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Implicit Bias in the Criminal Justice System: An Economic Review

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### Abstract

This project seeks to investigate implicit racial bias in the prosecution section of the criminal justice system and calculate its potential economic consequences. Combining past research and analyses of racial bias in other contexts with evaluations of legal rulings and precedents that hinder effective reform, potential areas for change and further study are identified. An experiment is designed to identify racial bias within the context of a drug offense where race and strength of evidence are isolated variables. Subsequent results are analyzed in the context of economic and social cost to both individuals and the United States as a whole.

### Implicit Bias in the Criminal Justice System: An Economic Review

As the former Attorney General of the United States, Janet Reno once said, "The keystone to justice is the belief that the legal system treats all fairly." But to treat all fairly, according to Black's Law Dictionary, it must contain four elements: the law must apply to everyone, the laws must not be secret or arbitrary, the laws must be enforced fairly, and the justice system must be fair (Black, 2009). In the United States today there is debate over whether these four elements are upheld. While the United States legal system was set up to protect all individuals' basic human rights, current empirical evidence and research reveal that this may not be upheld.

In response to the rise in attention towards police brutality against minorities, there has been a strong presence of research surrounding implicit and explicit racial and other biases that are said to be present in America today. Further reading and experimentation reveal the influence of these biases in a greater legal and criminal context from sentencing and jury selection to frisking and drug raids. The application of legal principles, primarily on the Supreme Court, reveal technical gaps and structural limitations in the law that allow for the perpetuation of punishment overly influenced by this implicit bias. This project aims to digest the current legal, economic, and psychological research surrounding the effects of implicit bias on the greater criminal justice system and the legal hurdles preventing it from being altered. In turn, this informational backing will contribute to the identification of gaps in the research surrounding the onset and validity of implicit racial biases as well as the structural

restraints of the legal system and an experiment was designed to fill that gap. Results contribute to an economic analysis of prosecuting and prison sentencing costs and inefficiencies.

To understand the complex ways in which racial discrimination differs from other forms of discrimination within the criminal justice system, an extensive knowledge surrounding political and social history is a necessary component. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* by Michelle Alexander uses empirical research and deals directly with the history and contributory factors that led to current racial inequities while focusing primarily on mass incarceration and the war against drugs as catalysts. *The New Jim Crow* provides an important contribution to the exploration of bias in the legal system as both topics, and the interactions between the two, have worked to perpetuate its existence for decades.

Alexander begins with an overview of the American prison system, stating that while the United States mirrors other similarly developed countries in its crime rates, its incarceration rates and prisons are dramatically larger. A shocking 750 per every 100,000 citizens are held in prison in the United States, a number proportionately larger than any other nation in the world (Alexander, 2010). While those numbers are strikingly high, it is actually the social status, more than the number of individuals in prisons, that has considerable impact. Once an individual has been released from the prison system, regardless of the length of their sentence, they are barred from many of their basic rights, suffering immediately and directly from employment and housing

discrimination and are also unable to vote (thus, counterintuitively, are unable to influence a political system that affected them and, if in any way flawed, have no influence to change it) (Alexander, 2010).

It is not surprising, however, that the majority of the individuals held behind bars today are of color, as “an illegal drug crisis suddenly appeared in the black community after --not before-- a drug war had been declared” (Alexander, 2010). Thus, this racial prison imbalance has had economic consequences, leading to a reduction in labor supply concentrated specifically in urban communities, primarily of color. It also creates a sizable expense for the United States to run and maintain such high prison populations, when funds could arguably be put to much greater use elsewhere, as it has in other similarly developed countries.

In an attempt to quantify the economic cost of potential discrepancies within the criminal justice system, an overall calculation of the value per day of life lost in prison at both an individual and national level was computed. The number cannot fully account for the dollar value of the potential loss per day of wrongful or biased imprisonment, as that percentage is simply unknown. However, putting a number to the loss and price tag represented by overall imprisonment is impactful for research and policy drafting, even if it is only speculative. To calculate this estimate, a common measure for the quantification of human life, expected lifetime earnings, was used. Under the assumption that there is no true way of quantifying the value of existence, economists use this number to evaluate the economic impact of a person's absence. In this calculation, the most common qualities and demographic features from

prisoner's were utilized. According to the Federal Bureau of Prisons (updated: April 13, 2019) the most common age range of individuals currently in prison is between 26-45, they are majority male, 45% are doing time for a drug offense, and the majority of prisoners have completed 12 years of school or less. The average expected lifetime income was taken within those demographics for white and black individuals and converted into 2019 dollars (Rice and Cooper, 1966). These numbers were divided by the average life expectancies in days for black and white men (28,324 days for white men and 27,539.25 days for black men). The resulting calculation yielded the cost of a day of life lost in labor opportunity cost as \$45 per day for a white man and \$30 per day for a black man. This, along with the average cost of caring for a prisoner per day (\$94.82) leaves an average cost of value per day at around \$124 for black men and \$139 for white men.

When results were multiplied by the number of United States prisoners, split by race, the total cost per day to the economy yielded an average of \$5,494,813 for black prisoners and \$2,572,527 for white prisoners. To put that into perspective, the amount the United States spends merely on black prisoners, combining both the dollar cost of care in prison with the opportunity loss of labor cost, is \$2,005,606,745 per year. While imperfect, and still considering that the majority of convictions are assumed to be just in nature, these values can still highlight discrepancies between races and quantify the true effects of bias in affecting the United States economy. If over 2 billion dollars are lost per year, solely on prisoners from one race, any potential existence of bias in the the system that gets them there is worth investigating.

In an attempt to protect both the dollar impact to the United States economy and the integrity of every individual in its grounds, as well as in attempt to eradicate explicit racial bias from legal processes, the United States judicial system has implemented several protections since the beginning of the War on Drugs in 1971. Since the execution of Title VII of the Civil Rights Act, explicit bias against an individual's race, color, religion, sex or national identity has been disallowed in a legal context. However, implicit biases leftover from the Drug War and other inequitable policies left a societal mark, continuing to influence media and its display of political, cultural, and criminal activity.

In an investigation into how media directly influences crime culture in American society, as well as in the formation of stereotypes, Gillam and Iyengar (2000) investigate the impact of crime scripts on viewers attitude towards crime from local and national news reports. The experiment used a large sample of news stories from Los Angeles and found that over 80% were about crime and 17% of the crime stories were about murder. In reality, murder constitutes less than 1% of all crimes in Los Angeles. This is important in a larger context, as it was observed that individuals tend to get their information about crime from media, as opposed to personal experience, and thus their perception of actual crime may be altered because of its overrepresentation in the media (Gillam and Iyengar, 2000).

The second part of the study was an experiment utilizing a manipulated criminal news report which isolated the perpetrator's race, followed by scales that tested for racial and crime related attitudes. There were four groups. In the first,



participants were shown a photo of a white suspect, in the second a photo of a black suspect, edited to hold all features similar excluding race. The third showed no suspect, and the fourth, the control group, showed no criminal section at all. The results showed that participants were more likely to recall a black suspect when they had been presented with one than when they were shown a White suspect.

Furthermore, 60% of the individuals who were shown no suspect falsely recalled having seen a perpetrator, and even more shocking, 70% of them identified that nonexistent perpetrator as African-American. Gallam and Iyengar conclude that taken together, these data reveal that crime scripts generate strong expectations about crime and viewers general social perception, whether valid or invalid, and allow individual users to fill in gaps in reporting with potentially biased beliefs that stem from formulated heuristics and stereotype activation.

Additionally, the researchers concluded that while local television stations cultivate misperceptions of violent crime and prejudice towards the imposed perpetrators, the commercial realities of our time dictate that this is unlikely to stop because of the fierce economic pressures companies face today. Gillam and Iyengar (2000) observe confirmation bias in the media, which, in keeping with extensive literature in social and cognitive psychology, shows that people are more likely to attend to information that confirms their prior beliefs. Therefore, if people are shown footage of crimes committed by black offenders, they may be more likely to pick up on or assume the race of future offenders as being black because their brain formulates a heuristic, or mental shortcut, connecting black individuals to crime more readily than

it does for other races (2000). This relates to the War on Drugs, as black neighborhoods were often targeted and individuals were advertised as criminals to the general public in association with dangerous crimes and drugs, often in a condensed nature, causing associations to be strengthened and normalized over time.

An instance where someone's prior beliefs and experiences may implicitly or explicitly influence their decision making is a police officer faced with the decision of whether or not to shoot a potentially dangerous individual. A controversial topic in the media today, Correll, Hudson, Guillermo, and Ma (2014) studied *A Police Officer's Dilemma* utilizing a simple video game. The game tested the effect of ethnicity on shoot/do not shoot decisions utilizing African-American and White targets holding guns or non-threatening objects and appearing in complex backgrounds. Before time limits or incentives were changed, White participants made the correct decision to shoot an armed target more quickly if the target was African-American but decided correctly to "not shoot" an unarmed target faster if they were White. This pattern is fundamentally consistent with research suggesting that individuals may use ethnicity as a factor to interpret ambiguously threatening targets (Correll et al, 2014). It would seem that when ambiguous behavior is performed by an African-American, it seems more "hostile, more mean and more threatening than when it is performed by a white person" (Duncan, 1976; Sagar & Schofield, 1980).

Participants were also found to recognize a weapon more quickly and more accurately after seeing an African-American face, according to research by Payne, (2001) which studies process dissociation procedure and the demonstration of racial

primes' influence on automatic, but not controlled, processing. After studying works similar to the implicit bias tests above, Payne sought to understand the decision of police officers to shoot in an ambiguous situation and the cognitive factors that led the officers to sincerely believe they were in danger. The study was an expansion of previous research focusing on the activation of racial stereotypes in situations where perceptual judgment is crucial. The first of two experiments focused specifically on the identification of weapons and used either the digital image of a white or black person to prime the participant before they sorted between threatening and non-threatening objects. Results showed that participants were faster to identify guns when they were primed by black faces. Because the experiment did not give participants an opportunity to connect or relate the racial primes to the sorting task intuitively, the effect of the prime was found to be automatic, as opposed to controlled.

Both of the above studies make an important contribution to the exploration of implicit bias as it was established in the above research that two requirements must be met to bias participants' error rates in the identification of hazardous weapons. There must first be *stereotype cues* present and secondly, the "opportunity to consider and control one's response must be limited" (Payne, 2001). Not surprisingly, these are two requirements that are often present in the work of police today when facing ambiguous stimuli.

If the presence of implicit or subconscious bias has been identified under certain conditions, the next question is how the legal system can and should act under the knowledge of that. The answer is not that simple. There are endless Supreme

Court Cases that have dealt with nuances of this topic over the years and have created various impactful precedences such as in the *City of Los Angeles v. Lyons* (1983), *Whren v. United States* (1996), or *Ohio v. Robinette* (1996). In the former, a 24-year-old black man Lyons was pulled over by the Los Angeles Police Department for driving with a burned out tail light. The officers ordered him out of the car and forced him into a choke hold. He ended up passing out and suffered permanent damage to his larynx from the hold. He sued the city seeking a permanent injunction against the use of chokeholds by law enforcement. The court ruled 5-4 to dismiss the case under the lack of sufficient legal grounding. They argued that Lyons would have to prove that the city specifically ordered or approved the police's use of the chokehold, which he could not. This set precedent for a procedural hurdle in the Court that made it difficult to impossible moving forward to use the courts to reform police department practices, including potentially racially discriminatory ones. A dissenting judge questioned that if Lyons did not have the standing to get an injunction, "who would?" (Johnson, 1983). This case is another example of the way that discriminatory behavior can be structurally dismissed or overlooked by the Court.

In a straightforward example of discriminatory rulings, *Whren v. United States* held that police officers were free to use minor traffic violations as an excuse to stop motorists for drug investigations, even when there was no evidence that the motorist had engaged in a drug crime. Violations included anything from failing to use a turn signal to stopping on a pedestrian walkway. In *Whren*, the Court concluded that such police conduct did not violate the Fourth Amendment's ban on "unreasonable

searches and seizures.” This, of course, exposed minorities to a high risk of discriminatory practices from police officers. Furthermore, the court barred victims of racial discrimination from claiming racial bias in their conclusion of its apparent unrelatedness to whether police behavior was “reasonable” or not under the Amendment.

Months later, in *Ohio v. Robinette*, the court took a case similar to the above in which a motorist, Robinette, was pulled over for alleged speeding but was let off with a warning and no ticket. Following the warning, the officer turned on his dash camera and recorded himself asking Robinette if he consented to a vehicle search, in which Robinette did. The officer searched the car and found a small amount of marijuana and one methamphetamine pill. Upon review of the appeal, the Ohio Supreme Court admitted to being made uncomfortable by the blatant fishing expedition the officer had used and the techniques’ increased use in the War on Drugs. In order to provide motorists with minimal protection the Court sought to adopt a bright-line rule, wherein officers would be required to tell motorists that they were free to leave before asking for consent to search their vehicle, as many motorists were simply unaware of their right to refuse consent of the act. In a shocking turn of events, the United States Supreme Court struck down the basic requirement as being “unrealistic and inefficient” therefore asserting to lower courts that the Fourth Amendment had no meaningful role over the police in the War on Drugs.

These cases, although only few of many, showcase individual examples of abuses in power or a lack of legal oversight in the criminal justice system. These

windows for individual judgement calls or discretion can be, and the data show often are, used discriminatorily and these cases highlight the structural inhibitors to the possibility or opportunity of change in the system altogether.

Stemming from the problem identified in the above past research, this study will investigate the existence and severity of implicit racial bias in the criminal justice system. This research has the potential to benefit society as a whole as it addresses a need to reinvestigate and rework different parts of the justice system, in particular prosecution, that could improve the quality of life for many individuals nationwide as well as the United States economy because of prison expenses and loss to labor force productivity. It is predicted that when individuals, acting as jurors, are presented with a defendant's race they are likely to prosecute the individual more severely and more confidently, in the United States, if the defendant is black than if they are presented as white or with no race.

## **Method**

### **Participants**

The participants were be a diverse sample of 721 individuals off of the Amazon's data collection site Mechanical Turk. Individuals signed up through the site and were remunerated \$0.50 for full completion of the survey. They opened up the study on the data collection site Qualtrics and were randomly assigned to 6 different groups, 4 treatment groups, and 2 control groups. These groups isolated and combined two variable, severity of evidence and the suspect's race (coded in

their name's through the use of Gaddis' name bank (2017), a name and race association study that identified and measured Americans' frequency of inference of race for distinctive names between ethnicities. His name bank has been used in many empirical research studies such as by Bertrand and Mullainathan (2014) who studied racial name coding and discrimination in employment resumes). All participants were required to sign a consent form and were thoroughly debriefed after participation.

## **Materials**

**The Modern Racism Scale.** The Modern Racism Scale measures a certain dimension of the cognitive component of racial attitudes (McConahay, Hardee, & Batts, 1981). It asks survey respondents to agree or disagree with a set of beliefs that people might have about black individuals and it distinguishes these types of beliefs from what is called old-fashioned racism, which is more outward, apparent, and blatant. Participants will be asked to rate their level of agreement (1=Strongly disagree to 7= Strongly agree) on statements such as "Discrimination against blacks is no longer a problem in the United States," or "It is easy to understand the anger of black people in America." where higher scores equate to higher levels of modern racism.

**Motivation to Control Prejudiced Reactions Scale.** Motivation to Control Prejudiced Reactions Scale measures an individual's internal and external

motivation to respond without prejudiced reactions to a number of statements (Dunton & Fazio, 1997). Participants will be asked to rate their level of agreement (1=Strongly disagree to 7= Strongly agree) on statements such as “I try to avoid any negative thoughts about Black people in order to avoid negative reactions from others,” or “Because of my personal values, I believe that using stereotypes about black people is wrong” where higher scores indicate a higher motivation to control prejudiced reactions.

**Race and Crime Attitudes Scale.** Individuals racial crime attitudes were measured on a scale designed by Gilliam and Iyengar (2000). The scale was made up of 6 parts in which individuals were asked to “strongly agree”, “agree”, or “disagree” to three potential reasons as to why there is so much crime in this country (For example: “*people are just born criminals*”) and for their support of a punitive criminal justice policy (For example: “*Three strikes and you are out legislation*”). Subjects agreeing in any way were given a one and those who are not are given a zero.

**Demographic Questionnaire** Participants were asked questions regarding their gender, age, race, ethnicity, income, education, political affiliation, vulnerability and proximity to crime, and their fear of violent crime.



**Criminal Drug Trial Script.** Six vignettes of a criminal drug conviction trial were crafted and checked by a member of the Judicial Branch of New Hampshire. The scripted cases were straightforward scenarios of a drug bust, a wiretapped conversation with the suspect recorded on a wiretap expressing intent to sell 100 grams or more of heroin. The language used was colloquial so that it could be easily understood by all participants. Three of the scripts showed strong evidence against the defendant and the other showed weak evidence against them. Two scripts coded with the name Connor Anderson (with 95% frequency for association as a white name), two were coded with the name DaQuan Washington (91% frequency for association as a black name), and two showed no name at all. These names were selected because they had the highest recognized frequency in combination for each race with first and last name. As mentioned before, names were selected from Gaddis' name bank (2014) a study which tested Americans' associations with inference of race for different distinctive names.

### **Procedure**

Using Mechanical Turk, a large, diverse sample of 721 individuals was obtained. These participants received remuneration for their participation in this study. Participants then opened a link that sent them to the Qualtrics study. There were six groups with three separate versions of the criminal script scenario sent to participants to account for the three conditions, those of which were distributed through random assignment so that each group had an even number of participants.

Upon opening the link, participants were asked to sign an Informed Consent form (see Appendix B). Once the individual agreed to participate, they were randomly assigned by Qualtrics to see the criminal trial script for a case concerning possession and intent to distribute heroin. All participants read the case file then were given Section 960 of United States Federal Law which detailed out the illegality of possession or intent to distribute 100 grams or less of heroin, which occurred in the script. They were then asked to decide whether they believed the defendant to be innocent or guilty, and asked to rate their confidence on this conviction on a 1-10 scale. Following this they were given a potential third option, asking whether they would have dropped the case on lack of conclusive evidence (which is evidence that cannot be refuted by any other evidence) and asked to rate their confidence level on the same 1-10 confidence scale in either keeping or dropping the case entirely.

Next, participants were given the Modern Racism Scale (Appendix G), the Motivation to Control Racial Prejudice Scale (Appendix D), and Racial Crime Attitudes Scale (Appendix F). Participants were then put through an attention check and asked to “select strongly agree if you are human”. Around 100 individuals failed the attention check so their data was not included in the final evaluation. To conclude the study participants filled out a brief demographic questionnaire (Appendix A) to account for any confounding variables, and sign a debriefing statement before exiting (Appendix E).

## **Ethical Issues**

There was slight deception used in this study. Participants were not aware that differing racial groups were being used until the study was completed. The consent form and script lead them to believe that the study only pertains to prosecution. The study also dealt with controversy in race, as well as drug convictions which can be sensitive topics. All participants were thoroughly debriefed and made aware prior to testing that they could exit the experiment at any point.

## **Results**

To test the hypothesis that, based on related research, participants put into the black defendant category would determine guilty more often than in the white or raceless category, with higher confidence in the conviction, three linear regressions were conducted on the statistical analysis program Stata. The 6 groups were broken down into an additional 6 groups, 12 in total, to account for whether or not the participant was American or an international, the split was 60% Americans, 40% other. This variable was added under the assumption that criminal attitudes in the United States differ from those abroad, and also because the names coded for race were taken from a study based off of an American population. All groups were put into the first regression with no additional control variables and 11 of them were compared to the base condition of non-U.S.A., no race, and good evidence to test their effect on

“vc,” a variable combining verdict with confidence level (See Table 1). Guilty verdicts were coded a 0 and innocent verdicts were coded at 1. For the category good evidence, no race, and U.S.A. results were significant and negative with a coefficient of, -3.34 (1.58)  $p = 0.05$ , meaning that participants in the United States were more likely to be punitive than their international counterparts.

For good evidence, black name, and non-U.S.A. results were insignificant 1.81 (1.61), showing no influence on racial coding for international participants. In support of the hypothesis, for good evidence, black name, and U.S.A. results were significant with a negative coefficient, -4.95 (1.55)  $p = 0.01$  meaning that participants were more likely to select guilty at a higher confidence for the black coded name than non coded. Additionally, for the good evidence, white name, U.S.A. group results were negative and significant with a coefficient of -4.21 (1.53),  $p = 0.01$ , supporting the hypothesis because of the difference in coefficient size between this group and the prior one where the only difference is racial coding. United States participants were more likely to be punitive and even more likely to select guilty if the individual was in the black coded category. For bad evidence, black name, and non-U.S.A. results were significant 2.68 (1.60)  $p = 0.10$  and in the bad evidence, black name, U.S.A. category results were insignificant .08 (1.58). In the good evidence, white name, non-U.S.A group results were also insignificant .436 (1.71), meaning outside of the United States, racial coding with a white name made little difference when there was good evidence against the suspect. For bad evidence, white name, non-U.S.A. results were significant and positive with a coefficient of 2.81 (1.61)  $p = 0.10$ . Bad evidence,

white name, non-U.S.A. was insignificant with a coefficient of -1.10 (1.56), and bad evidence, no race, non-U.S.A. was also insignificant with a coefficient of 2.43 (1.66). Lastly, bad evidence, no race, and U.S.A. was insignificant -2.1 (1.51) showing no significant differences between results for bad evidence.

On the second regression, significant results held with little variation, but the added control of the racial bias scale, showed no significant results .028 (.045). The third regression added control and demographic variables such as education, income, race, vulnerability to crime, commonality of crime in your area, and political affiliation. Results were insignificant for all variables except education, so they were dropped from the model. Education was significant with a coefficient of .599 (.277)  $p = 0.05$ . A regression was used to test the variable 'keep/drop' and 'keep/drop confidence' which measured how likely it was that an individual dropped the case, and their confidence in that decision. Results were insignificant.

Table 1:

vc	regression 1	regression 2	regression 3
Good edivence No Race USA survee	-3.35** (1.58)	-3.29** (1.58)	-3.05** (1.57)
Good edivence Black name non-USA survee	1.81 (1.61)	1.83 (1.61)	1.85 (1.62)
Good evidence Black name USA survee	-4.95*** (1.55)	-4.95*** (1.55)	-4.65*** (1.55)
Bad evidence Black name non-USA survee	2.68* (1.60)	2.72* (1.6)	2.67* (1.61)
Bad Evidence Black name USA survee	.08 (1.58)	.108 (1.58)	.311 (1.58)
Good evidence White name non-USA survee	.436 (1.71)	.477 (1.72)	.477 (1.71)
Good evidence White name USA survee	-4.21*** (1.53)	-4.16*** (1.54)	-3.99*** (1.53)
Bad evidence White name non-USA survee	2.81* (1.61)	2.81* (1.62)	2.93* (1.61)
Bad evidence White name USA survee	-1.10 (1.56)	-1.06 (1.57)	-1.05 (1.56)
Bad evidence No race non-USA survee	2.43 (1.66)	2.45 (1.66)	2.41 (1.66)
Bad evidence No race USA survee	-2.1 (1.51)	-2.06 (1.51)	-1.7 (1.52)
Racial Bias	--	.028 (.045)	.022 (.044)
education	--	--	.599** (.277)

### Discussion

When combined with verdict confidence, the hypothesis stating that participants would be more likely to chose guilty for a name coded black than for a

name coded white or no race was supported when the participants were within the United States and had good evidence against the suspect in the trial. The significant result for good evidence and no race, within the United States, showed the higher likelihood of American participants to choose guilty, likely due to the more punitive nature of the United States crime culture and Judicial system. With good evidence and a black name out of the United States, however, the lack of significant results likely points to the power and specificity of Gaddis' Name Bank. Because Gaddis' study took place within the United States and utilized names taken from base-rate data in New York state, name-race inferences for distinctive names are likely only to only to carry their association through individuals socialized within American culture. As most of the non-American participants in this study came from Asia, it is plausible to assume that they would not associate the chosen distinctive names with certain races and therefore are less likely to change their verdicts based on potential implicit biases.

A distinctive result from the study showed a higher likelihood for United States participants to chose guilty, with good evidence, for names coded black or white, as compared to coded for no race. However, the difference between those two results showed that when the name was coded for black, the likelihood of conviction, and particularly the confidence behind that decision, increased significantly. As name-race inference was more fitted to the population at hand, this result was consistent with related recent research, such as the implicit bias tests by Correll, Hudson, Guillermo, and Ma (2014) or crime news study by Gilliam and Iyengar

(2000), indicating that implicit racial bias is likely to exist within American culture, and in particular the American Judicial System. Counterintuitive to this result, however, is the second regression where the test for the racial bias and motivation to control prejudice reactions scale was insignificant on results, indicating that higher ratings of racial bias against black individuals was not correlated with a higher likelihood of choosing guilty or being confident in the guilty conviction. This however, is also supportive of analyses in Alexander's *The New Jim Crow*, as mentioned before, in that people tend to be inconsistent when rating themselves for bias explicitly, compared to the actual bias they display in real life. This finding contributes to the greater issue and need for oversight in different levels of the Courts, as it has been established that racial bias cannot stand in the justice system, so much as no-one outwardly states it. Alexander, as well as the findings of this study, contribute to a general call for oversight in judicial decision making to account for possible, even if often unintentional, unjust racial bias.

Additionally, comparing results between names and nationalities with bad evidence, showed very little significance at all. Only when comparing United States participants to internationals were there any significant results but this, again, likely points to the difference in punitivity between cultures, and had no significant difference between races. This can be interpreted as a positive result in the sense that when the evidence was not strong, in this case a wiretap not functioning correctly, participants were no more likely to assert guilt on either race.



Lastly, the only significant control was the human capital variable for education. The result was positive and showed that the higher a participant had been educated, the more likely they were to be forgiving and lean towards innocent than individuals with lower levels of education. This could speculatively be due to several factors, as achieving a higher education may give someone a better understanding of the legal system, of crime, in reading comprehension, or deeper analyses of society and culture. In future research, for this variable as well as many others, it would be valuable to explore the potential reasons as to why correlations exist, like that with education, to uncover potential remedies to social issues or at the least gain a deeper understanding of the psychology of implicit bias. As for other limitations, it is arguable that Gaddis' name bank may skew results, however, for this type of analysis it was eye-opening in uncovering the unique qualities of American-specific culture and influences. Future research, as well, could utilize visuals for the defendants and test the difference between the visual and name-inference on stereotype activation, as a visual representation may be more representative to a jury trial, as the study was attempting to mock.

It was also limiting in that this study did not control for participants knowledge of drug cases or their familiarity with the legal system. It could be beneficial for future research to specifically target prosecutors and judges with a similar study, as they have even greater power over the outcome of these types of cases. Court judges also have greater and much more specific knowledge of the legal system and drug law, as well as familiarity and experience with actual cases, so an

identification of bias in these contexts could have even greater implications for study and application moving forward.

Overall, while the study is limited to the population and scenario tested, the results still show strong evidence in support to current literature detailing that implicit racial bias exists within American culture and that it can have serious economic and social consequences, especially within the United States prison system, as a result. These significant implications point to a need for judicial oversight in the criminal justice process to safeguard minorities for the effects of implicit bias and best ensure the United States can practice what it preaches and serve justice equally for all.

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**Appendix A**

**Demographic Questionnaire**

1. With what gender do you identify as?

Female  Male  Other : \_\_\_\_\_

2. Which category below includes your age?

17 or younger,  18-20,  21-29,  30-39,  40-49,  50-59,  60 or older

3. Are you married, widowed, divorced, separated, or never married?

married,  widowed,  divorced,  seperated,  never married  prefer not to answer

4. What is the highest level of school you have completed or the highest degree you have received?

less than high school degree,  high school degree or equivalent (GED),  some college but no degree,  associate degree,  bachelor degree,  graduate degree  prefer not to answer

5. Are you Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Cuban-American, or some other Spanish, Hispanic or Latino group?

I am not Spanish, Hispanic, or Latino,  Mexican,  Mexican-American,  Chicano,

Puerto Rican,  Cuban,  Cuban-American,  Some other Spanish, Hispanic, or

Latino group,  From multiple Spanish, Hispanic, or Latino groups (please specify).

\_\_\_\_\_  prefer not to answer

6. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, or some other race?

White,  Black or African-American,  American Indian or Alaskan Native,  Asian,  Native Hawaiian or other Pacific Islander,  From multiple races (please specify). \_\_\_\_\_

prefer not to answer

7. What is your family's yearly income?

\$0 - \$9,999,  \$10,000 - \$19,999,  \$20,000 - \$29,999,  \$30,000 - \$39,999,  \$40,000 - \$49,999,  \$50,000 - \$59,999,  \$60,000 - \$69,999,  \$70,000 - \$79,999,  \$80,000 - \$89,999,  \$90,000 - \$99,999,  100,000 or more.  prefer not to answer

8. How vulnerable do you feel to being the victim of a crime?

not vulnerable at all,  slightly vulnerable,  very vulnerable,  extremely vulnerable,  neither vulnerable or not vulnerable  prefer not to answer

9. How common is crime in the area that you live?

not common at all,  fairly common,  not particularly common nor uncommon,  very common,  extremely common  prefer not to answer

10. On average, how afraid are you of being the victim of a violent crime?

not afraid at all,  slightly afraid,  not particularly afraid nor unafraid,   
very afraid,  extremely afraid  prefer not to answer

11. What would you consider to be your political affiliation?

extremely conservative  conservative  slightly conservative  neutral  
 slightly  
liberal  liberal  extremely liberal  other (please specify).

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prefer not to answer

**Appendix B**

**Informed Consent**

Study Title: Decision Making in the Criminal Justice System

Principal Investigator: Brianna Duseau  
270 Mohegan Ave. New London, CT  
mstelzner@conncoll.edu  
bduseau@conncoll.edu

- You are being invited to participate in Brie Duseau’s research about the criminal justice system. This is a honor’s thesis project for the Economics Department at Connecticut College.
- This research will involve reading a script and completing a series of questionnaires.
- While the direct benefits of this research to society are not known, you may learn more about the criminal justice system
- This research will take about 30 minutes.
- There are no known risks or discomforts related to participating in this research.
- Your participation is voluntary, and you may decline to answer any questions as you see fit.



- You may withdraw from the study without penalty at any time.
- Information you provide will be identified with a code number and NOT your name.
- You may contact the researcher who will answer any questions that you may have about the purposes and procedures of this study. Brie Duseau can be contacted at [bduseau@conncoll.edu](mailto:bduseau@conncoll.edu). The faculty advisor, Mark Stelzner ([mstelzner@conncoll.edu](mailto:mstelzner@conncoll.edu)) is supervising the study.
- This study is not meant to gather information about specific individuals and your responses will be combined with other participants' data for the purpose of statistical analyses.
- You are being asked to consent to the publication of the study results as long as the identity of all participants is protected.
- This research has been approved by Connecticut College's Human Subjects Institutional Review Board (IRB). Concerns about any aspect of this study may be addressed to Audrey Zakriski at [alzack@conncoll.edu](mailto:alzack@conncoll.edu).

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A copy of this informed consent will be given to you.

I am at least 18 years of age, have read these explanations and assurances, and voluntarily consent to participate in this research on decision making in the court.

_____	_____	_____
Name of participant (please print)	Signature of participant	Date
_____	_____	_____
Name of person obtaining consent (please print)	Signature	Date

## Appendix C

### Script

**Information all participants will get after reading the script:**

**The government seeks a penalty of a five year mandatory minimum imprisonment if the jury can prove that beyond a reasonable doubt the defendant can be identified as having *distributed or had possession with intent to distribute 100 grams* or less of Heroin under Section 960 of United States Federal Law. The government does not seek to add any further sentencing as the alleged dealer is a first time offender.**

#### Case 1: Strong Evidence and White Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer identifies himself as **Connor Anderson** and sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation.

During trial, the CI identifies the defendant, **Connor Anderson**, as the heroin dealer and the **prosecutor shows the voice on the wiretap matches that of the defendant's.**

#### Case 2: Weak Evidence and White Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer identifies himself as **Connor Anderson** and sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation. **Upon review of the wiretap, the officers find that the audio recording malfunctioned so it will not be able to be used as sufficient evidence in court.**

During trial, the CI identifies the defendant, **Connor Anderson**, as the heroin dealer. **No further collaborating evidence is provided.**

#### Case 3: Strong Evidence and Black Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer identifies himself as **DaQuan Washington** and sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation.

During trial, the CI identifies the defendant, **DaQuan Washington**, as the heroin dealer and the **prosecutor shows the voice on the wiretap matches that of the defendant's.**

#### Case 4: Weak Evidence and Black Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer identifies himself as **DaQuan Washington** and sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation. **Upon review of the wiretap, the**

**officers find that the audio recording malfunctioned so it will not be able to be used as sufficient evidence in court.**

During trial, the CI identifies the defendant, **DaQuan Washington**, as the heroin dealer. **No further collaborating evidence is provided.**

Case 5: Weak Evidence and Unspecified Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation. **Upon review of the wiretap, the officers find that the audio recording malfunctioned so it will not be able to be used as sufficient evidence in court.**

During trial, the CI identifies the defendant as the heroin dealer. **No further collaborating evidence is provided.**

Case 6: Strong Evidence and Unspecified Defendant

Police are tipped as to the identity of a potential moderate-scale drug dealer. In their attempt to catch the male suspect they utilize an undisclosed Confidential Informant (CI). While the officers wait several streets away, the CI, who is using a wiretap to record the conversation with the suspect, meets with the dealer. The dealer sells the CI 0.5 grams of heroin, or about 5 doses. The male suspect mentions he has around 100 grams of heroin he is aiming to sell. The CI returns to the officers with the 0.5 grams of heroin and the wiretapped conversation.

During trial, the CI identifies the defendant as the heroin dealer and the **prosecutor shows the voice on the wiretap matches that of the defendant's.**

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. .  
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Acting independently as a jury member please indicate whether you personally believe the defendant to be **guilty** or **innocent**, or whether you would prefer to **drop the case** on a lack of conclusive evidence (*conclusive evidence* is evidence that cannot be contradicted by any other evidence and asserts the truth of something).

Guilty

Innocent

Or would you like to:

Drop the case

Appendix D

Motivation to Control Prejudiced Reactions Scale

Internal Motivation to Respond Without Prejudice Scale (IMS) and External Motivation to Respond Without Prejudice Scale (EMS) Items

Instructions: The following questions concern various reasons or motivations people might have for trying to respond in nonprejudiced ways toward Black people. Some of the reasons reflect internal–personal motivations whereas others reflect more external–social motivations. Of course, people may be motivated for both internal and external reasons; we want to emphasize that neither type of motivation is by definition better than the other. In addition, we want to be clear that we are not evaluating you or your individual responses. All your responses will be completely confidential. We are simply trying to get an idea of the types of motivations that students in general have for responding in nonprejudiced ways. If we are to learn anything useful, it is important that you respond to each of the questions openly and honestly. Please give your response according to the scale below.

Scale item	Factor loadings	
	Factor 1: IMS	Factor 2: EMS
External motivation items		
Because of today's PC (politically correct) standards I try to appear nonprejudiced toward Black people.	.05	.73
I try to hide any negative thoughts about Black people in order to avoid negative reactions from others.	-.003	.78
If I acted prejudiced toward Black people, I would be concerned that others would be angry with me.	.22	.67
I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from others.	-.16	.83
I try to act nonprejudiced toward Black people because of pressure from others.	-.22	.69
Internal motivation items		
I attempt to act in nonprejudiced ways toward Black people because it is personally important to me.	.76	.15
According to my personal values, using stereotypes about Black people is OK. (R)	.71	-.16
I am personally motivated by my beliefs to be nonprejudiced toward Black people.	.77	-.08
Because of my personal values, I believe that using stereotypes about Black people is wrong.	.77	-.05
Being nonprejudiced toward Black people is important to my self-concept.	.74	-.08

Note. (R) indicates reverse coded item. Participants rated 10 items on a scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). When participants complete the scales, the IMS and EMS items are intermixed. The factor loadings are from an exploratory factor analysis.

## Appendix E

### Debriefing Statement

First of all, thank you for participating in this research dealing with decision making in the criminal justice system. We were also interested in implicit racial bias in the judicial system, and in particular, in prosecution. In this research, we are comparing the length and severity of prison sentences for individuals accused of a drug-related crime. Participants were divided into three groups where the individual was either described as Black, White, or not having been assigned a race. This topic was investigated in depth because implicit bias has been at the forefront of much concern in the greater criminal justice system and further understanding of its apparentness is valuable for change moving forward.

If you have any questions or concerns about the manner in which this study was conducted, please contact the IRB Chairperson Audrey Zakriski at [alzak@conncoll.edu](mailto:alzak@conncoll.edu) or me, Brie Duseau at [bduseau@conncoll.edu](mailto:bduseau@conncoll.edu).

If you are interested in this topic and want to read the literature in this area, you might enjoy the following articles:

Correll, Hudson, Guillermo, Ma *The Police Officer's Dilemma: A Decade of Research on Racial*

*Bias in the Decision to Shoot*, University of Colorado, Boulder California State University, Northridge.

Fellner, J. (2009, June 19). *Race, Drugs, and Law Enforcement in the United States*.

Retrieved October

18, 2018, from Stanford Law and Policy Review: Human Rights Watch website:

[https://www.hrw.org/news/2009/06/19/  
race-drugs-and-law-enforcement-united-states.](https://www.hrw.org/news/2009/06/19/race-drugs-and-law-enforcement-united-states)

You may also contact me, Brianna Duseau at [bduseau@conncoll.edu](mailto:bduseau@conncoll.edu) for additional resources.

## Appendix F

### Race and Crime Related Attitudes:

Here is a list of potential reasons that, according to some people, help explain why there is so much crime in this country. For each, tell us if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the proposed remedy:

- *"failure of some groups in society to instill proper morals and values in their children."*
- *"break- down of the family structure."*
- *"people are just born criminals."*

Subjects who "strongly agree" or "agree" with each of the reasons will be assigned a score of one; all other responses will be given the value of zero. The index is created by summing the responses and dividing by three.

The support for punitive criminal justice policy index also consists of three items. Subjects will be provided with a list of potential remedies for crime and asked to agree or disagree



with each. An index has been constructed reflecting agreement with three potential remedies:

- "Enforcement of the death penalty for people convicted of murder."
- "Three strikes and you're out legislation."
- "Putting more police on the streets."

Subjects who "strongly agree" or "agree" with each of the remedies will be coded as one; all other responses will be given the value of zero, then the summed responses are divided by three.

## Appendix G

### Modern Racism Scale

*Please rate the following statements in how much you agree, 1 = Strongly Disagree / 7 = Strongly Agree.*

1. Discrimination against blacks is no longer a problem in the United States.
2. It is easy to understand the anger of black people in America.
3. Blacks have more influence upon school desegregation plans than they ought to have.
4. Blacks are getting too demanding in their push for equal rights.
5. Blacks should not push themselves where they are not wanted.
6. Over the past few years, blacks have gotten more economically than they Deserve.
7. Over the past few years, the government and news media have shown more respect to blacks than they deserve.



