ranging authority at several points in the litigation process. At the outset of a case, prosecutors have sole responsibility for determining which charges, if any, a criminal defendant will face. Though the choice can be colored by other considerations, like the victim's preferences, the final decision is left in the prosecutor's hands. Likewise, as a case progresses to the plea bargaining phrase, the ensuing negotiation is largely dictated by the discretion of the prosecutor and the policies of her office. Moreover, there is relatively little oversight of these types of prosecutorial discretion, making them unique forms of power in the American criminal justice system.

Prosecutorial discretion in charging and plea bargaining is also hugely influential because the structure of the criminal justice system strongly incentivizes actors on both sides of the adversarial process to avoid going to trial. Estimates of the proportion of cases that are resolved through plea bargaining run as high as 90-95% on both the federal and state court levels (Devers 2011). If even a fraction of those cases were rerouted to trial, an already overburdened system would face the prospect of complete paralysis.

As a result, researchers have spent considerable time investigating the plea bargaining process and, in turn, lamenting its shortcomings. A comprehensive account of the American criminal justice system is plainly impossible without a complete understanding of the plea bargaining process. However, one notable gap in that literature is the lack of experimental data collected that can directly examine decision-making processes in this context. While experimental work abounds in other related areas, like jury decision-making (Sweeney and Haney 1992), the quantitative studies analyzing plea bargaining and prosecutorial discretion have mostly been observational. Predictably, one of the major hurdles to primary data collection in this context is access, as prosecutor's and public defender's offices are often far less interested in

being studied than researchers are in studying them. Consequently, innovative data collection strategies would help inform the existing literature and provide another layer to an already rich, if somewhat mixed, body of work.

This paper approaches the issue from a new perspective by conducting a pair of related vignette experiments that recruit laypeople as subjects and assign them the roles of prosecutor and public defender in a hypothetical charge and plea bargaining process. Although laypeople bring a different set of experiences to the study than would governmental lawyers, their perceptions and thought processes can still inform the plea bargaining debate. Experiment 1 places respondents in the role of a prosecutor, whereas Experiment 2 assigns them the duties of a public defender. Both experiments are guided by the hypothesis that prosecutors and defense attorneys treat racial minorities more harshly in the pretrial process. To test that hypothesis, the key manipulation in both experiments is the race of the defendant, who is described to subjects either as black or white. The results of the experiments completely contradict the guiding hypothesis: the "prosecutors" in Experiment 1 treat the white defendant significantly more harshly and the "public defenders" in Experiment 2 show no differences across race condition.

Part I of this paper details the existing research in this subject area before Part II lays out the data and methodology of the current study. Part III then presents the results of the analysis, which are then contextualized in the discussion in Part IV. Finally, Part V concludes the paper.

I. Literature Review

The rise of the plea bargaining system is one of the more noteworthy trends of the last century in the American criminal justice system. Although the historical models for the U.S. system placed an emphasis on litigation, more than 90% of modern cases do not go to trial (Newman 1966). As scholars began to assess the rise of plea bargaining, a consensus formed in

academia that the process was plagued by unfairness. Quite a few prominent thinkers have called for the complete abolition of plea bargaining (Alschuler 1983; Langbein 1979; Schulhofer 1992), although doubts also exist as to the practicality of such a massive reform (Langbein 1978).

Still, the system does have its supporters, some of whom argue that it works well most of the time—just not particularly well for innocent defendants (Scott and Stuntz 1992). Other proponents assert that plea bargaining is a rational response to the pressures facing criminal justice actors given the adversarial nature of the American system and the fact that most defendants are indeed guilty (Heumann 1981). Supporters also commonly cite the role of defense attorneys as a safeguard of the plea bargaining process, but the idea that those attorneys act solely in accordance with their clients' best interests might be truer in theory than in reality (Alschuler 1975). When shifting focus to the views of the actors themselves in the criminal justice system, they often think the system works appropriately (Easterbrook 1992).

To better understand the nuances of plea bargaining, other authors have focused on the mechanics of the negotiations that take place during the process (Maynard 1984). Quite a bit of the literature explores the factors in prosecutorial decision-making. One of the most commonly cited factors is the incentive for prosecutors, given their large caseloads, to use plea bargaining to maximize efficiency (Alschuler 1968). Another hypothesis states that plea bargaining is the result of a cost-benefit analysis in which prosecutors weigh the likely sentence at conviction against the risk of losing a trial (Landes 1971; Rhodes 1976; Weimer 1978), but critics have claimed that such cost-benefit theories are oversimplified and need to better account for important structural and psychological variables (Bibas 2004). Other perspectives emphasize prosecutors' sense of justice, which can manifest itself in terms of the specifics of a given case or in terms of views on a law more broadly. According to this line of thinking, prosecutors can use

plea bargaining as a form of nullification to counteract laws that they find unjust, although contradictory evidence casts doubt on that idea (Alschuler 1968). Recent work has also proffered less intuitive motivations for prosecutorial decision-making, such as the attorney's passion for a specific case (Burke 2007).

In thinking about how bias might play a role in prosecutorial decision-making, commentators have noted the unrivaled discretion that prosecutors have, coupled with a lack of meaningful oversight of that discretion. Prosecutors have the power to decide which cases are brought, what charges are filed, and whether plea bargaining negotiations are even an option (Hartley, Maddan, & Spohn 2007). That authority and lack of oversight, combined with the common organizational and professional pressures on prosecutors to secure convictions and keep caseloads moving, open the door for discrimination (Bibas 2009). Scholars have identified a variety of points of racial bias in prosecutors' offices, including in charging decisions (Crutchfield et al. 1995), pretrial release decisions (Research Working Group 2012) and setting bail (Ayres and Waldfogel 1994), and the severity of homicide classifications (Radelet and Pierce 1985). Other work identifies more subtle consequences of racial bias, such as the idea that due process itself is racialized, and that prosecutors also reinforce racialized norms by using plea bargaining as a punitive tool (Gonzalez Van Cleve 2016).

Still, the most comprehensive meta-analysis on racial bias and prosecutorial discretion illustrates that quite a few studies have found no evidence of racial bias (Wu 2016), but many of these studies suffer from methodological shortcomings that might have influenced their results. Nevertheless, on the whole, the meta-analysis confirms that minorities seem to get charged or face full prosecutions at higher rates than whites—but the landscape could use additional clarity.

As a final point, no study has yet to recruit laypeople to partake in hypothetical charging or plea bargaining decisions. Although the conclusions of this study cannot definitively be

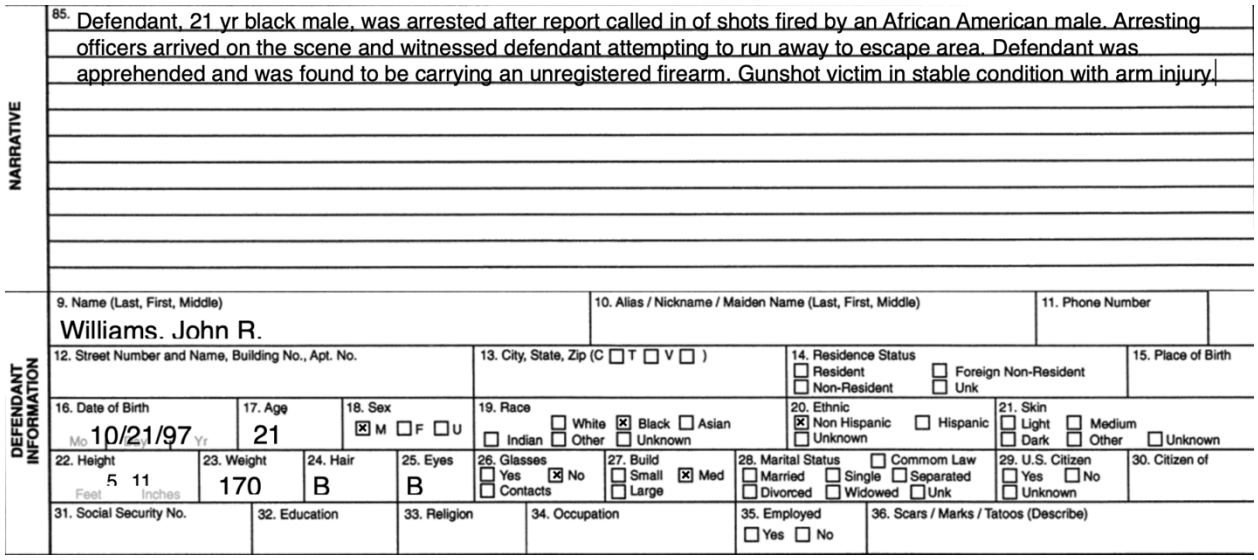
extended to real-world prosecutors and public defenders, they remain suggestive and can serve as a launching point for future experimental work that directly engages lawyers in this area. Plus, there is a wealth of research across a variety of fields, in contexts ranging from lie detection (Bond, Jr. and DePaulo 2006) to probability assessments in gambling (Wagenaar and Keren 1985) that demonstrates that differing levels of expertise and experience do not always result in differences in judgment. Consequently, it is entirely possible that the thought processes of lay experimental subjects mirror those of prosecutors and public defenders.

II. DATA AND METHODOLOGY

This study consists of two related vignette experiments designed to measure the effect of race on charge and plea bargaining. Experiment 1 explores the effect among respondents assigned to be prosecutors and Experiment 2 focuses the effect on role-playing public defenders. Both experiments recruited respondents from Amazon Mechanical Turk, a marketplace that connects researchers with individuals interested in taking surveys in exchange for compensation.[48] The experiments are both centered around two vignettes derived from an actual arrest report form used in New York State.[49] The vignette uses the "Defendant Information" and "Narrative" sections of the report to provide basic but limited information about a fictional arrest. The two vignettes used in both experiments are identical except for the indication of the defendant's race, who is black in one condition and white in the other. Figure 1 illustrates the vignette used in the black condition, while Figure 2 presents the vignette in the white condition.

[48] Respondents were paid $0.10 if they completed this survey in its entirety, including an attention check that quizzed participants on a simple factual element of the vignette.
[49] Available here: http://www.criminaljustice.ny.gov/ojis/documents/dcjs3203_sar.pdf.

Figure 1: Vignette Used in Black Defendant Condition in Chapter 3, Experiments 1 and 2



NARRATIVE

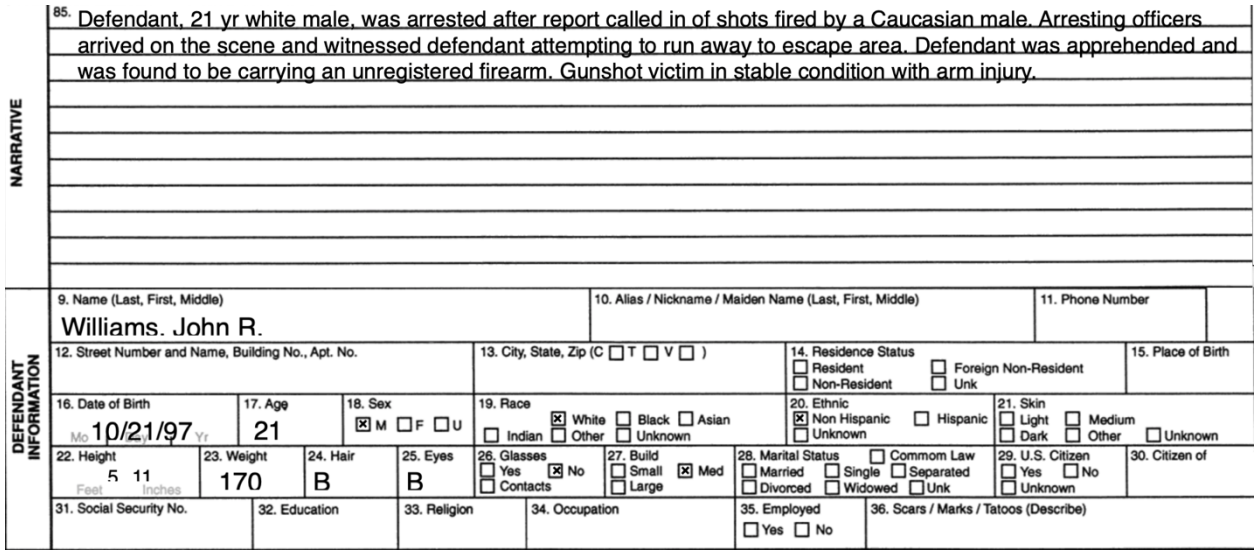
85. Defendant, 21 yr black male, was arrested after report called in of shots fired by an African American male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle): Williams, John R.
10. Alias / Nickname / Maiden Name (Last, First, Middle):
11. Phone Number:
12. Street Number and Name, Building No., Apt. No.:
13. City, State, Zip (C ☐ T ☐ V ☐):
14. Residence Status: ☐ Resident ☐ Non-Resident ☐ Foreign Non-Resident ☐ Unk
15. Place of Birth:
16. Date of Birth: Mo 10/21/97 Yr
17. Age: 21
18. Sex: ☒ M ☐ F ☐ U
19. Race: ☐ White ☒ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown
20. Ethnic: ☒ Non Hispanic ☐ Hispanic ☐ Unknown
21. Skin: ☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown
22. Height: Feet 5 Inches 11
23. Weight: 170
24. Hair: B
25. Eyes: B
26. Glasses: ☐ Yes ☒ No ☐ Contacts
27. Build: ☐ Small ☒ Med ☐ Large
28. Marital Status: ☐ Commom Law ☐ Married ☐ Single ☐ Separated ☐ Divorced ☐ Widowed ☐ Unk
29. U.S. Citizen: ☐ Yes ☐ No ☐ Unknown
30. Citizen of:
31. Social Security No.:
32. Education:
33. Religion:
34. Occupation:
35. Employed: ☐ Yes ☐ No
36. Scars / Marks / Tatoos (Describe):

Using a portion of an actual arrest report helps minimize external validity issues. While there is inevitably a gap between reality and an experiment in which laypeople are pretending to be prosecutors and public defenders, the study tries to minimize that gap as much as possible.

Figure 2: Vignette Used in White Defendant Condition in Chapter 3, Experiments 1 and 2



NARRATIVE

85. Defendant, 21 yr white male, was arrested after report called in of shots fired by a Caucasian male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle): Williams, John R.
10. Alias / Nickname / Maiden Name (Last, First, Middle):
11. Phone Number:
12. Street Number and Name, Building No., Apt. No.:
13. City, State, Zip (C ☐ T ☐ V ☐):
14. Residence Status: ☐ Resident ☐ Non-Resident ☐ Foreign Non-Resident ☐ Unk
15. Place of Birth:
16. Date of Birth: Mo 10/21/97 Yr
17. Age: 21
18. Sex: ☒ M ☐ F ☐ U
19. Race: ☒ White ☐ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown
20. Ethnic: ☒ Non Hispanic ☐ Hispanic ☐ Unknown
21. Skin: ☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown
22. Height: Feet 5 Inches 11
23. Weight: 170
24. Hair: B
25. Eyes: B
26. Glasses: ☐ Yes ☒ No ☐ Contacts
27. Build: ☐ Small ☒ Med ☐ Large
28. Marital Status: ☐ Commom Law ☐ Married ☐ Single ☐ Separated ☐ Divorced ☐ Widowed ☐ Unk
29. U.S. Citizen: ☐ Yes ☐ No ☐ Unknown
30. Citizen of:
31. Social Security No.:
32. Education:
33. Religion:
34. Occupation:
35. Employed: ☐ Yes ☐ No
36. Scars / Marks / Tatoos (Describe):

Concerns with the realism of the vignette, however, also must be balanced with presenting too much information to the participants. Excessive information can overwhelm or distract respondents, and also can muddy the causal inferences that make experimental design so valuable. As a result, the vignettes provide only a few physical characteristics aside from race, such as age and height, that are held constant across both conditions. The defendant's name is also held constant in both vignettes and was intentionally chosen because it is race-neutral.[50] Likewise, the narrative descriptions included in the vignettes only describe the incident, a shooting, in very broad terms. This intentional ambiguity allows for variation in respondent perception of the case because of its uncertain legal trajectory. Because the evidence of the crime is by no means definitive, there is more room for subjective interpretation based on the inferences drawn by respondents.

In both experiments, survey respondents are randomly assigned to either the black or white condition. In Experiment 1, the survey begins with the following directions in both conditions:

> Imagine that you are a lawyer working for your local prosecutor's office. Please closely examine the following excerpt from a police arrest report pertaining to a new case that you will be taking over. You are the lead prosecutor on the case and you have sole authority to proceed with the case as you choose. After you have looked over the excerpt, you will be asked to answer a few questions about the case.

Participants are then shown the vignette corresponding to whichever condition they have been randomly assigned. After presenting the arrest report excerpt, the survey transitions to the questions measuring the respondents' perceptions of the case, which are identical in both the

[50] Another potentially interesting manipulation would be to vary name across condition by choosing different names that are typically perceived as more typical for whites or blacks. But names potentially convey more information than simply race (e.g., class), making it harder to attribute any effects solely to the independent variable of interest in the experiment.

white and black conditions.[51] The first question asks the participants whether they would choose to charge the defendant or drop the case. For those electing to pursue the case, the next question explains the fictional sentence maximums in the hypothet jurisdiction for illegal possession of a firearm, a misdemeanor, and assault with a deadly weapon, a felony. Respondents then decide which of the two types of charges they feel is more appropriate. Once the charging decisions have been made, the respondents enter the plea bargaining portion of the survey. Participants who choose to file charges then partake in a two-step simulation in which they determine their opening offer in the negotiation as well as their final, best offer. At each stage, they may select between offering community service, probation, or jail time. The survey then concludes with a short series of demographic and attitudinal questions to serve as controls in the analysis.[52]

Experiment 2 is structured very similarly to Experiment 1 but begins with a different set of instructions assigning the respondents the role of a public defender:

> Imagine that you are a lawyer working for your local public defender's office. Please closely examine the following excerpt from a police arrest report pertaining to a new case that you will be taking over. You are the lead attorney representing the defendant, and you have sole authority to proceed with the case as you choose. After you have looked over the excerpt, you will be asked to answer a few questions about the case.

The only other significant change to the experimental protocol for Experiment 2 is that the first two questions comprising the charging decision element of the study are reframed to query participants' expectations for what a hypothetical prosecutor would do in the case.[53] For example, the threshold charging question asks if they would expect the prosecutor to charge their client or drop the case.

---

[51] See Appendix D for the list of Experiment 1 questions.
[52] See Appendix F for the list of demographic and attitudinal questions.
[53] See Appendix E for the list of Experiment 2 questions.

III. RESULTS

A. EXPERIMENT 1

Overall, 600 respondents participated in Experiment 1. As illustrated by Table 16, the respondent sample skews female and is comprised of more whites than the national population.

Table 16. Demographics of Chapter 3, Experiment 1 Respondents

Female	386 (64.3%)
Male	212 (35.33%)
Other	2 (0.33%)
Black	72 (12.00%)
East Asian	22 (3.67%)
Latinx	39 (6.50%)
Middle Eastern	3 (0.50%)
Native American	4 (0.67%)
White	425 (70.83%)
South Asian	9 (1.50%)
Other	26 (4.33%)
Age (Average)	38.29 Years

n = 600

To analyze the results of the experiment, a series of logistic regression models are used. All regression coefficients across the entire analysis are expressed as odds ratios. Therefore, any statistically significant coefficient greater than one represents a positive association, controlling for the other independent variables, between the independent and dependent variables. A significant coefficient less than one denotes a negative relationship.

Table 17 presents the first two models, which explore the effects of the experimental manipulation on charging decisions. The first model, the Initial Charging Decision, measures the likelihood that mock prosecutors choose to file charges and pursue the case. The dependent variable is a dichotomous yes/no variable with respect to whether the prosecutor chooses to file

charges. The results indicate that the experimental condition does indeed have a statistically significant effect on the charging decision, but it is the white defendants who are charged at a higher rate: the odds of the white defendant facing charges are nearly five times higher than those of the black defendant.

Table 17. Logistic Regressions of Charging Decision on Prosecutor Experimental Condition

	Initial Charge Decision (SE)	Felony Charge (SE)
White Defendant	4.950***	2.143***
	(2.030)	(0.410)
Respondent Race		
Asian	3.535	1.235
	(0.231)	(0.526)
Black	1.493	1.139
	(0.797)	(0.347)
Latinx	3.579	0.615
	(3.750)	(0.220)
Other	0.998	0.705
	(0.782)	(0.285)
Male	1.360	1.206
	(0.500)	(0.348)
Age	0.992	1.008
	(0.014)	(0.008)
Politics	1.073	1.274*
	(0.176)	(0.122)
Trust in Police	1.676***	1.038
	(0.258)	(0.099)
Constant	4.298	0.496
	(5.198)	(0.229)
Observations	598	556

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black Defendant (Experimental Condition), White (Respondent Race), Female (Respondent Gender).

The only other significant relationship is a positive association between a respondent's general level of trust in the police and likelihood of filing charges. The second model, labeled Felony Charge, examines the factors that influence whether the prosecutors prefer to file charges for a misdemeanor illegal possession or a felony assault with a deadly weapon. A positive relationship here demonstrates increased odds in selecting the more serious charge. Again, the experimental manipulation is significant, with white defendants being charged more harshly than black defendants. Harsher charging decisions are also linked to more conservative political views.

Table 18 contains the results for the second set of logistic regressions that analyze the plea bargaining component of the experiment. The two models evaluate differences in the opening plea bargain offer and the final offer, respectively. The dependent variable in both models is a dichotomous jail/non-jail measure to indicate the nature of the sentence offered by the prosecutors.[54] In the analysis of the opening offer, white defendants again are treated more harshly and are significantly more likely to be offered jail time. In the final offer, however, there is no significant difference across conditions. In both analyses, older respondents are more likely to make harsher offers. Moreover, more conservative participants are more likely to put forth jail time in their opening offer, while male participants elected for jail more frequently in their final offers.

[54] As described in Part II, the respondents were able to choose between probation, community service, and jail time for both of these measures. The dependent variable here collapses the first two options into a single non-jail category.

Table 18. Logistic Regressions of Plea Bargaining Offers on Prosecutor Experimental Condition

	Opening Plea Bargaining Offer (SE)	Final Plea Bargaining Offer (SE)
White Defendant	1.746**	1.143
	(1.746)	(0.200)
Respondent Race		
Asian	1.245	1.524
	(0.514)	(0.597)
Black	1.041	1.020
	(0.302)	(0.280)
Latinx	0.740	1.032
	(0.706)	(0.361)
Other	1.562	1.510
	(0.706)	(0.589)
Male	1.180	1.508*
	(0.229)	(0.274)
Age	1.017*	1.016*
	(0.008)	(0.007)
Politics	1.223*	1.171
	(0.114)	(0.101)
Trust in Police	1.081	1.077
	(0.100)	(0.094)
Constant	0.328*	0.214***
	(0.149)	(0.092)
Observations	556	556

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black Defendant (Experimental Condition), White (Respondent Race), Female (Respondent Gender).

B. EXPERIMENT 2

Experiment 2 consists of 599 unique respondents. Like the sample in Experiment 2, the sample in this experiment also skews female and white. Table 19 illustrates the overall demographic composition of the participants.

Table 19. Demographics of Chapter 3, Experiment 2 Respondents

Female	383 (63.94%)
Male	215 (35.89%)
Other	1 (0.17%)
Black	61 (10.18%)
East Asian	26 (4.34%)
Latinx	36 (6.01%)
Middle Eastern	4 (0.67%)
Native American	6 (1%)
White	434 (72.45%)
South Asian	7 (1.17%)
Other	25 (4.17%)
Age (Average)	39.82 Years

n = 599

The analysis of the manipulation in Experiment 2 is paints a much different pictures than the results seen in Experiment 1. Table 20 presents the results of the charging decisions made by the assigned public defenders in Experiment 2.[55] Defendant race proves statistically insignificant in public defenders' expectations of both prosecutors' initial charging decision and the severity of the charge. In fact, there are no significant predictors of any kind across either model.

[55] The race categories included in Table 20 are slightly different than those used in the other models because two of the racial subgroups (Asian and Latinx) contained no variation in the dependent variables. In other words, every Latinx and Asian respondent elected to file charges. Because of how logistic regression models are specified, all of those respondents were excluded from the regression analysis in its original form. Thus, the race categories for Table 19 are collapsed, with Latinx and Asian individuals getting folded into the "Other" category. To ensure that this change does not bias the results, a sensitivity analysis was conducted using Firth logit models, which use penalized likelihood instead of the conventional maximum likelihood, are are better suited to account for this type of issue. Those models confirm that the alternative racial categorization does not meaningfully change the results.

Table 20. Logistic Regressions of Charging Decision on Public Defender Experimental Condition

	Initial Charge Decision (SE)	Felony Charge (SE)
White Defendant	1.301	1.193
	(0.593)	(0.246)
Respondent Race		
Black	1.500	1.119
	(1.180)	(0.409)
Other	3.933	0.770
	(4.102)	(0.204)
Male	2.321	0.922
	(1.320)	(0.198)
Age	0.976	1.003
	(0.018)	(0.009)
Politics	1.213	0.965
	(0.257)	(0.093)
Trust in Police	1.327	1.059
	(0.268)	(0.102)
Constant	10.423*	2.928*
	(10.437)	(1.467)
Observations	598	577

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black Defendant (Experimental Condition), White (Respondent Race), Female (Respondent Gender).

Table 21 contains the results for the plea bargaining portion of Experiment 2, and they too illustrate a lack of effect across experimental condition. The public defenders demonstrate no differences in plea bargaining tactics across defendant race. The only significant effect is a decreased likelihood of offering jail time by black respondents.

Table 21. Logistic Regressions of Plea Bargaining Offers on Public Defender Experimental Condition

	Opening Plea Bargaining Offer (SE)	Final Plea Bargaining Offer (SE)
White Defendant	1.083	1.010
	(0.185)	(0.173)
Respondent Race		
Asian	1.406	0.891
	(0.524)	(0.332)
Black	0.602	0.336***
	(0.184)	(0.107
Latinx	1.143	0.605
	(0.406)	(0.220)
Other	1.508	0.877
	(0.552)	(0.320)
Male	1.025	1.159
	(0.183)	(0.207)
Age	0.989	0.996
	(0.007)	(0.007)
Politics	1.034	0.875
	(0.082)	(0.070)
Trust in Police	1.089	1.129
	(0.088)	(0.092)
Constant	0.780	1.124
	(0.325)	(0.467)
Observations	577	577

Coefficients Expressed as Odds Ratios.
* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$
Reference groups, with category in parentheses: Black Defendant (Experimental Condition), White (Respondent Race), Female (Respondent Gender).

IV. DISCUSSION

The results of the experiments resoundingly fail to support the initial hypothesis that black defendants are treated more severely than whites in terms of both charging and plea bargaining decisions. Not only is there no evidence to support bias against blacks in that regard, but there is actually quite consistent evidence that hypothetical prosecutors are more punitive

toward white defendants. In Experiment 1, white defendants are more likely to be charged, more likely to be charged with a felony, and more likely to be presented with an initial plea bargaining offer that includes jail time. The non-finding in the second stage of the plea bargaining process implies that the calculus changes for prosecutors when making their final offer—perhaps a more pressing urgency at that point to make an offer that would successfully lead to a deal overrides the bias that pervades decision-making earlier in the process. Conversely, Experiment 2 demonstrates that respondents assigned to be public defenders do not exhibit different expectations of prosecutors depending on the race of the defendant, and also do not navigate the plea bargaining process differently when their client's race varies.

There are a variety of potential explanations for the surprising findings in Experiment 1. The first and simplest explanation is that the results reflect a true bias against white defendants. Perhaps the recent spate of high-profile acts of violence by white men has fundamentally changed the way that criminally-inclined whites are perceived. Thus, respondents might feel that more severe punishments are warranted for white defendants in order to send a broader message to that population.

On the other hand, the results also could indicate a bias in favor of blacks. In the age of Donald Trump, it is possible, if somewhat unexpected, that perceptions of race and criminalization have evolved to the point where Americans are more inclined to give the benefit of the doubt to people of color who encounter the criminal justice system. In that case, respondents could be inferring some sort of mitigating factor in the black condition that they are less inclined to find in the white condition, or they could be using the platform of the prosecutor as a form nullification, as posited by Alschuler (1968). For example, experimental subjects might find the somewhat dubious arrest report to be more problematic when it pertains to a black defendant—though trust in police was included as a control to account for this precise

possibility. Furthermore, even if the prosecutors are not inclined themselves to read in mitigating factors for blacks, they could be scaling down their charging decisions and plea bargaining offers under the belief that jurors or judges will be more sympathetic to cases with black defendants. In other words, the results could be indicative of the type of cost-benefit analysis described in several previous studies (Landes 1971; Rhodes 1976; Weimer 1978).

The third potential explanation is that the results in fact are the indirect result of bias against people of color. If true, this line of thinking could cause the disparities as a consequence of whites being held to a higher standard of culpability than blacks. Respondents could potentially find white defendants more blameworthy for the acts described in the vignette because they think, for example, that the white defendant should know better. Or, respondents could find it less likely that the white defendant happened to be at the wrong place as the wrong time, and in turn find it more likely that he is guilty.

Lastly, the race disparities could be the result of an undetected idiosyncrasy of the experimental design or vignette. If something about the vignette makes it more believable to respondents that a white man is guilty for the episode in question, then the corresponding charging and plea bargaining decisions would treat white defendants more harshly. In addition, if the experimental manipulation is plainly transparent to participants, then desirability bias, or the tendency of survey respondents to answer so that others view them more favorably, could also play a role. That explanation, though, is complicated by the non-findings exhibited by the analysis of Experiment 2. If Experiment 1's purpose and manipulation were obvious enough to respondents to alter the results, then a similar pattern would be expected in Experiment 2. Instead, there are no patterns with respect to the experimental manipulation in the second experiment. Additionally, the validity of the findings are strengthened by the fact that an additional round of pilot data collection found similar results when the vignette described an

arrest relating to driving under the influence. The fact that white defendants were also treated more harshly in the context of that crime, which is arguably far less racialized than a shooting-related incident, further suggests that the findings in this study are not merely an artifact of the specific vignette used.

There are also other implications of the Experiment 2 results. The fact that the participants in this experiment predicted no differences across race in terms of prosecutorial discretion suggests that everyday Americans might not be overly suspicious of racial bias in charging decisions. Moreover, the lack of racial disparities in the plea bargaining decisions made by public defenders intimates that racial bias is more likely to rear its head in prosecutorial decision-making.

V. Conclusion

Overall, the results of the experiment are highly surprising. Prior research has generally found evidence of racial bias against blacks in charging and plea bargaining decisions. This study, benefitting from an experimental design allows for direct causal inference, finds the exact opposite in the form of bias against white defendants. Further research is certainly needed to help situate these results, both in the form of replication and extension. Replication with similar results in another sample would counter the argument that these results are merely a function of an improbably idiosyncratic sample of respondents. Extending this design to both vignette studies looking at other types of crimes and to actual prosecutors and public defenders would also provide more definitive answers. Regardless, the disparities revealed by these two experiments highlight the importance of continuing study and novel data collection strategies in the areas of prosecutorial discretion and plea bargaining.

Works Cited

Abrahms, M. (2014) Deterring Terrorism: A New Strategy, *Perspectives on Terrorism*, 8(3), 2-15.

Addington, L. (2007) Hot vs. Cold Cases: Examining Time to Clearance for Homicides Using NIBRS Data, *Justice Research and Policy*, 9:2, 87-112.

Aguinis, H. and Bradley, K. J. (2014) Best Practice Recommendations for Designing and Implementing Experimental Vignette Methodology Studies, *Organizational Research Methods*, 17(4), 351-71.

Alderden, M.A. and Lavery, T.A. (2007) Predicting Homicide Clearances in Chicago: Investigating Disparities in Predictors Across Different Types of Homicide, *Homicide Studies*, 11:2, 115-32.

Alschuler, A. W. (1968) The Prosecutor's Role in Plea Bargaining, *The University of Chicago Law Review*, 36:1, 50-112.

Alschuler, A. W. (1975) The Defense Attorney's Role in Plea Bargaining, *The Yale Law Journal*, 84:6, 1179-1314.

Alschuler, A. W. (1983) Implementing the Criminal Defendant's Right to Trial: Alternatives to the Plea Bargaining System, *University of Chicago Law Review*, 50, 931-1050.

Atzmüller, C. and Steiner, P. M. (2010) Experimental Vignette Studies in Survey Research, *Methodology*, 6(3), 128-38.

Ayres, I. and Waldfogel, J. (1994) A Market Test for Race Discrimination in Bail Setting, *Stanford Law Review*, 46, 987-1048.

Barter, C. and Renold, E. (2000) 'I Wanna Tell You a Story': Exploring the Application of Vignettes in Qualitative Research with Children and Young People, *International Journal of Social Research Methodology*, 3(4), 307-23.

Benedict, H. (1993) *Virgin or Vamp: How the Press Covers Sex Crimes*. Oxford, UK: Oxford University Press.

Bibas, S. (2004) Plea Bargaining Outside the Shadow of Trial, *Harvard Law Review*, 117:8, 2463-2547.

Bibas, S. (2009) Prosecutorial Regulation Versus Prosecutorial Accountability, *University of Pennsylvania Law Review*, 157:4, 959-1016.

Bieler, S. et al. (2016) Engaging Communities in Reducing Gun Violence: A Road Map for Safer Communities, *Urban Institute*.

Black, D. (1976) *The Behavior of Law*. New York: Academic Press.

Bond, Jr., C. F. and DePaulo, B. M. (2006) Accuracy of Deception Judgments, *Personality and Social Psychology Review*, 10(3), 214-34.

Burke, A. S. (2007) Prosecutorial Passion, Cognitive Bias, and Plea Bargaining, *Marquette Law Review*, 91, 183-212.

Byman, D. (2018) When to Call a Terrorist a Terrorist, *Foreign Policy*, https://foreignpolicy.com/2018/10/27/when-to-call-a-terrorist-a-terrorist/.

Cassell, P. G. and Fowles, R. (1998) Falling Clearance Rates after Miranda: Coincidence or Consequence? *Stanford Law Review*, 50:4, 1181-91.

Chermak, S. and Gruenewald, J. A. (2014) Laying a Foundation for the Criminological Examination of Right-Wing, Left-Wing, and Al Qaeda-Inspired Extremism in the United States, *Terrorism and Political Violence*, 27(1), 133-59.

Chiricos, T. and Eschholz, S. (2002) The Racial and Ethnic Typification of Crime and the Criminal Typification of Race and Ethnicity in Local Television News, *Journal of Research in Crime and Delinquency*, 39, 400.

Crenshaw, M. (1981) The Causes of Terrorism, *Comparative Politics*, 13(4), 379-99.

Crutchfield, R. D. et al. (1995) *Racial and Ethnic Disparities in the Prosecution of Felony Cases in King County: Final Report*. Olympia: Washington State Minority and Justice Commission.

Davies, H. J. (2007) Understanding Variations in Murder Clearance Rates: The Influence of the Political Environment, *Homicide Studies*, 11:2, 133-50.

Devers, L. (2011) Plea and Charge Bargaining: Research Summary, Bureau of Justice Assistance, U.S. Department of Justice.

Dixon, T. L. (2003) The Portrayal of Race and Crime on Television Network News, *Journal of Broadcasting and Electronic Media*, 47, 498.

Dugan, L. and Chenoweth, E. (2012), Moving Beyond Deterrence: The Effectiveness of Raising the Expected Utility of Abstaining from Terrorism in Israel, *American Sociological Review*, 77(4), 597-624.

Dunn, E. W., Moore, M., & Nosek, B. A. (2005) The War of the Words: How Linguistic Differences in Reporting Shape Perceptions of Terrorism, *Analyses of Social Issues and Public Policy*, 5(1), 67-86.

Easterbrook, F. H. (1992) Plea Bargaining as Compromise, *Yale Law Journal*, 101:8, 1969-1978.

Fahey, S. and LaFree, G. (2014) Does Country-Level Social Disorganization Increase Terrorist Attacks?, *Terrorism and Political Violence*, 27(1), 81-111.

Federal Bureau of Investigation (2016) Offenses Cleared, *Uniform Crime Report: Crime in the United States*, 2015.

Finn, M. (2018) ShotSpotter Technology Makes Dent in Chicago's Crime – But Raises Privacy Concerns, *Fox News*, https://www.foxnews.com/us/shotspotter-technology-makes-dent-in-chicagos-crime-but-raises-privacy-concerns.

Freskos, B. (2018) Record Gun Theft Poses Threat to Progress Against Violence in Chicago: An Analysis of Lost and Stolen Firearms Ties Thousands of Weapons to Crimes Committed on the City's Streets, *The Trace*, https://www.thetrace.org/2018/10/stolen-guns-are-fueling-violence-in-chicago/.

Givens, A. (2018) A Powerful Database Helps Solve Gun Crimes. Only Two States Use It., *The Trace*, https://www.thetrace.org/2018/09/nibin-ballistics-database-solves-gun-crimes-state-police/.

Gonzalez Van Cleve, N. (2016) *Crook County: Racism and Injustice in America's Largest Criminal Court*. Stanford, CA: Stanford University Press.

Graziano, L., Schuck, A., & Martin, C. (2010) Police Misconduct, Media Coverage, and Public Perceptions of Racial Profiling: An Experiment, *Justice Quarterly*, 27:1, 52-76.

Hartley, R. D., Maddan, S., & Spohn, C. C. (2007). Prosecutorial Discretion: An Examination of Substantial Assistance Departures in Federal Crack-Cocaine and Powder-Cocaine Cases, *Justice Quarterly*, *24*, 382-407.

Heumann, M. H. (1981) *Plea Bargaining*. Chicago: University of Chicago Press.

Hox, J.J., Kreft I. G. G., & Hermkens P. L. J. (1991), The Analysis of Factorial Surveys, *Sociological Methods & Research*, 19(4), 493-510.

Hughes, R. and Huby, M. (2001) The Application of Vignettes in Social and Nursing Research, *Journal of Advanced Nursing*, 37(4), 382-86.

Jenkins, B. M. (1974) International terrorism: A New Kind of Warfare, *The Rand Paper Series*.

Kane, M. N., Jacobs, R. J., & Hawkins, W. E. (2015) Beliefs About Safety and Religious and Cultural Diversity, *Journal of Social Service Research*, 41(5), 622-41.

Keel, T.G., Jarvis, J.P, & Muirhead, Y.E. (2009) An Exploratory Analysis of Factors Affecting Homicide Investigations: Examining the Dynamics of Murder Clearance Rates, *Homicide Studies*, 13:1, 60-58.

Knight, C. (2018) A Gunshot-Detection System Helped Reduce Shootings in Avondale. Which Neighborhood is Next? *The Cincinnati Enquirer*, https://www.cincinnati.com/story/news/crime/crime-and-courts/2018/09/19/where-gunshot-detection-system-go-next-cincinnati/1342608002/.

Krueger, A. B. and Malečková, J. (2003) Education, Poverty and Terrorism: Is there a Causal Connection?, *The Journal of Economic Perspectives*, 17(4), 119-44.

Kunreuther, H., Michel-Kerjan, E., & Porter, B. (2003) Assessing Managing and Financing Extreme Events: Dealing With Terrorism, Working Paper 10179, Cambridge, MA: National Bureau of Economic Research.

Kurth Cronin, A. (2015) ISIS is Not a Terrorist Group: Why Counterterrorism Won't Stop the Latest Jihadist Threat, *Foreign Affairs*, March/April 2015 Issue.

Kyung, M., Gill, J., & Casella, G. (2010) New Findings From Terrorism Data: Dirichlet Process Random-Effects Models for Latent Groups, *Journal of the Royal Statistical Society Series C (Applied Statistics)*, 60:5, 701-21.

Landes, W. M. (1971) An Economic Analysis of the Courts, *Journal of Law and Economics*, 14, 61-107.

Langbein, J. H. (1978) Torture and Plea Bargaining, *The University of Chicago Law Review*, 46:1, 3-22.

Langbein, J. H. (1979) Land Without Plea Bargaining: How the Germans Do It, *Faculty Scholarship Series*, Paper 534.

Lee, C (2005) The Value of Life in Death: Multiple Regression and Event History Analyses of Homicide Clearance in Los Angeles County, *Journal of Criminal Justice*, 33, 527-34.

Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003) Effects of Fear and Anger on Perceived Risks of Terrorism: A National Field Experiment, *Psychological Science*, 14(2), 144-50.

Litwin, K. J. and Xu, Y. (2007) The Dynamic Nature of Homicide Clearances: A Multilevel Model Comparison of Three Time Periods, *Homicide Studies*, 11:2, 94-114.

Lowery, W. and Bennett, D. (2018) Witness to the Killing: In Many Homicides, Police Believe They Know the Killer's Identity but Can't Get a Witness to Cooperate, *The Washington Post*, https://www.washingtonpost.com/news/national/wp/2018/10/17/feature/witness-to-the-killing/?utm_term=.b12cf370c589.

Maguire, E. R. et al. (2010) Why Homicide Clearance Rates Decrease: Evidence from the Caribbean, *Policing and Society*, 20:4, 373-400.

Mason, P. (2012) *Criminal Visions*. Abingdon, UK: Routledge.

Mawby, R.C. (1999) Visibility, Transparency, and Police-Media Relations, *Policing and Society*, 9, 263-86.

Maynard D. W. (1984) *Inside Plea Bargaining: The Language of Negotiation*. New York: Springer.

McCann, M. et al. (2001) Java Jive: Genealogy of a Juridical Icon, *University of Miami Law Review*, 56, 113.

Miles, T. J. (2005) Estimating the Effect of *America's Most Wanted*: A Duration Analysis of Wanted Fugitives, *Journal of Law and Economics*, 48, 281.

Newman, D. (1966) *Conviction: The Determination of Guilt or Innocence Without Trial*. Boston: Little, Brown and Company.

Nielsen, L. B. (2013) What is Terrorism? *Al Jazeera*, https://www.aljazeera.com/indepth/opinion/2013/04/20134179548891867.html.

Nitcavic, R. G. and Dowling, R. E., (1990) American Perceptions of Terrorism: A Q-Methodological Analysis of Types, *Political Communication*, 7(3), 147-66.

Ousey, G. C. and Lee, M. R. (2010) To Know the Unknown: The Decline in Homicide Clearance Rates, 1980-2000, *Criminal Justice Review*, 35:2, 141-58.

Pape, R. A. (2003) The Strategic Logic of Suicide Terrorism, *American Political Science Review*, 97(3), 343-61.

Pierre, A. (2013) *Third Party Citizen Reactions to Interventions in a Genocide: The Influence of the Social Categorization of Victims and the Norms of a Responsibility to Protect*. Ottawa.

Pisoiu, D. (2014) Subcultural Theory Applied to Jihadi and Right-Wing Radicalization in Germany, *Terrorism and Political Violence*, 27(1), 9-28.

Puckett, J. L. and Lundman, R. J. (2003) Factors Affecting Homicide Clearances: Multivariate Analysis of a More Complete Conceptual Framework, *Journal of Research in Crime and Delinquency*, 40:2, 171-93.

Radelet, M. L. and Pierce, G. L. (1985) Race and Prosecutorial Discretion in Homicide Cases, *Law and Society Review*, 19, 587-622.

Regoeczi, W.C., Kennedy, L.W., & Silverman, R.A. (2000) Uncleared Homicides: A Canada/United States Comparison, *Homicide Studies*, 4, 135-61.

Research Working Group (2012) Preliminary Report on Race and Washington's Criminal Justice System, *Seattle University Law Review*, 35, 623-71.

Rhodes, W. M. (1976) The Economics of Criminal Courts: A Theoretical and Empirical Investigation, *Journal of Legal Studies*, 5, 311-40.

Riedel, M. (2008) Homicide Arrest Clearances: A Review of the Literature, *Sociology Compass*, 2:4, 1145-64.

Riedel, M. and Rinehart, T.A. (1996) Murder Clearances and Missing Data, *Journal of Crime and Justice*, 19, 83-102.

Roberts, A. (2007) Predictors of Homicide Clearance by Arrest: An Event History Analysis of NIBRS Incidents, *Homicide Studies*, 11:2, 82-93.

Romer, D. et al. (1998) The Treatment of Persons of Color in Local Television News: Ethnic Blame Discourse or Realistic Group Conflict?, *Communication Research*, 25, 286.

Rossi, P. H. and Anderson, A. B. (1982). An Introduction. In Rossi, P. H. and Nock, S. L. (Eds.) (1982) *Measuring Social Judgments: The Factorial Survey Approach*. Beverly Hills, CA: Sage, 15–68.

Rossi, P. H. and Nock, S. L. (Eds.) (1982) *Measuring Social Judgments: The Factorial Survey Approach*. Beverly Hills, CA: Sage.

Said, W. E. (2014) Sentencing Terrorist Crimes, *Ohio State Law Journal*, 75:3, 477-528.

Sainani, K. L. (2012) Dealing With Non-Normal Data, *PM & R*, 4, 1001-5.

Sandler, T. (2014) The Analytical Study of Terrorism: Taking Stock, *Journal of Peace Research*, 51(2), 257-71.

Schoenberg, N. E. and Ravdal, H. (2000) Using Vignettes in Awareness and Attitudinal Research, *International Journal of Social Research Methodology*, 3(1), 63-74.

Schulhofer, S. J. (1992) Plea Bargaining as Disaster, *The Yale Law Journal*, 101:8, 1979-2009.

Scott, R. E. and Stuntz, W. J. (1992) Plea Bargaining as a Contract, *The Yale Law Journal*, 101:8, 1909-68.

Shamir, J. and Shikaki, K. (2002) Self-Serving Perceptions of Terrorism Among Israelis and Palestinians, *Political Psychology*, 23(3), 537-57.

Simon, D. (1991) *Homicide: A Year on the Killing Streets*. New York: Houghton Mifflin.

Sommers, Z. (2016) Missing White Woman Syndrome: An Empirical Analysis of Race and Gender Disparities in Online News Coverage of Missing Persons, *Journal of Criminal Law and Criminology*, 106:2, 275-314.

Stillman, S. (2007) 'The Missing White Girl Syndrome': Disappeared Women and Media Activism, *Gender and Development*, 15, 491.

Sweeney, L. T. and Haney, C. (1992) The Influence of Race on Sentencing: A Meta-Analysis Review of Experimental Studies, *Behavioral Sciences and the Law*, 10:2, 179-95.

Taylor, B. J. (2006) Factorial Surveys: Using Vignettes to Study Professional Judgment, *British Journal of Social Work*, 36, 1187-1207.

Taylor, M. (1988). *The Terrorist*. London: Brassey's Defence Publishers.

United States Census Bureau (2010), U.S. Census Bureau QuickFacts: Chicago city, Illinois, https://www.census.gov/quickfacts/fact/table/chicagocityillinois/POP010210#viewtop.

United States Department of State (2018) State Department Terrorist Designations of Jawad Nadrallah, al-Mujahidin Brigades, Hizballah, https://www.state.gov/r/pa/prs/ps/2018/11/287318.htm.

Wagenaar, W. A. and Keren. G. B. (1985) Calibration of Probability Assessments by Professional Blackjack Dealers, Statistical Experts, and Lay People, *Organziational Behavior and Human Decision Processes*, 36(3), 406-16.

Wallander, L. (2009) 25 Rears of Factorial Surveys in Sociology: A Review, *Social Science Research*, 38, 505-20.

Weimer, D. L. (1978) Plea Bargaining and the Decision to Go to Trial: The Application of a Rational Choice Model, *Policy Sciences*, 10, 1-24.

Wellford, C. and Cronin, K. (1999) An Analysis of Variables Affecting the Clearance of Homicides: A Multistate Study, *Justice Research and Statistics Association*, Washington, D.C.

Wu, J. (2016) Racial/Ethnic Discrimination and Prosecution, *Criminal Justice and Behavior*, 43:4, 437-58.

Xu, Y. (2008) Characteristics of Homicide Events and the Decline in Homicide Clearance, *Criminal Justice Review*, 33:4, 453-79.

Yin, T. (2013), Were Timothy McVeigh and the Unabomber the Only White Terrorists?: Race, Religion, and the Perception of Terrorism, *Alabama Civil Rights and Civil Liberties Law Review*, 4, 33-87.

Appendix A: Chapter 2, Experiment 1 Vignettes and Questions

Muhammad Vignette:

Washington — Metropolitan Police Department officials apprehended a suspect this morning after he allegedly set off an explosive device in front of the District of Columbia Court of Appeals. MPD authorities have identified the suspect as Ahmad Muhammad. According to eyewitness accounts, Muhammad entered the plaza to the north side of the courthouse shortly before 8:45, set down a package in front of the building, and then walked away. About a minute later, the package detonated. One of the eyewitnesses on the scene was an MPD officer, who arrested Muhammad immediately. At least seven deaths have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Christian Vignette:

Washington — Metropolitan Police Department officials apprehended a suspect this morning after he allegedly set off an explosive device in front of the District of Columbia Court of Appeals. MPD authorities have identified the suspect as William Christian. According to eyewitness accounts, Christian entered the plaza to the north side of the courthouse shortly before 8:45, set down a package in front of the building, and then walked away. About a minute later, the package detonated. One of the eyewitnesses on the scene was an MPD officer, who arrested Christian immediately. At least seven deaths have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Control Vignette:

Washington — Metropolitan Police Department officials apprehended a suspect this morning after he allegedly set off an explosive device in front of the District of Columbia Court of Appeals. According to eyewitness accounts, the suspect entered the plaza to the north side of the courthouse shortly before 8:45, set down a package in front of the building, and then walked away. About a minute later, the package detonated. One of the eyewitnesses on the scene was an MPD officer, who arrested the suspect immediately. At least seven deaths have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Subsequent Questions[56]:

1. In your own words, how would you characterize Ahmad Muhammad/William Christian/the suspect?

2. How morally wrong are Muhammad's/Christian's/the suspect's actions? Please rate on a scale of 1-100, with 1 indicating "not wrong at all" and 100 indicating "very wrong."

[56] Note: the order of Questions 2-4 was randomized.

3. Is Muhammad/Christian/the suspect mentally ill? Please rate on a scale of 1-100, with 1 indicating "not at all mentally ill" and 100 indicating "very mentally ill."

4. If given the chance, how likely is Muhammad/Christian/the suspect to commit this type of act again? Please rate on a scale of 1-100, with 1 indicating "not at all likely" and 100 indicating "very likely."

5. If convicted, what is the most appropriate punishment for Muhammad/Christian/the suspect?

A. Probation
B. 1-24 Years in Prison
C. 25-50 Years in Prison
D. Life in Prison
E. Death Penalty

6. Would you characterize the actions of Muhammad/Christian/the suspect as an act of terrorism?

A. Yes
B. No
C. Maybe

7. This question is intended to check that you were paying attention. Please choose the answer that describes what happened to the suspect.

A. Arrested
B. Escaped
C. Killed
D. Injured
E. Unknown

Appendix B: Chapter 2, Experiment 2 Vignettes and Questions

Mosque Vignette:

Washington — Metropolitan Police Department officials are investigating after an unidentified suspect detonated an explosive device inside the Sultan Ahmed Mosque earlier this evening. According to eyewitness accounts, the suspect entered the mosque shortly before 6:45, set down a package by the main entrance, and then exited the building and walked away. About a minute later, the package exploded. The deaths of at least seven worshippers have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Church Vignette:

Washington — Metropolitan Police Department officials are investigating after an unidentified suspect detonated an explosive device inside the Mt. Zion Church of Christ earlier this evening. According to eyewitness accounts, the suspect entered the church shortly before 6:45, set down a package by the main entrance, and then exited the building and walked away. About a minute later, the package exploded. The deaths of at least seven worshippers have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Control Vignette:

Washington — Metropolitan Police Department officials are investigating after an unidentified suspect detonated an explosive device inside the Washington Concert Hall earlier this evening. According to eyewitness accounts, the suspect entered the concert hall shortly before 6:45, set down a package by the main entrance, and then exited the building and walked away. About a minute later, the package exploded. The deaths of at least seven concertgoers have been confirmed, and an additional thirteen victims are being treated for injuries. Stay tuned for additional updates.

Subsequent Questions[57]:

1. In your own words, how would you characterize the mosque suspect/the church suspect/the concert hall suspect?

2. How morally wrong are the mosque suspect's/the church suspect's/the concert hall suspect's actions? Please rate on a scale of 1-100, with 1 indicating "not wrong at all" and 100 indicating "very wrong."

3. Is the mosque suspect/the church suspect/the concert hall suspect mentally ill? Please rate on a scale of 1-100, with 1 indicating "not at all mentally ill" and 100 indicating "very mentally ill."

[57] Note: the order of Questions 2-4 was randomized.

4. If given the chance, how likely is the mosque suspect/the church suspect/the concert hall suspect to commit this type of act again? Please rate on a scale of 1-100, with 1 indicating "not at all likely" and 100 indicating "very likely."

5. If convicted, what is the most appropriate punishment for the mosque suspect/the church suspect/the concert hall suspect?

A. Probation
B. 1-24 Years in Prison
C. 25-50 Years in Prison
D. Life in Prison
E. Death Penalty

6. Would you characterize the actions of the mosque suspect/the church suspect/the concert hall suspect as an act of terrorism?

A. Yes
B. No
C. Maybe

7. This question is intended to check that you were paying attention. Please choose the answer that describes where the package was left.

A. By the main entrance
B. Outside the back door
C. In a car parked outside
D. In a bathroom stall
E. Unknown

Appendix C: Chapter 2 Demographic and Attitudinal Questions

1. What is your gender?

   A. Female
   B. Male
   C. Other

2. Which of the following best represents your racial or ethnic heritage?

   A. Black, Afro-Caribbean, or African American
   B. East Asian or Asian American
   C. Latino/a or Hispanic American
   D. Middle Eastern or Arab American
   E. Native American or Alaskan Native
   F. Non-Hispanic White or Euro-American
   G. South Asian or Indian American
   H. Other

3. What is your age?

4. What is your religious affiliation?

   A. Christian
   B. Hindu
   C. Jewish
   D. Muslim
   E. Other
   F. None

5. How would you characterize your political views?

   A. Very liberal
   B. Somewhat liberal
   C. Moderate
   D. Somewhat conservative
   E. Very conservative

6. What are your views on the death penalty?

   A. Strongly Oppose
   B. Somewhat Oppose
   C. Neutral
   D. Somewhat Support
   E. Strongly Support

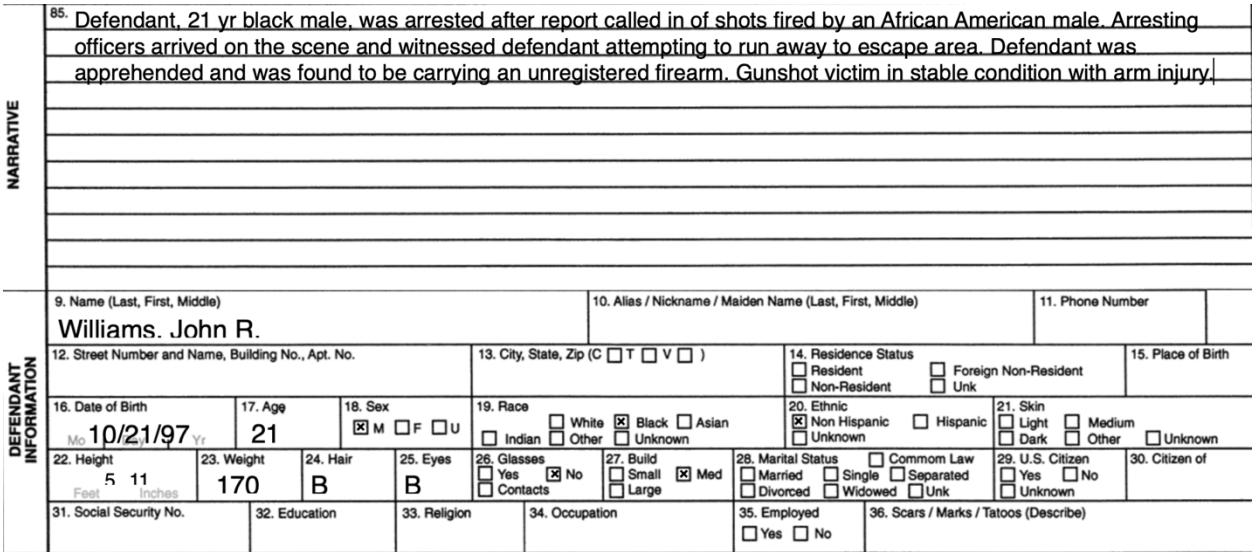
Appendix D: Chapter 3, Experiment 1 Vignettes and Questions

Introductory Instructions:

Imagine that you are a lawyer working for your local prosecutor's office. Please closely examine the following excerpt from a police arrest report pertaining to a new case that you will be taking over. You are the lead prosecutor on the case and you have sole authority to proceed with the case as you choose. After you have looked over the excerpt, you be asked to answer a few questions about the case.

Note: individuals who fail an attention check will be ineligible for compensation.

Black Vignette:



NARRATIVE

85. Defendant, 21 yr black male, was arrested after report called in of shots fired by an African American male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle)	10. Alias / Nickname / Maiden Name (Last, First, Middle)	11. Phone Number
Williams, John R.		

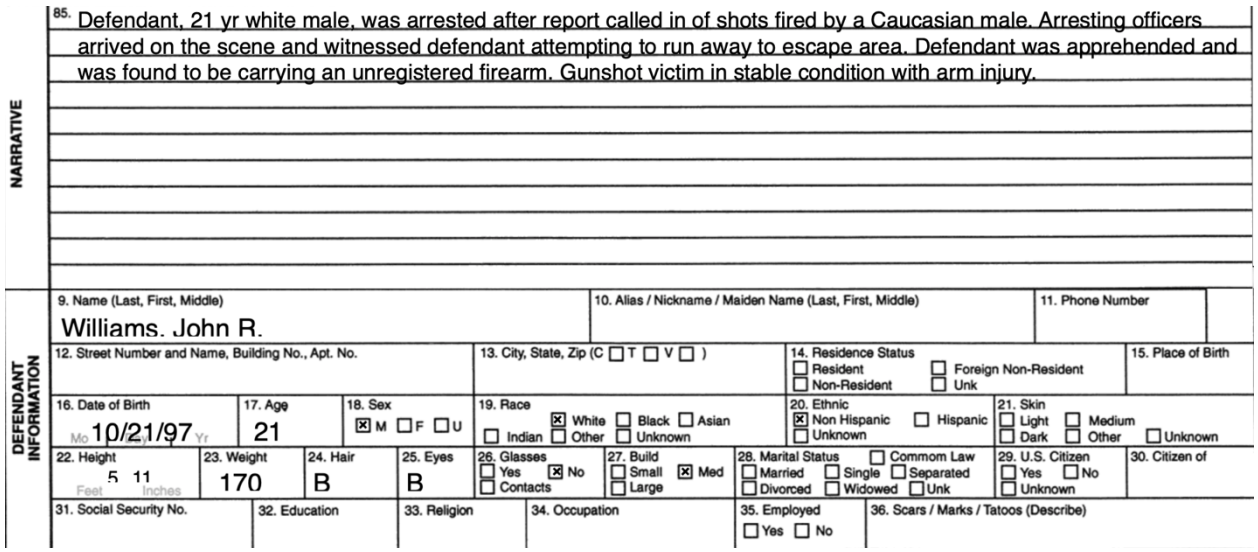
12. Street Number and Name, Building No., Apt. No.	13. City, State, Zip (C ☐ T ☐ V ☐)	14. Residence Status	15. Place of Birth
		☐ Resident ☐ Foreign Non-Resident ☐ Non-Resident ☐ Unk	

16. Date of Birth	17. Age	18. Sex	19. Race	20. Ethnic	21. Skin
Mo 10 Da 21 Yr 97	21	☒ M ☐ F ☐ U	☐ White ☒ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown	☒ Non Hispanic ☐ Hispanic ☐ Unknown	☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown

22. Height	23. Weight	24. Hair	25. Eyes	26. Glasses	27. Build	28. Marital Status	29. U.S. Citizen	30. Citizen of
Feet 5 Inches 11	170	B	B	☐ Yes ☒ No ☐ Contacts	☐ Small ☒ Med ☐ Large	☐ Married ☐ Commom Law ☐ Single ☐ Separated ☐ Divorced ☐ Widowed ☐ Unk	☐ Yes ☐ No ☐ Unknown	

31. Social Security No.	32. Education	33. Religion	34. Occupation	35. Employed	36. Scars / Marks / Tatoos (Describe)
				☐ Yes ☐ No	

White Vignette:



NARRATIVE

85. Defendant, 21 yr white male, was arrested after report called in of shots fired by a Caucasian male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle)	10. Alias / Nickname / Maiden Name (Last, First, Middle)	11. Phone Number
Williams, John R.		

12. Street Number and Name, Building No., Apt. No.	13. City, State, Zip (C ☐ T ☐ V ☐)	14. Residence Status ☐ Resident ☐ Foreign Non-Resident ☐ Non-Resident ☐ Unk	15. Place of Birth

16. Date of Birth	17. Age	18. Sex	19. Race	20. Ethnic	21. Skin
Mo 10 Day 21 Yr 97	21	☒ M ☐ F ☐ U	☒ White ☐ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown	☒ Non Hispanic ☐ Hispanic ☐ Unknown	☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown

22. Height	23. Weight	24. Hair	25. Eyes	26. Glasses	27. Build	28. Marital Status	29. U.S. Citizen	30. Citizen of
Feet 5 Inches 11	170	B	B	☐ Yes ☒ No ☐ Contacts	☐ Small ☒ Med ☐ Large	☐ Married ☐ Single ☐ Separated ☐ Commom Law ☐ Divorced ☐ Widowed ☐ Unk	☐ Yes ☐ No ☐ Unknown	

31. Social Security No.	32. Education	33. Religion	34. Occupation	35. Employed	36. Scars / Marks / Tatoos (Describe)
				☐ Yes ☐ No	

Subsequent Questions:

1. Would you choose to charge the defendant to pursue the case or drop all charges?

    A. Charge the Defendant
    B. Drop the Case

2. In your jurisdiction, illegal possession of a firearm is a Class A misdemeanor with a maximum punishment of 1 year imprisonment. On the other hand, assault with a deadly weapon is a Class 3 felony with a maximum punishment of 10 years imprisonment. With what type of crime would you charge the defendant?

    A. Misdemeanor: illegal possession of a firearm
    B. Felony: assault with a deadly weapon

3. The next few questions relate to the plea bargaining process. If both sides can come to an agreement on a sentence, the defendant will plead guilty to avoid a trial. In your opening offer of the plea bargaining process, what type of punishment would you offer to the defendant?

    A. Community Service
    B. Probation
    C. Jail Time

4. In the plea bargaining process, what type of punishment would you offer in your final, best offer?

A. Community Service
B. Probation
C. Jail Time

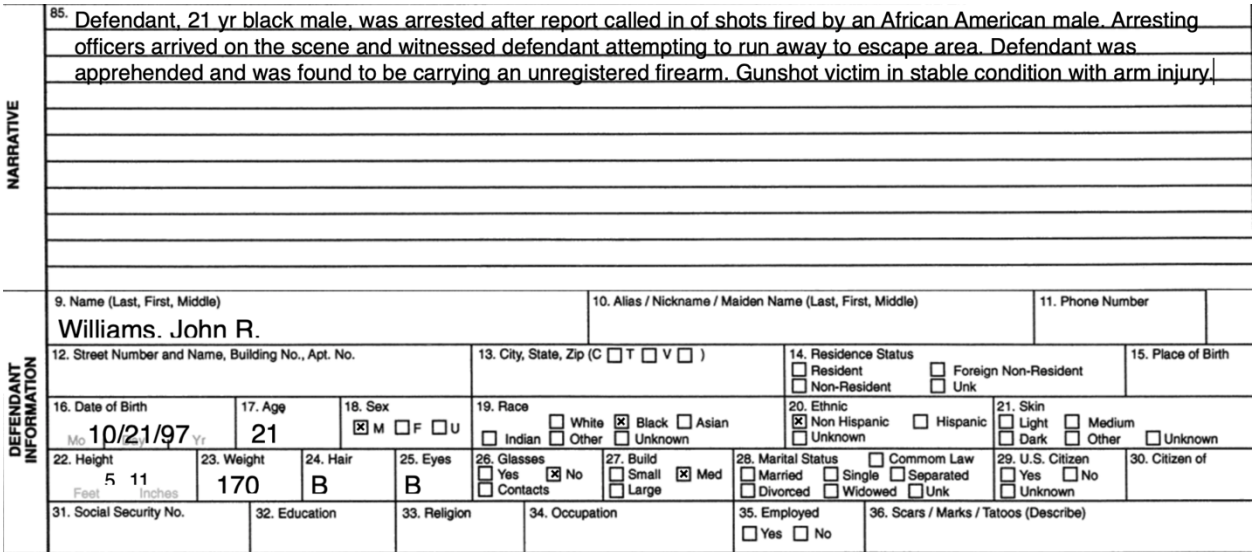
Appendix E: Chapter 3, Experiment 2 Vignettes and Questions

Introductory Instructions:

Imagine that you are a lawyer working for your local public defender's office. Please closely examine the following excerpt from a police arrest report pertaining to a new case that you will be taking over. You are the lead attorney representing the defendant, and you have sole authority to proceed with the case as you choose. After you have looked over the excerpt, you be asked to answer a few questions about the case.

Note: individuals who fail an attention check will be ineligible for compensation.

Black Vignette:



NARRATIVE

85. Defendant, 21 yr black male, was arrested after report called in of shots fired by an African American male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle)	10. Alias / Nickname / Maiden Name (Last, First, Middle)	11. Phone Number
Williams, John R.		

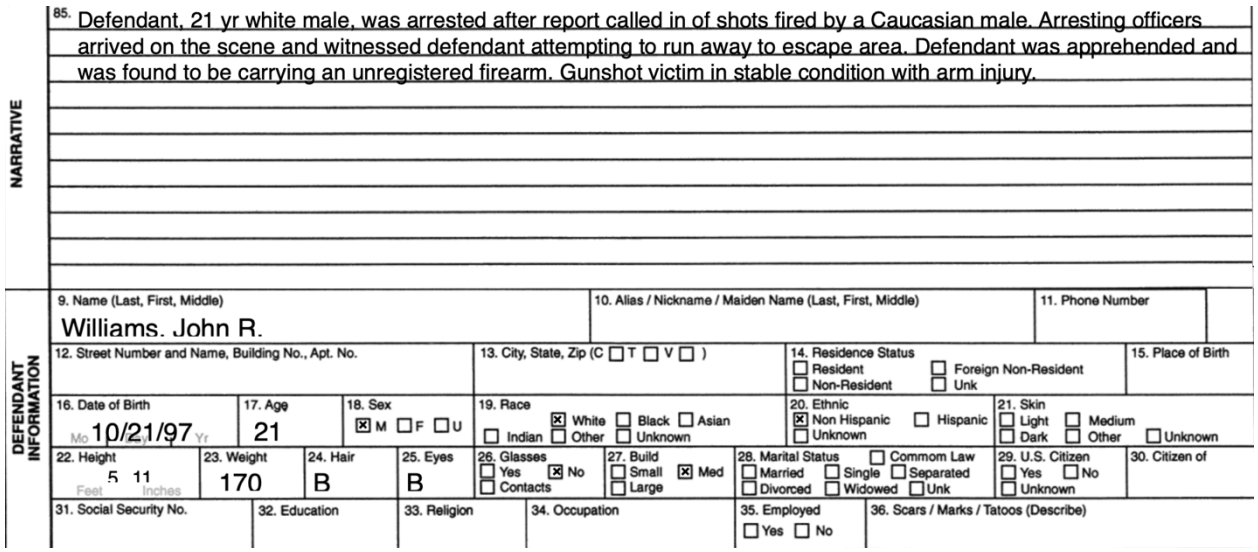
12. Street Number and Name, Building No., Apt. No.	13. City, State, Zip (C ☐ T ☐ V ☐)	14. Residence Status	15. Place of Birth
		☐ Resident ☐ Foreign Non-Resident ☐ Non-Resident ☐ Unk	

16. Date of Birth	17. Age	18. Sex	19. Race	20. Ethnic	21. Skin
Mo 10/21/97 Yr	21	☒ M ☐ F ☐ U	☐ White ☒ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown	☒ Non Hispanic ☐ Hispanic ☐ Unknown	☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown

22. Height	23. Weight	24. Hair	25. Eyes	26. Glasses	27. Build	28. Marital Status	29. U.S. Citizen	30. Citizen of
Feet 5 Inches 11	170	B	B	☐ Yes ☒ No ☐ Contacts	☐ Small ☒ Med ☐ Large	☐ Married ☐ Single ☐ Separated ☐ Commom Law ☐ Divorced ☐ Widowed ☐ Unk	☐ Yes ☐ No ☐ Unknown	

31. Social Security No.	32. Education	33. Religion	34. Occupation	35. Employed	36. Scars / Marks / Tatoos (Describe)
				☐ Yes ☐ No	

White Vignette:



NARRATIVE

85. Defendant, 21 yr white male, was arrested after report called in of shots fired by a Caucasian male. Arresting officers arrived on the scene and witnessed defendant attempting to run away to escape area. Defendant was apprehended and was found to be carrying an unregistered firearm. Gunshot victim in stable condition with arm injury.

DEFENDANT INFORMATION

9. Name (Last, First, Middle)	10. Alias / Nickname / Maiden Name (Last, First, Middle)	11. Phone Number
Williams, John R.		

12. Street Number and Name, Building No., Apt. No.	13. City, State, Zip (C ☐ T ☐ V ☐)	14. Residence Status ☐ Resident ☐ Foreign Non-Resident ☐ Non-Resident ☐ Unk	15. Place of Birth

16. Date of Birth	17. Age	18. Sex	19. Race	20. Ethnic	21. Skin
Mo 10/21/97 Yr	21	☒ M ☐ F ☐ U	☒ White ☐ Black ☐ Asian ☐ Indian ☐ Other ☐ Unknown	☒ Non Hispanic ☐ Hispanic ☐ Unknown	☐ Light ☐ Medium ☐ Dark ☐ Other ☐ Unknown

22. Height	23. Weight	24. Hair	25. Eyes	26. Glasses	27. Build	28. Marital Status	29. U.S. Citizen	30. Citizen of
5 11 Feet Inches	170	B	B	☐ Yes ☒ No ☐ Contacts	☐ Small ☒ Med ☐ Large	☐ Married ☐ Single ☐ Separated ☐ Divorced ☐ Widowed ☐ Unk	☐ Yes ☐ No ☐ Unknown	

31. Social Security No.	32. Education	33. Religion	34. Occupation	35. Employed	36. Scars / Marks / Tatoos (Describe)
				☐ Yes ☐ No	

Subsequent Questions:

1. Would you expect the prosecutor to choose to pursue the case by charging your client or drop all charges?

A. Charge the Defendant
B. Drop the Case

2. In your jurisdiction, illegal possession of a firearm is a Class A misdemeanor with a maximum punishment of 1 year imprisonment. On the other hand, assault with a deadly weapon is a Class 3 felony with a maximum punishment of 10 years imprisonment. With what type of crime would you expect the prosecutor to charge your client?

A. Misdemeanor: illegal possession of a firearm
B. Felony: assault with a deadly weapon

3. The next few questions relate to the plea bargaining process. If both sides can come to an agreement on a sentence, the defendant will plead guilty to avoid a trial. In your opening offer of the plea bargaining process, what type of punishment would you offer on behalf of your client to the prosecutor?

A. Community Service
B. Probation
C. Jail Time

4. In the plea bargaining process, what type of punishment would you offer in your final, best offer on behalf of the defendant?

A. Community Service
B. Probation
C. Jail Time

Appendix F: Chapter 3 Demographic and Attitudinal Questions

1. What is your gender?

   D. Female
   E. Male
   F. Other

2. Which of the following best represents your racial or ethnic heritage?

   I. Black, Afro-Caribbean, or African American
   J. East Asian or Asian American
   K. Latino/a or Hispanic American
   L. Middle Eastern or Arab American
   M. Native American or Alaskan Native
   N. Non-Hispanic White or Euro-American
   O. South Asian or Indian American
   P. Other

3. What is your age?

4. How would you characterize your political views?

   F. Very liberal
   G. Somewhat liberal
   H. Moderate
   I. Somewhat conservative
   J. Very conservative

5. In general, how trustworthy do you consider police?

   A. Very untrustworthy
   B. Somewhat untrustworthy
   C. Neutral
   D. Somewhat trustworthy
   E. Very trustworthy