Implicit Bias and Juvenile Justice:
A Review of the Literature

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EXECUTIVE SUMMARY

It has long been established that there are racial disparities in the juvenile justice system. Indeed the U.S. Congress created the Disproportionate Minority Contact (DMC) mandate requiring states to address racial disproportionality in the juvenile justice system. However, scholars have not come to a consensus about the causes of these racial disparities within the juvenile justice system. Some scholars argue that disparities in the system are caused by differences in crime rates by race. Other scholars cite overt racism, institutional racism, and bias within other systems as causal factors. Increasingly, leaders in the field are looking at the “implicit biases” or “unconscious attitudes” of decision makers in the juvenile justice system as a possible cause for these disparities.

This paper reviews the literature investigating implicit bias within the juvenile justice system, focusing on five domains of decision-makers: judges, law enforcement officers, indigent juvenile defenders, prosecutors, and probation officers. Research addressed in this review suggests that unconscious, biased attitudes are at play among police officers, probation officers, and judges within the juvenile justice system (Graham and Lowery 2004, Rachlinski et al. 2009, Correll et al. 2002). Studies also suggest that age and race interact with implicit biases in a way that may amplify consequences for youth in the juvenile justice system (Rattan et al. 2012). Scholarly work regarding implicit biases or among indigent juvenile defenders and prosecutors is sparse. Finally, this paper reviews the literature relevant to “de-biasing” techniques designed to mitigate implicit bias within the juvenile justice system; and synthesizes ongoing debates about the effectiveness of such techniques.
1) RACIAL DISPARITIES IN JUVENILE JUSTICE?

The disproportionate representation of youth of color in the juvenile justice system was recognized as a national concern in 1988 when the U.S. Congress passed amendments to the Juvenile Justice and Delinquency Prevention Act of 1974, directing attention to “Disproportionate Minority Contact” (DMC). Congress required states to analyze the number of youth in confinement and determine if those proportions were larger than their proportions in the general populations. States that discovered disproportionality were then charged with finding ways to reduce disproportioned minority confinement. Later, Congress expanded the program to all phases of the juvenile justice process, and re-termed it Disproportionate Minority Contact (Leiber and Chamlin 2011, p. 461).

Decades after the implementation of the DMC mandate there is still notable disproportionality in the juvenile justice system at all phases, outlined in a report by the National Council on Crime and Delinquency.

“White youth were referred to juvenile court at a rate of 4,431 per 100,000 youth, compared to 9,633 for African American youth and 5,409 Native American youth...White youth made up 67% of juvenile referrals, they accounted for 60% of detentions. In contrast, African American youth made up 30% of referrals and 37% of detentions...Overall, delinquency cases were petitioned [formal processing] more often among cases involving African American youth (64%) and Asian and Pacific Islander youth (60%) than White youth (54%)...Overall, cases involving White youth represented a slightly smaller proportion of waived cases than of petitioned cases, and cases involving African American youth represented a slightly

*For the purpose of this document, the term “youth,” is used in lieu of, “minor,” or, “juvenile,” except for in commonly used phrases such as, “juvenile justice,” or when directly quoting an author who uses another term.
larger proportion of waived cases than petitioned cases.” (NCCD 2007, pp. 8, 11, 15, 16).

Disproportionality was more noticeable with drug offenses, meaning African American youth were more likely to be referred to court, formally processed, detained, and waived to adult court at higher rates than white youth for drug offenses. In 2011 Leiber and Chamlin also found that race was still a factor at intake and a small factor at judicial disposition (Leiber and Chamlin 2011, p. 484).
2) IMPLICIT BIAS A CAUSE OF RACIAL DISPARITIES IN JUVENILE JUSTICE?

Scholars disagree about the cause of racial disparities within the juvenile justice system, and about the possible role that implicit bias may play in such disparities. Although most researchers agree that there are pervasive and persistent racial disparities in the juvenile justice system, a number of theories have been put forth to explain the cause of these disparities, and scholars continue to pursue research that investigates these individual theories. Debate about the cause of racial disparities is also currently underway within the wider criminal justice community, with scholars noting the lack of evidence that implicit bias has a direct causal effect on racial disparities within criminal justice (Rachlinkski et al. 2009).

Some scholars propose that racial disparities within the juvenile justice system are at least partially caused by differing rates of criminal activity by race. In other words, such scholars suggest that higher rates of minority exposure to the juvenile justice system are a reflection of higher criminal activity in minority communities. For example, Christopher Michael Hill argues that, “[o]ne should not infer that racial bias exists in the juvenile justice system simply on the basis that minorities are overrepresented at most stages of juvenile case processing. Rather, one should examine how race is related to a variety of contextual factors that may place minorities at greater risk for involvement in delinquent behavior and the juvenile justice system” (Hill 2004, p. 26). Meanwhile, Carl Pope and Howard Snyder used the FBI’s National Incident-Based Reporting System to study the role of race in law
enforcement officer decisions to arrest youth for nonviolent crimes, arguing that, there is “no direct evidence that an offender’s race affects police decisions to take juveniles into custody in such incidents” (Pope and Snyder 2003, p. 1).” Finally, Alison S. Burke analyzed judicial decisions to waive youth to adult courts in Arizona state between 1994 and 2000, finding that age and number of referrals were determinants of judicial waivers to adult court, but that neither race nor gender were significant in predicting whether a youth will be waived to adult court (Burke 2008, p. 128). It is important to note that Burke’s study defines race as a dichotomous variable (“white,” versus “non-white”) (Burke 2008, p. 91), which may limit some of the ability to speak to bias towards a specific non-white racial group, and may account for the non-significance of gender and race variables.

While some scholars deny or downplay the role of bias as a cause of racial disparities in the juvenile justice system, a wider body of research supports the notion that some type of bias lies at the root of these disparities. In Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms, George Bridges and Sara Steen cite overt, or explicit, racism as one cause of racial disparities within the juvenile justice system. In a study of 233 narrative reports written by probation officers within three counties in a “western state,” between 1990 and 1991, Bridges and Steen found that “[t]he analysis of probation officers’ narratives reveal important differences in their attributions about black and white youths,” that, “probation officers describe black and white youths differently, referring to negative personality traits for black youths and more to negative environmental influences for whites… black youths were judged to have a higher risk of reoffending than were white youths.” (Bridges and Steen, 1998 pg. 561) However, Bridges and Steen note that
overt bias is only one of many possible explanations for these differences, and that the perceived environment of youth, families connections to the criminal justice system, or the perceived influence of their peers may play an important role as well. Meanwhile, Paul Ketchum points to both institutional racism and color-blind racism as possible causes of biased decision-making around youth in the juvenile justice system.

In recent years researchers have turned to investigating unconscious attitudes or biases as a potential cause of racial disparities within the juvenile justice system. A number of scholars have published articles citing unconscious attitudes or biases as a potential threat to racial equality in the juvenile justice system (Livingston; Moriearty; Rosenfeld et al.; Rattan et al.; Tatum and others). Robert Livingston notes that within criminal justice broadly, “discrimination may occur without awareness or intention, even when perceivers have complete control over their actions (Livingston 2001, p. ii),” while Rattan, Levine, Dweck and Eberhardt conducted a study which suggests that even subtle racial “priming” –or references- can influence the treatment and perception of youth within the juvenile justice system. In their paper Race and the Fragility of the Legal Distinction Between Juveniles and Adults, the scholars describe a study in which they used one word to “prime” individuals about the culpability of a youth offender in a case, finding what they argue is “the first direct empirical evidence that a racial priming manipulation can affect the degree to which juveniles (in general) are afforded the established protections associated with their age status in the context of a severe crime.” (Rattan et al. 2009, p. 4). It is important to note that this study did not directly sample from decision-makers in the juvenile justice system, but rather sampled from a group of individuals that was designed to represent adults in the U.S.; Rattan
et al. suggest that the influence of racial priming could be even more significant with judges and juries, who may have more exposure to racially charged language within the criminal justice system.

Some scholars cite media influences as a driver of unconscious attitudes or biases. For example, Becky Tatum argues that legal decision-makers may have racial or class biases that are formed because of media (Tatum, 2003 pg. 166.). Likewise, in his article *Framing Justice: Media, Bias and Legal Decisionmaking*, Perry L. Moriearty suggests that recent over representation of “superpredator” youth in the media might partially contribute to bias among juvenile justice decision-makers, and may intensify any unconscious attitudes or biases already held by such decision-makers. Jerry Kang, a law professor at UCLA, has focused on the role that media and communications play in the formation of implicit biases and unconscious attitudes that may play out in the courtroom.

Finally, in the past few years scholars have started to question whether implicit bias has a direct causal effect on the racial disparities within the juvenile justice system. Specifically, in 2004 Sandra Graham and Brian Lowery conducted studies that investigated the unconscious racial stereotypes of law enforcement officers and probation officers in the juvenile justice system. In these studies, participants were asked to read a story about a racially unidentified youth who was suspected of committing a crime, and to make judgments about the minor’s “greater culpability, expected recidivism, and deserved punishment” (Graham and Lowery 2004, p. 487). Before this exercise, some participants had been asked to participate in an activity that the researches had designed as a racial priming activity. Graham and Lowery found that racially primed law enforcement officers judged
hypothetical juvenile suspects as less immature (more adult), more culpable, and as having more “generalized negative traits.” Additionally, law enforcement officers who had been racially primed endorsed significantly harsher punishments for hypothetical juvenile suspects than those law enforcement officers who had not been racially primed. Graham and Lowery did not find significant differences in perceived violence and “bad character,” between the racial primed and unprimed law enforcement officers. It is important to note that this study recruited participants who volunteered their time (with a $50 stipend), and who were ethnically diverse (38% Latino, 27% African American, 26% Caucasian, and 9% Asian or biracial) (Graham and Lowery 2004, p. 488). The self-selected nature of this sample, and the ethnically diverse participant pool may make it difficult to generalize these findings beyond the laboratory environment.

Graham and Lowery conducted a similar study of probation officers in the juvenile justice system, finding that racially primed probation officers “judged the alleged offender to be less immature and more violent, and their global trait ratings were more negative. Those primed with the racial category also viewed the offender as more culpable, more likely to reoffend, and more deserving of punishment” (Graham and Lowery 2004, p. 496). Participating probation officers were drawn from an urban setting, and were similar to participating police officers in that they were asked to volunteer for the study and were ethnically diverse (51% African American, 25% Caucasian, 13% Asian or biracial and 11% Latino). In 2009, Jeffrey J. Rachlinski, Sheri Lynn Johnson, Andrew J. Wistrich and Chris Guthrie followed up on these studies by using the Graham and Lowery methodology and questions with a sample of judges. These scholars found evidence that implicit association
influence trial judge’s decisions, but only when they manipulated the characteristics of the target by unconscious means (Graham and Lowery 2004, p. 1225).

Many questions about the cause of racial disparities in the juvenile justice system have yet to be answered. More research must be done before researchers can directly cite implicit bias as a causal factor of these racial disparities. The work of Graham and Lowery, and Rachlinski, Johnson, Wistrich and Guthrie have indicated that implicit bias is present and involved in criminal justice and juvenile justice decision making, and they begin to address some of these questions. These scholars have noted that similar studies of juvenile defense attorneys and prosecutors (Graham and Lowery 2004, p. 502) may be helpful to the field moving forward.
3) IMPLICIT BIAS AND THE LAW

The notion that unconscious attitudes influence decision-making in the legal system and the courts is not new. The concept of “implicit bias” in the legal system and the courts was first suggested by Charles Lawrence with his groundbreaking Law Review Article, *The Id, the Ego, and Equal Protection: Reckoning with Unconscious Racism*. In the 1990’s the next step in this research occurred with the publication of Linda Hamilton Krieger’s Stanford Law Review Article, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*. Krieger laid the foundation for future scholarly work on implicit bias, describing biases which:

“...operate absent intent to favor or disfavor members of a particular social group. And, perhaps most significant for present purposes, they bias a decisionmaker’s judgment long before the “moment of decision,” as a decisionmaker attends to relevant data and interprets, encodes, stores, and retrieves it from memory. These biases “sneak up on” the decisionmaker, distorting bit by bit the data upon which his decision is eventually based... Stereotypes, when they function as implicit prototypes or schemas, operate beyond the reach of decisionmaker self-awareness (Krieger, 1995 pg. 1188).”

This literature review does not seek to replicate Jerry Kang’s 2009 *Implicit Bias: A Primer for the Courts* or The Kirwan Institute for the Study of Race and Ethnicity’s March 2013 literature review on implicit bias, *State of the Science: Implicit Bias Review 2013*. Both of these resources can serve as a useful survey of the current research relevant to the broader
field of implicit bias research. Scholarly works regarding implicit bias in juvenile justice that would be most useful for those who are interested in the issue are outlined in the following sections.
4) IMPLICIT BIAS AND JUVENILE JUSTICE DECISION-MAKING

The literature reviewed in this section is divided into five domains that are relevant to implicit bias among decision-makers in the juvenile justice system; sections include: Judges, Law Enforcement Officers, Indigent Juvenile Defenders, Prosecutors, and Probation Officers. Bias among decision-makers within one domain likely intersects with and influences biases within other domains. This issue is reflected in the overlapping nature of the present literature, and because of this, some studies appear in multiple sections of the literature review.

One recent piece of research is especially difficult to fit into one of the above domains, as it addresses the interaction of race and perceived age of youth in the legal system. Rattan, Levine, Dweck and Eberhardt conducted a study which suggests that even subtle racial “priming” –or references- can influence the treatment and perception of youth within the juvenile justice system. In their paper Race and the Fragility of the Legal Distinction Between Juveniles and Adults, the scholars describe a study in which they used one word to “prime” individuals about the culpability of a youth offender in a case, finding what they suggest is “the first direct empirical evidence that a racial priming manipulation can affect the degree to which juveniles (in general) are afforded the established protections associated with their age status in the context of a severe crime” (Rattan et al. 2012, p. 4). It is important to note that this study did not directly sample from decision-makers in the
juvenile justice system, but rather sampled from a group of individuals that was designed to represent adults in the U.S.; Rattan et al. suggest that the influence of racial priming could be even more significant with decision-makers who may have more exposure to racially charged language within the criminal justice system.

4.A) JUDGES

In recent years scholars have started to look specifically at what role implicit bias may play in juvenile court judge decision-making. However, the study of bias among juvenile court judges is not new: in 1982 Dale Dannefer and Russell K. Schutt published an analysis of legal and extralegal variables involved in the decisions made by juvenile court judges and police officers who made the youth arrests that brought the minor to court. Dannefer and Schutt confirmed their hypothesis that bias plays a larger role in law enforcement officer decision making about youth, compared to juvenile court judges. Dannefer and Schutt reasoned that, “[t]here are strong theoretical reasons for suspecting that bias (in any direction) is more likely to occur at the police stage of processing than at the juvenile court. First of all, a relatively large amount of discretion is endemic to police work, and action must often be taken without adequate knowledge of the relevant facts” (Dannefer and Schutt 1982, p. 1116) and that, “[i]n contrast to the speed with which the officer must reach a “verdict,” the nature of court decision making both permits and requires more careful deliberation before adjudicating and disposing of a case” (Dannefer and Schutt 1982, p. 1117). In their study of law enforcement officers and juvenile court judges in three counties, Dannefer and Schutt found that ultimately, “[i]n contrast to its impact on police dispositions,
race was only weakly associated with court disposition… in neither county were the associations significant …Race has a strong effect on police dispositions, but not on court dispositions” (Dannefer and Schutt 1982, p. 1123). Still, Dannefer and Schutt noted that law enforcement officer bias likely spills over into judicial decision-making, especially considering their finding that “differences in prior record,” had more effect on juvenile court dispositions than any other variable in the study (Dannefer and Schutt 1982, p. 1129). In other words, if law enforcement officer racial bias has a significant impact on the prior record that a youth has upon entering court, it may result in a biased court outcome for the youth, amplifying the effects of bias within and outside the courtroom.

Some researchers have begun to move toward a direct investigation of the role that implicit bias plays in the decisions made by juvenile court judges. This scholarship has sought to understand the role that implicit bias or unconscious attitudes may play in a judge’s decision to waive or transfer a youth to adult court. In 2003, Becky Tatum’s chapter in Racial Issues in Criminal Justice: The Case of African Americans, Trying Juveniles As Adults: A Case of Racial and Ethnic Bias? suggested that a judge’s decision to waive or transfer youth to adult court may be influenced by conscious or unconscious biases that are formed because of media or direct contact with that racial or ethnic group, or differences in class. Arnold Daktari Alexander’s 2004 doctoral dissertation focused on this issue, finding that “race is not only a salient factor in judges’ decision-making, but race is also a crucial factor in decisions to waive [to adult court]” (Alexander 2004, p. 118).

Two recent papers are leading the discussion about implicit bias among juvenile court judges. A 2009 article by Jeffrey J. Rachlinski, Sheri Lynn Johnson, Andrew J. Wistrich and
Chris Guthrie followed up on Graham and Lowery’s study by conducting an experiment designed to evaluate the impact of a racial priming exercise on the judgments and opinions held by judges (Rachlinski et al. 2009, 1205). Although this study was aimed at the broader criminal justice system, one component of the experiment employed Graham and Lowery’s methodology to measure implicit bias in the decisions and opinions of judges concerning youth. The authors concluded that there was evidence that implicit associations influence trial judge’s decisions, but only when the researchers manipulated the characteristics of the target by unconscious means (Graham and Lowery 2004, p. 1225). The authors also note that a “defensive reaction” may occur with judges who are concerned about the influence of their own bias, citing Dr. Jack Glaser’s suggestion that this defensive reaction (where the judge may rule more in favor of the minority group after they have been primed on race and bias) can be expected of people who are “highly motivated to control [their] prejudice.” (Graham and Lowery 2004, p. 1204).

Finally, the 2012 paper by Aneeta Rattan, Cynthia S. Levine, Carol S. Dweck and Jennifer L. Eberhardt, Race the Fragility of the Legal Distinction Between Juveniles and Adults suggests that judges may be more affected by racial priming that the general population, due to the nature of their work. This study used a sample of adults that reflected the general U.S. adult population, claiming to provide, “the first direct empirical evidence that a racial priming manipulation can affect the degree to which juveniles (in general) are afforded the established protections associated with their age status in the context of a severe crime.” (Rattan et al. 2012, p. 4). Although the effect sizes in this study were small, the participants had only been exposed to one racially primed term. The authors note that effects may be
more extreme with judges and juries than with the general public, because judges and juries may have been primed on race more frequently that were the adults in the study (Rattan et al. 2012, p. 4)

4.B) LAW ENFORCEMENT OFFICERS

There is an abundance of research about the role of implicit bias in law enforcement officers’ decision to shoot or not shoot targets, which affects the criminal justice system generally. More recently there has been some research specifically concerning the role of implicit bias in law enforcement officer decision-making processes concerning youth targets.

Researchers have studied bias and juvenile justice processing for decades and have conducted many studies that have contradictory conclusions regarding racial disparities and law enforcement (Dannefer and Schutt 1982, p. 1114). In 1982 Dannefer and Schutt set out to test whether the inconsistent findings are based on “(1) characteristics of the social environment [large or small communities] and (2) the type of agency studied [police or judicial process].” They hypothesized that “[t]he larger the proportion of minority group members in a population, the greater the likelihood of discrimination by official agencies against juvenile justice offenders who belong to minorities” and that “racial bias is more likely to occur in police than in juvenile court processing” (Dannefer and Schutt 1982, pp. 1116 and 1118). The conclusions supported their hypothesis: bias in official decision-making varies with social-structural factors (Dannefer and Schutt 1982, p. 1129). A study by Stewart et al. supports this finding. They conclude “neighborhood conditions are important for shaping levels of racially based discrimination experienced by black adolescents at the hands
of the police” (Stewart et al. 2009, p. 871). This notion supports their hypothesis of “Conflict Theory and Racial Threat Perspective” that in predominately African American neighborhoods, African American youth will experience more law enforcement officer discrimination, and under “Implicit Bias Theory” and “Defended Neighborhoods Theory” African American youth will experience more law enforcement officer discrimination in predominately white neighborhoods (Stewart et al. 2009, pp. 853 and 854). Dannefer and Schutt found evidence of bias in the likelihood of law enforcement officers sending youth to court, but less evidence of bias in court processing (Dannefer and Schutt 1982, p. 1129). They note that juvenile court processing is not independent of law enforcement officer decision-making.

Although Dannefer and Schutt found evidence of race bias among law enforcement officers, in 2003 Pope and Snyder, on behalf of the Office of Juvenile Justice and Delinquency Prevention, came to the opposite conclusion. Based on a review of the literature available about race bias and youth arrests, they noted that the results are still contradictory: some studies reveal that there is evidence of racial bias, and others find no evidence of racial bias (Pope and Snyder 2003, pp. 1 and 2). Pope and Snyder used data from the FBI's National Incident-Based Reporting System to “compare arrest probabilities of white and nonwhite juveniles for violent crimes” (Pope and Snyder 2003, p. 1). They compared offense characteristics such as: number of victims, number of offenders, location of incident, most serious weapon, victim age, victim race, and relationship between victim and offenders (Pope and Snyder 2003, p. 3). They found “no direct evidence that such bias
exists in police arrests of juveniles for serious (and some nonserious) violent crimes” (Pope and Snyder 2003, p. 7).

Another study focuses on law enforcement officer decisions to stop drivers, specifically the patterns of stopping young drivers. Rosenfeld et al. investigated the interactive effects of race and age in St. Louis in 2007. They concluded that the probability that a driver is stopped and searched by law enforcement depends on the driver's age, and among younger drivers African-Americans were more likely to be searched than whites (Rosenfeld et al. 2012, p. 46). Rosenfeld et al. note that cultural cues may have an implicit effect on law enforcement officers (Rosenfeld et al. 2012, p. 48). For example, law enforcement officers may misunderstand the type of cars driven by young people of color as a sign of misbehavior or disrespect to law enforcement (Rosenfeld et al. 2012, p. 47).

Another large body of research addresses law enforcement officers and implicit bias in the decision to shoot or not shoot. Correll, Judd and Wittenbrink investigated the effect of a target's ethnicity on a decision-maker’s (college students, not law enforcement officers) choice to shoot or not shoot the target based on whether or not the target has a weapon or harmless object. Using a video game simulator with college students, Correll et al. recreated law enforcement official’s experience when faced with potentially dangerous suspects. Correll et al. suggest that the decision to shoot/not shoot is divided into three steps for the decision maker: 1) perceiving the object, 2) interpreting the object, and 3) making the decision to shoot or not shoot. The researchers argued that “bias impacts the second stage of this process, changing the interpretation of an ambiguous object” (Correll et al. 2002, pp. 1326 and 1327). After four studies, the researchers' overall conclusion was that “participants
showed a bias to shoot African-American targets more rapidly and/or more frequently than White targets” (Correll et al. 2002, p. 1327).

Correll et al.’s research paved the way for Plant and Peruche’s studies about shooter bias among actual law enforcement officers. In 2005, Plant and Peruche used law enforcement officers as participants in a computer simulation examining shooter bias. They found that “the officers were initially more likely to mistakenly shoot unarmed Black suspects than unarmed White suspects” (Plant and Peruche 2005, p. 182). In 2006, Peruche and Plant conducted a study focused on the connection between shooting bias and law enforcement officer’s self-reported racial bias. They found that “the officers with negative attitudes towards Black criminal suspects tended toward shooting the Black suspects and tended to avoid shooting the White suspects compared to the officers with more positive attitudes toward Black criminal suspects” (Peruche and Plant 2006, p. 198). Katherine Knight’s dissertation analyzing implicit racial attitudes and law enforcement's decision to shoot supported Plant and Peruche’s findings using law enforcement cadets as participants and finding that they had “an implicit bias favoring whites” (Knight 2009, p. 32).

4.C) INDIGENT JUVENILE DEFENDERS

There does not seem to be any peer-reviewed research specifically about implicit bias and indigent defense attorneys in the juvenile justice system. However, there are articles identifying the gap in research concerning criminal defense lawyers in general and implicit bias (Lyon 2012; Richardson and Goff 2013; Eisenberg and Johnson 2004). More research should be done on the influence of implicit bias and public defender decision-making due
the very nature of the public defenders job. “[Implicit] biases are likely to be particularly influential in circumstances where time is limited, individuals are cognitively taxed, and decision making is highly discretionary” (Richardson and Goff 2013, p. 2628). There should not be an assumption that defense lawyers do not have implicit biases. “[I]ndividuals who became [public defenders] in order to fight racial injustice may be just as susceptible to the effects of [implicit biases] as those with less noble motives” (Richardson and Goff 2013, p. 2634). Lyon reports that little research has been done on implicit bias among criminal defense lawyers, hypothesizing that people believe criminal defense lawyers are more liberal and because their clients are primarily of color (Lyon 2012, p. 765).

Andrea Lyon, a former lawyer at the Law Office of the Cook County Public Defender, stated in her research that public defenders need to be aware of their racial biases, especially when it comes to client-attorney communication and jury voir dire (Lyon 2012, p. 757). Her study used her observations and personal experiences to illustrate how implicit bias may play a role in the public defender's job, and how it may negatively affect their clients when they are unaware of such biases or resist addressing the biases (Lyon 2012, p. 761). For example, Lyon recalls trying to communicate with one of her African American clients about his charges and possible consequences when he began yelling at her, which caused her to end the conversation. Later, she attended a conference about people with developmental disabilities and realized that client was not “an angry black man,” but a person with a learning disability covering up his inability to understand her by acting tough and reacting negatively (Lyon 2012, p. 763). She then changed her communication with him by only presented one topic at a time and made sure he understood her information along
the way. She concludes that educating public defenders about implicit bias is important, but simply raising consciousness about implicit bias is just as important especially if it means better communicating with and understanding clients (Lyon 2012, p. 767).

Eisenberg and Johnson found that Capital Defense Lawyers do have an implicit preference for whites over African Americans, similar to the general population (Eisenberg and Johnson 2003, p. 1553). They conducted a study where 321 participants (habeas lawyers, trial lawyers, and law students) took a written Implicit Association Test†. Eisenberg and Johnson then compared those results with online data results of other participants. This is significant because it shows that defense attorneys are not immune to implicit bias. However, the authors want to make clear that these specific results do not prove that defense attorneys “treat black clients...differently than they treat their white counterparts” or “prove that their performance is impaired by those attitudes” (Eisenberg and Johnson 2003, pp. 1554 and 1542). Rather, this study gave other researchers the ability to take the next step and attempt to connect implicit bias in defense attorneys to decision-making in practice.

Finally, Richardson and Goff used findings from the general population to show how implicit biases could be activated in public defender decision-making. For example, implicit biases can “affect evaluation of ambiguous evidence” (Richardson and Goff 2013, p. 2636), and “[implicit biases] can influence how attorneys interpret a client's ambiguous behaviors

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† “The Implicit Association Test (IAT) was developed to measure the relative strength with which groups (or individuals) are associated with positive and negative evaluations. It has been used to measure attitudes about a variety of issues, including race, gender, age, and political candidates, and is accepted as a valid research tool. All variations of the IAT use some form of response latency to assess those attitudes that are ‘automatic,’ as opposed to attitudes that are subject to intention or control” (Eisenberg and Johnson 2003, p. 1542).
and facial expressions (Richardson and Goff 2013, p. 2637). Richardson and Goff also noted that “[implicit biases] can negatively influence attorney's behaviors” (Richardson and Goff 2013, p. 2637), and “[implicit biases] can cause attorneys to treat stereotyped individuals in stereotype-consistent ways” (Richardson and Goff 2013, p. 2638).

4.D) PROSECUTORS

Prosecutors follow an accused youth through many phases of the juvenile justice system and also exercise a wide range of discretion. Many scholars have been interested in how racial and ethnic prejudice may play a role in prosecutorial discretion. P.S. Kane wrote a student note assessing some previous work by scholars noting: there is a “clear pattern of discrimination against black and Hispanic defendants in the pre-trial decision-making process” (Kane 1993, p. 2297, citing Spohn, Gruhl, and Welch); for criminal homicide cases “1) that the defendant's race does not make much difference in cases with black victims, 2) that cases with white victims are more likely to be upgraded [felony charges] than cases with black victims, and 3) that among cases with white victims, black defendants are more likely than white defendants to be upgraded and less likely to be downgraded” (Kane 1993, p. 2298, citing Radelet and Pierce); and “the races of the victim and the defendant may alter the prosecutor’s charging decisions” in sexual assault cases (Kane 1993, p. 2300, citing LaFree).

Specific to implicit bias and juvenile prosecutor's decision-making, Kristin Henning reviewed the research of Graham and Lowery and Bridges and Steen, and hypothesizing that “police, probation officers, and prosecutors, treat youth of color more harshly than white youth in part because of an implicit bias to ignore developmental immaturity in youth of
color” (Henning 2012, p. 420). Henning argues that prosecutors implicitly treat what should be viewed as normal adolescent behavior as criminal activity “warranting law enforcement intervention” for youth of color, which leads to racial disparities (Henning 2012, p. 426).

Like Henning, Smith and Levinson note that to date, scholars have not used prosecutors as participants in implicit bias studies. Also Smith and Levinson analyze how implicit bias could factor into the decision making process of prosecutors in the criminal justice system generally, specifically in charging decisions, pretrial strategy, and trial strategy. For example, they state “activation of negative constructs [i.e. that black Americans are more aggressive and hostile] can translate into a sense that the crime (or the offender) is more aggressive or violent than would be the case if the prosecutor assessed the facts of the case in a truly race-neutral manner” (Smith and Levinson 2011, p. 812). Because scholars have not tested prosecutors directly for implicit bias (generally or in their practice specifically), Smith and Levinson end their article by suggesting ways in which other scholars could test the activation of implicit bias in prosecutorial decision-making.

4.E) PROBATION OFFICERS

The most direct recent study about the role of implicit bias among probation officers in the juvenile justice system was conducted by Sandra Graham and Brian S. Lowery. In this study, Graham and Lowery asked participants to read a story about a racially unidentified youth who was suspected of committing a crime, and to make judgments about the youth’s “greater culpability, expected recidivism, and deserved punishment.” (Graham and Lowery 2004, p. 487). Before this exercise, some participants had been asked to participate in an
activity that the researches had designed as a racial priming activity. Graham and Lowery found that racially primed probation officers “judged the alleged offender to be less immature and more violent, and their global trait ratings were more negative. Those primed with the racial category also viewed the offender as more culpable, more likely to reoffend, and more deserving of punishment” (Graham and Lowery 2004, p. 496). It is important to note that this study recruited participants who volunteered their time (with a $50 stipend), and who were ethnically diverse (51% African American, 25% Caucasian, 13% Asian or biracial and 11% Latino) (Graham and Lowery 2004, p. 494). The self-selected natural of this sample, and the ethnically diverse participant pool may make it difficult to generalize these findings beyond the laboratory environment.
5) DE-BIASING

A growing body of research is dedicated to studying and evaluating implicit bias de-biasing techniques in criminal justice, while research about de-biasing techniques specific to implicit bias in juvenile justice are few. Although researchers have not come to definitive consensus on which de-biasing techniques are effective, recently some researchers have started. In 2012 Calvin Lai et al. held a research contest to assess the effectiveness of various de-biasing techniques. After comparing eighteen interventions, they found that “interventions featuring exposure to counterstereotypical exemplars, intentional strategies to overcome biases, and evaluative conditioning were consistently more effective than ones that featured engagement with others’ perspectives, appeals to egalitarian values, and elevation induction for reducing implicit preferences for Whites compared to Blacks” (Calvin K. Lai et al. 2012, p. 48).

Prior to Calvin Lai et al.’s intervention comparison experiment, there has been two key lenses through which scholars approach implicit bias de-biasing efforts in the courts: some scholars focus on changing the implicit biases and unconscious attitudes of decision-makers, while other scholars consider the effectiveness of efforts to mitigate the impact of implicit biases and unconscious attitudes held by decision-makers. Likewise, some scholars support de-biasing efforts designed to educate decision-makers, build cultural familiarity, and/or raise awareness about the harms of implicit bias. Meanwhile, many scholars suggest that such techniques can backfire, especially with certain populations.
Two recent resources that survey de-biasing techniques are *Helping Courts Address Implicit Bias: Resources for Education*, published by The National Center for State Courts in 2012, and *State of the Science: Implicit Bias Review 2013* Published by The Kirwan Institute for the Study of Race and Ethnicity. Both of these resources acknowledge and synthesize the current research regarding implicit bias de-biasing techniques, but neither resources have a specific focus on implicit bias in juvenile justice. Only very recently have scholars begun to call for research on de-biasing efforts specifically relevant to implicit bias in the juvenile justice system. Below is a brief survey of the de-biasing research that may be useful when thinking about implicit bias in juvenile justice.

Historically, much of the research around de-biasing strategies has been built out of the notion that educating decision-makers, building cultural familiarity, and/or raising awareness about the harms of implicit bias is the most promising approach to debiasing. Peruche and Plant suggest that, “the quality of contact that police officers have with Black people may have important implications for their attitudes and responses to Black people on the job and in their personal lives” (Peruche and Plant 2006, p. 197). Meanwhile, Graham and Lowery propose that positively framed de-biasing techniques may be more promising than techniques designed to, “unlearn” negative biases and consider the impact of, “exercising good relationships-building skills, as in establishing rapport and trust among vulnerable youth” (Graham and Lowery 2004, p. 501). It is important to note that these studies are focused on de-biasing techniques aimed at decision-makers in the broader court and legal system, and not specifically on decision-makers in the juvenile justice system (with the exception of Graham and Lowery).
Scholars disagree about whether measured changes in the expression of bias reflect actual reduced bias, or instead are a product of suppressed bias. Hausmann and Ryan suggest that both dynamics may be at play: “We believe that the reduction in prejudice likely results from real changes in attitudes for some people and pressures to conform to socially acceptable standards for others” (Hausmann and Ryan 2004, p. 215). Plant and Peruche also note that the causal direction of racial attitudes and contact is difficult to detangle: “Similarly, although officers who have more positive experiences with Black people in their personal lives may have more positive expectations about Black suspects, it is also possible that officers with more positive beliefs about Black people may seek out and contribute to more positive experiences with Black people in their personal lives. Thus, attitudes and contact may influence and reinforce each other.” (Peruche and Plant 2006, p. 198)

Research about the lasting effect of de-biasing techniques is limited. One body of research suggests that the effectiveness of de-biasing techniques may be temporally limited. Plant and Peruche found in their 2005 study The Consequences of Race for Police Officers’ Responses to Criminal Suspects: “…after extensive practice with the [de-biasing computer] program, in which the race of the suspect was unrelated to the presence of a weapon, this racial bias was eliminated both immediately after training and 24hr. later” (Plant and Peruche 2005, p. 180). Meanwhile, Graham and Lowery note that such techniques may be less feasible outside of research environments: “It would be extremely difficult for a police or probation officer to imagine a counter-stereotypic exemplar every time they encountered an African American suspect, and the social settings in which those encounters take place (e.g., street corners, not
churches) are most likely to activate negative associations” (Graham and Lowery 2004, p. 501).

Scholars have begun to challenge the notion that education and awareness efforts are effective de-biasing strategies for implicit bias in the criminal justice system. In their 2004 article, Effects of External and Internal Motivation to Control Prejudice on Implicit Prejudice: The Mediating Role of Efforts to Control Prejudiced Responses, Leslie Hausmann and Carey Ryan suggest that efforts to reduce implicit bias can backfire or be counterproductive, explaining that:

“...our results suggest a mechanism by which external motivation to control prejudice might become associated with increased, rather than decreased expression of prejudice in some situations. When externally motivated individual would like to respond without prejudice and they try to do so, their attempts to avoid prejudice may actually translate into increased expressions of prejudice… unfortunately, then, externally motivated people’s efforts to act in a nonprejudiced manner may be ineffective, and even backfire, in some situations.” (Huasmann and Ryan, 2004 pg. 223)

In other words, Hausmann and Ryan suggest that those individuals who are externally motivated to reduce bias (that is, those who are driven by outside pressures such as social norms, or fear of being judged as biased) may find it difficult to effectively reduce their “expression of prejudice”; and that efforts to reduce the “expression of prejudice” may actually make the situation more extreme. Similarly, Bertram Gawronski, Roland Deutsch, Sawsan Mbirkou, Beate Seibt and Fritz Strack note that efforts to recognize and unlearn negative stereotypes may counterproductively drive a decision-maker’s focus to such stereotypes, effectively amplifying such stereotypes upon which biases and unconscious
attitudes may be based. In their 2008 paper *When Just Say No*’s Is Not Enough: Affirmation Versus Negation Training and the Reduction of Automatic Stereotype Activation*, the authors point out that, negating [negative] stereotypes may lead to activating stereotypical associations which may result in ironic stereotyping effects (Gawronski et al. 2008, p. 2).
6) FUTURE RESEARCH AND CONCLUSION

As stated previously, more research must be done before researchers can directly cite implicit bias as a causal factor of the racial disparities in the juvenile justice system. In general, future research could be done that specifically looks at how each key decision-maker in the juvenile justice system may possibly downplay the role of protecting children when racial stereotypes are activated by implicit bias. Below are recommendations for additional research in this field, not including judges and law enforcement because research seems to be abundant and increasing regarding those key players.

INDIGENT JUVENILE DEFENDERS

In general, more research about indigent defenders’ implicit bias needs to include using actual public defenders as test subjects, specifically juvenile indigent defenders. There should also be research done comparing the implicit bias preferences of “career” juvenile defenders (those who have been practicing as a juvenile defender for a significant time period) versus newer/short term juvenile defenders (those who have only been practicing a short period of time or those who consider the juvenile defender assignment to be a short experience in their long term career plans). This sort of research could bring awareness that defense lawyers are not exempt from having implicit bias.

Because Eisenberg and Johnson concluded that habeas defenders, trial defenders, and law students have similar implicit bias as the general public, it would be good to test those implicit bias in the practice of law to determine if those biases are possibly triggered or not.
For example, juvenile indigent defenders could be given general IAT tests, shoot or not shoot tests, or other juvenile trial-tailored IAT tests.

Future researchers could conduct research based on Richardson and Goff’s article, which is about the possible areas where implicit bias could be triggered in public defenders. Specifically, researchers could assess juvenile public defenders’ implicit bias and the evaluation of evidence, interactions with clients, and acceptance of juvenile dispositions. For example, in regards to the implicit dehumanization affect on the acceptance of sentences, Richardson and Goff conducted research where they “compared police officers’ actual use-of-force history against juveniles with their implicit dehumanization score” (Richardson and Goff 2013, p. 2640). Similar research could probably be conducted with juvenile indigent public defenders to assess if “the more [PDs] unconsciously associated blacks with apes, the less innocent they thought black children suspected of a crime were,” and thus more willing to accept guilty pleas or more accepting of harsher dispositions (Richardson and Goff 2013, p. 2639).

PROSECUTORS

Again there should be more research done with prosecutors as study participants, especially prosecutors in juvenile court. For example, prosecutors should be given the IAT to assess, like indigent defenders, if they have an implicit preference for Whites compared to Blacks, similar to the general public. More specifically, because prosecutors participate in various aspects of the juvenile justice system, future research should attempt to assess if implicit biases are triggered at those various stages: charging decisions (dismiss charges,
misdemeanor v. felony, or charge as an adult), evaluation of evidence, plea bargaining strategies and decisions, trial strategies, disposition recommendations, etc. (Smith and Levinson 2012). Smith and Levinson provide specific starting points for future research. For example:

“researchers might examine whether participants subliminally primed with black and white faces make different decisions when deciding how to charge suspects (versus opting not to prosecute) in borderline cases. A similar research methodology could be used to test [the] hypothesis regarding implicit bias and plea-bargaining….Researchers could perform a coding analysis on actual closing arguments made by prosecutors, counting references to animal imagery, and could then seek to test those prosecutors using an implicit bias measure such as the IAT.” (Smith and Levinson 2012, pp. 822-23).

PROBATION OFFICERS

As with the other key players, there could be more implicit bias research done using juvenile probation officers as actual study participants to assess how those individuals who are trained in a specific manner may have implicit biases triggered during the decision-making process. Like research done with indigent defenders, juvenile probation officers should be given the IAT to assess whether they have an implicit preference similar to the general public. More specifically, researchers could study juvenile probation officers’ implicit bias in specific job related tasks or decision-making points. Similar to recommendations for indigent defenders and prosecutors, future research should include how probation officers
perceive African-Americans, in particular the dehumanizing or animal (ape) imagery affect, and decision-making outcomes.

In the juvenile halls, probation officers may be seen as or given the role of law enforcement officers, which would also be the case in Probation Departments that equip their members with guns, therefore researchers could have juvenile probation officers take the shoot/not shoot IAT (or rather appropriately change it to the tase/ not tase IAT or pepper-spray/not pepper-spray IAT). In a similar vain, researchers could also see if there is a difference in implicit bias affecting the decision making process of probation officers assigned to the juvenile halls or camps compared to probation officers that are assigned to monitor youth who are not placed in out of home placements. These are some of the few ideas that could increase the research in this field concerning these specific key players in the juvenile justice system.

**CONCLUSION**

After an evaluation of the research on implicit bias, criminal justice, and juvenile justice it is clear that implicit bias is at work in the juvenile justice system. It must be noted that although research does indicate that implicit bias may be a factor in juvenile justice decision-making, there is no research proving that implicit bias is in fact a cause of the racial disparities. Based on research regarding the criminal justice system, steps should be taken to address implicit bias; therefore, it can be inferred that similar steps can also be taken to address implicit bias in the juvenile justice system. Overall, future research should be done to
address implicit bias and the specific decision-makers in the juvenile justice system in order to properly assess how to address implicit bias.

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APPENDIX

METHODOLOGY

The methods used in this literature review are designed to increase the likelihood that the final product will offer an objective survey of the best current evidence upon which NCYL can make decisions about how to move forward with efforts that seek to limit the impact of implicit bias within the juvenile justice system. In order to produce a transparent, replicable document, key search terms and research databases searched are noted in this appendix. Finally, this literature review has been produced parallel to a separate review of the literature on the role of implicit bias in the systems that feed into the juvenile justice system.

Sources of research include: scholarly journals, published peer reviewed articles, law review articles, books, previously conducted literature reviews, and work produced by respected research institutions. Unpublished scholarly journals are outside the feasibility of this project and have not been included.

Sources of literature include: research databases (Proquest), previously conducted literature reviews regarding juvenile justice and/or implicit bias, academic library catalogues, works cited and bibliographies in relevant research, and word of mouth from researchers.

KEY SEARCH TERMS USED

For the purpose of the Proquest database search, key search terms were categorized into layers and terms from each layer were combined with terms from other layers to ensure that the search was comprehensive. Once it became clear to the authors that no new relevant
studies would be discovered within a combination or a layer, a new search term was used. Because of this, not every possible combination of search terms was used. Key search terms and the corresponding layers are outlined in the table on the next page.