Research Article

The Influence of Afrocentric Facial Features in Criminal Sentencing

Irene V. Blair, Charles M. Judd, and Kristine M. Chapleau

University of Colorado

ABSTRACT—Prior research has shown that within a racial category, people with more Afrocentric facial features are presumed more likely to have traits that are stereotypic of Black Americans compared with people with less Afrocentric features. The present study investigated whether this form of feature-based stereotyping might be observed in criminal-sentencing decisions. Analysis of a random sample of inmate records showed that Black and White inmates, given equivalent criminal histories, received roughly equivalent sentences. However, within each race, inmates with more Afrocentric features received harsher sentences than those with less Afrocentric features. These results are consistent with laboratory findings, and they suggest that although racial stereotyping as a function of racial category has been successfully removed from sentencing decisions, racial stereotyping based on the facial features of the offender is a form of bias that is largely overlooked.

Stereotypes are commonly defined as widely shared beliefs about the attributes of social groups (Fiske, 1998; Judd & Park, 1993). As such, they are assumed to influence judgment through categorization: People are judged to have stereotypic attributes if and only if they are categorized as members of the relevant social group (Bodenhausen & Macrae, 1996; Brewer, 1988; Fiske & Neuberg, 1990). Recently, we (Blair, Judd, Sadler, & Jenkins, 2002) argued that stereotypes might also be applied on the basis of individuating features. More specifically, we suggested that Afrocentric facial features may be used to stereotype individuals within, as well as between, racial groups.1 Across a series of studies, we showed that attributes stereotypically associated with Black Americans (e.g., criminal, athletic) were judged to be more true of individuals the more Afrocentric their facial features, and this effect was independent of any stereotyping due to racial category. That is, feature-based stereotyping was found when all of the individuals were clearly members of the same racial category, Black or White. Additionally, when judgments of both Black and White individuals were made, racial category and (within-race) Afrocentric features were shown to have independent effects on judgment.

On the basis of that evidence, we argued that a person’s facial features may lead to stereotyping in two ways. First, as suggested by standard stereotyping models (Bodenhausen & Macrae, 1996; Brewer, 1988; Fiske & Neuberg, 1990), racial-category membership may be inferred from Afrocentric features, and category-based stereotyping may ensue for that basis. Additionally, direct feature-trait associations are likely to form over time through associative learning processes (Anderson & Bower, 1972; Hayes-Roth, 1977; Hebb, 1948). As a result, Afrocentric features may directly activate associated traits and lead to stereotypic inferences within a racial category.

In subsequent work (Blair, Judd, & Fallman, in press), we investigated the automaticity of category- and feature-based stereotyping. Replicating other research, we found that stereotyping based on racial category is an efficient process, occurring even when cognitive resources are compromised. Nonetheless, people are sensitive to racial stereotypes and are able to suppress them when instructed to do so (see also Wyer, Sherman, & Stroessner, 1998, 2000). We also found feature-based stereotyping to be an efficient process. However, people were largely unaware of the influence of Afrocentric features and were unable to avoid making stereotypic inferences on the basis of those features, even when they were given explicit information about the problem and demonstrated that they could reliably identify the relevant features. Thus, although people appear to be able to control some aspects of race-based stereotyping, they appear unaware of and unable to control stereotyping based on Afrocentric features. This work has broad implications for the operation of racial bias in society.

RACIAL STEREOTYPING IN THE CRIMINAL JUSTICE SYSTEM

Consider the important arena of the criminal justice system, where the role of racial bias has long been debated (Tonry, 1995). Nearly all aspects of the criminal justice system have been criticized for showing racial bias; however, some of the harshest criticism has been directed at sentencing decisions (Spohn, 2000). Until the mid-1970s, most...
courts used a system whereby an offender was given both a minimum sentence and a maximum sentence, and the release date was determined by a parole board. In view of the wide discretion such sentencing permitted and the well-documented racial disparities that existed, critics contended that “racial discrimination in the criminal justice system was epidemic, [and] that judges, parole boards, and corrections officials could not be trusted” (Tonry, 1995, p. 164). Largely in response to such concerns, both state and federal governments passed laws designed to severely limit the discretion of judges and ensure the neutrality of sentencing (Spohn, 2000; Tonry, 1995; Zatz, 1987). Many states adopted sentencing guidelines for determining the appropriate sentence on the basis of the seriousness of the crime and the offender’s prior criminal record, with some allowance for judges to take aggravating and mitigating circumstances into account. In addition, some laws explicitly stated that sentences should be neutral with respect to race, gender, and socioeconomic status. Research now shows that the primary determinants of sentencing decisions are the seriousness of the offense and the offender’s prior criminal record. Racial disparities still exist, but researchers largely agree that they are not the consequence of direct racial bias (Spohn, 2000; Tonry, 1995). Once the seriousness of the crime and past criminal record are equated, Black offenders do not generally receive harsher sentences than White offenders.\(^2\)

Although this evidence is encouraging, our analysis of Afrocentric features suggests that a more subtle form of racial bias may still operate. Judges may be careful to avoid giving different sentences to members of different racial categories, but such efforts to control category-based bias may have little effect on the operation of stereotypical associations with Afrocentric features (Blair et al., in press). Moreover, because people are generally not aware of feature-based stereotyping, they are unlikely—and perhaps even unable—to control it effectively. Thus, controlling for legally relevant factors, Black offenders as a group may not receive harsher sentences than White offenders, but members of both groups who have relatively more Afrocentric features may receive harsher sentences than group members with less Afrocentric features. Racial bias based on racial category is avoided, yet racial bias based on Afrocentric features might still be operating.

**THE PRESENT RESEARCH**

The State of Florida Department of Corrections maintains a public database that contains information, including photographs, on all inmates incarcerated in the state. Using this database, we randomly selected samples of young Black and White male inmates to determine whether their sentences depended both on race and, within race, on the degree to which they manifested Afrocentric facial features, controlling for the seriousness of the crimes they had committed and their prior criminal histories.

Our decision to use the Florida database was based primarily on its availability and completeness. These data are all the more interesting in light of the state’s demonstrated commitment to race neutrality in sentencing. Like other states, Florida once permitted considerable judicial discretion in sentencing. But in 1979, the Florida Sentencing Study Committee determined that ethnic-minority offenders were significantly more likely to receive prison sentences than White offenders, and it recommended that sentencing guidelines be implemented to decrease bias (Bales, 1997). Such guidelines were adopted in 1983, and an explicit statement of race neutrality in sentencing was added to the Florida Statutes (§921.001[a][4]). Today, all noncapital felonies are placed into 10 levels of offense severity, and judges are provided with a worksheet that specifies the sanction and, when applicable, the prison time appropriate given the severity of the primary offense, additional offenses, and prior offenses, as well as other pertinent factors. In 1997, the Florida Department of Corrections conducted a study to determine whether race influenced either sentencing decisions (prison vs. no prison) or, for offenders sentenced to prison, the length of prison sentences. For both types of outcomes, it was determined that race had no “meaningful” effect on decisions once relevant sentencing factors were taken into account: “This leads to the conclusion that the goal of racial equity explicit in the sentencing guidelines law has been met . . .” (Bales, 1997, p. 3).

**METHOD**

**Sample Selection**

From the population of all young (18 to 24 years of age) male inmates in the Florida Department of Corrections database, a sample of 216 was randomly selected, stratified by race, as designated on their court record (\(n = 100\) Black inmates and 116 White inmates). We selected only cases involving a current offense committed between October 1, 1998, and October 1, 2002. These date restrictions ensured that the offenders in our sample were all sentenced under the same laws.\(^3\)

**Coding Criminal Histories**

With the assistance of a third-year law student, we researched the Florida criminal statutes and coded each case on a number of different variables. Specifically, we coded the total amount of time the inmate was currently serving, the seriousness of the primary offense, the number of any additional offenses and their average seriousness, and the number of prior offenses and their average seriousness.\(^4\) In this sample of cases, a total of 138 different types of offenses had been committed. The seriousness of each was determined by consulting the Florida state statutes (§921.0022). In Florida’s 10-point system, lower numbers indicate less serious felonies. For example, supplying an unauthorized driver’s license is a Level 1 offense, possessing child pornography or selling cocaine is a Level 5 offense, and murder is a Level 10 offense.

\(^2\)Because the database did not permit the selection of cases by offense date, we initially drew a total of 350 cases. We then excluded those cases with offense dates outside our parameters (\(n = 113\)). Twenty-one additional cases were excluded, either because the crimes could not be coded or because the photographs were severely degraded.

\(^3\)For multiple sentences (served concurrently), total sentence length was determined by the length of the longest sentence; life sentences were coded as 99 years. For multiple current offenses, the offense given the longest sentence was defined as the primary offense. Only felony crimes were included in this analysis because there was no system to code the seriousness of the relatively infrequent misdemeanors.
Categorizing Facial Features

The 216 facial photographs associated with the selected cases were randomly divided into two sets, each with approximately equal numbers of Black and White inmates. Each set was given to a group of undergraduate research participants (n = 34 and n = 35) who were asked to make a single, global assessment of the degree to which each face had features that are typical of African Americans, using a scale from 1 (not at all) to 9 (very much). Prior research has shown that participants can make judgments easily and reliably for both Black and White faces (Blair et al., 2002). Reliable judgments were likely facilitated by the fact that the inmates were otherwise similar in appearance (i.e., same hairstyle, clothing, and expression; no accessories). Half of the participants were asked to rate the Black photographs before rating the White photographs; the other participants made their ratings in the reverse order. Within racial group, the photographs were presented in a random order. Obtained reliabilities of mean ratings varied between .88 and .95. Although the Black inmates were rated, on average, as possessing significantly more Afrocentric features than the White inmates (M = 5.92 vs. 3.33), t(214) = 16.06, p < .0001, there was considerable variance within each group (SD = 1.11 and 1.27, respectively).

Because the attractiveness and babyishness of faces have been shown to influence judicial outcomes (Downs & Lyons, 1991; Stewart, 1980; Zebrowitz & McDonald, 1991), the participants were asked to rate the faces on these dimensions after completing the ratings for Afrocentric features. The correlations of Afrocentric features with attractiveness and babyishness features, controlling for race, were .17, p < .05, and -.04, n.s., respectively.

RESULTS

Our first analysis used multiple regression to determine the degree to which sentence length was influenced by only those factors that should lawfully predict sentencing: seriousness of the primary offense, the number and seriousness of additional concurrent offenses, and the number and seriousness of prior offenses. We also included quadratic terms for seriousness of the primary offense, seriousness of additional offenses, and seriousness of prior offenses, because the Florida Criminal Punishment Code specifies that for more serious offenses, the length of the sentence ought to increase dramatically as the seriousness of the offense increases. Because sentence length was positively skewed, a log-transformation was performed on this variable prior to analysis.

The results of the analysis showed, as expected, that criminal record accounted for a substantial amount of the variance (57%) in sentence length. The resulting unstandardized coefficients (and their standard errors and associated t statistics) are given in Table 1 (Model 1). Unsurprisingly, the seriousness of the primary offense (linear and quadratic effects) and both the seriousness (quadratic effect) and the number of additional offenses were significant predictors of sentence length. Neither the seriousness nor the number of prior offenses predicted sentence length. We attribute these null effects to the relative youthfulness of the inmates, who had relatively few prior felony offenses (M = 0.95, SD = 1.90).

We turn next to the question of race differences in sentencing. We estimated a second model (Model 2) in which inmate race (−1 if White, +1 if Black) was entered as a predictor along with the variables from the previous model. The results of this analysis were consistent with the findings of Florida's Race Neutrality in Sentencing report (Bales, 1997): The race of the offender did not account for a significant amount of variance in sentence length over and above the effects of seriousness and number of offenses, t(206) = 0.90, p = .37, proportional reduction in error (PRE) = .00.

In a third model, we added the degree to which the inmates manifested Afrocentric features as a predictor of sentence length, controlling for the race of the inmates and the seriousness and number of offenses they had committed. This analysis showed that Afrocentric

---

TABLE 1
Unstandardized Parameter Estimates, Standard Errors, and t Values for Variables Predicting Sentence Length in Models 1 and 3

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Primary</td>
<td>0.29</td>
<td>0.023</td>
</tr>
<tr>
<td>Primary squared</td>
<td>0.04</td>
<td>0.010</td>
</tr>
<tr>
<td>Additional</td>
<td>0.04</td>
<td>0.021</td>
</tr>
<tr>
<td>Additional squared</td>
<td>0.02</td>
<td>0.008</td>
</tr>
<tr>
<td>Additional number</td>
<td>0.06</td>
<td>0.014</td>
</tr>
<tr>
<td>Prior</td>
<td>−0.02</td>
<td>0.056</td>
</tr>
<tr>
<td>Prior squared</td>
<td>0.00</td>
<td>0.012</td>
</tr>
<tr>
<td>Prior number</td>
<td>0.02</td>
<td>0.036</td>
</tr>
<tr>
<td>Race</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Afrocentric features</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001.

*In Florida, other factors, such as the victim's injury and supervision violations, are also considered in sentencing. However, the public database does not supply information on these aspects of each case.

This figure is comparable to the 42.2% of variance accounted for in the analysis conducted by the Florida Department of Corrections (Bales, 1997).
features were a significant predictor of sentence length over and above the effects of the other factors, $t(205) = 2.29, p < .025, \text{PRE} = .02$.

Table 1 provides the parameter estimates from this model (Model 3). The table shows that with Afrocentric features in the model, race significantly predicted sentence length, $t(205) = 2.28, p < .025, \text{PRE} = .02$, but in the direction opposite to what one might expect—White inmates serving longer sentences than Black inmates.

Figure 1 presents a residual plot of all data points and the prediction functions from the second and third models. The vertical axis is the residual sentence length for each case, partialing out effects of all criminal-history variables. The horizontal axis represents the residual Afrocentric-features variable, again partialing out the effects of all criminal-history variables. This plot thus illustrates the partial relationships between sentence length, on the one hand, and race and Afrocentric features, on the other, over and above any influence of criminal history. The predicted sentence lengths in the second model, which included race (but not Afrocentric features) as a predictor along with the criminal-history variables, are given by the two gray, horizontal lines, which show that the mean residual sentence lengths for White inmates serving longer sentences than Black inmates.

Figure 1. Residualized sentence length as a function of residualized Afrocentric features, for Black and White inmates. The regression lines displayed are from Model 2, which examined sentence length as a function of race, controlling only for criminal history, and from Model 3, which examined sentence length as a function of race and Afrocentric features, each controlling for the other variable as well as criminal history.

**DISCUSSION**

The results we have reported confirm both earlier research on the role of race in sentencing and our own work on stereotyping. As found previously, we observed little effect of race on sentencing in Florida: Black and White offenders, given equivalent criminal histories, were given roughly equivalent sentences. We suggest that the state’s efforts to ensure race neutrality in sentencing over the past 20 years have largely been successful. Our results are also consistent with the psychological literature showing that people can effectively reduce category-based stereotyping (Blair et al., in press; Wyer et al., 1998, 2000); it appears that judges have effectively learned to give sentences of the same length when Black and White offenders with equivalent criminal histories come before them.

However, Afrocentric facial features were associated with sentence length, such that offenders who had equivalent criminal histories and came from the same racial group (Black or White) were given longer sentences the more Afrocentric their features. These findings are consistent with the results of our laboratory research showing that people use Afrocentric features to infer traits that are stereotypic of African Americans. It is important to remember that this form of stereotyping appears to occur without people’s awareness and outside their immediate control (Blair et al., 2002, in press). We suspect that, like our laboratory participants, judges were unaware of the fact that Afrocentric features might be influencing their decisions and were not effectively controlling the impact of such features.

How large were the effects of Afrocentric features? One way to calibrate them is to derive predicted sentence lengths (for the mean levels of the criminal-history variables) for individuals within each race who were 1 standard deviation above and below the mean level of Afrocentric features for their racial group. These calculations indicate, there was a significant difference between the two races: Given equivalent criminal histories and equivalent Afrocentric facial features, White inmates had longer sentences than Black inmates.

In a fourth model, we examined whether the impact of Afrocentric features was the same for Black and White inmates by testing the interaction between Afrocentric features and race. This interaction did not approach significance ($p > .70$), thus suggesting that the plotted lines in Figure 1 really are parallel: The effects of Afrocentric features on residual sentence length within the two racial groups were statistically equivalent.8

Finally, we examined the influence of facial attractiveness and babyish features on sentence length. Controlling for criminal record, neither variable was a significant predictor of sentence length, $t(206) = 0.05$ and $t(206) = 0.63$, respectively. Moreover, Afrocentric features continued to predict sentence length when these variables were controlled, $t(203) = 2.32, p < .025, \text{PRE} = .03$.

8Separate analyses of the data for Black and White inmates produced the following estimates for Afrocentric features: $B = 0.06, t(90) = 0.04$, n.s., $\text{PRE} = .01$, and $B = 0.11, t(100) = 2.11, p < .05, \text{PRE} = .04$, respectively. Although the effect was somewhat larger among the White than among the Black inmates, the lack of a significant race-by-features interaction suggests that this difference is not reliable. Moreover, when race differences have appeared in our laboratory research, they have not been consistent: Sometimes Afrocentric features have produced stronger effects for White targets, and sometimes they have produced stronger effects for Black targets. We do note that there was slightly more variability in Afrocentric features among the White inmates than the Black inmates in the present sample.
that individuals 1 standard deviation above their group mean would receive sentences 7 to 8 months longer than individuals 1 standard deviation below their group mean (for the same typical criminal record). This is clearly a meaningful difference.

We argue that the effect of Afrocentric features on sentencing is due to the associations that have formed between those features and stereotypic traits. We suggest that when judges are faced with the difficult task of weighing the blameworthiness of the offender, the need to protect the community and deter potential offenders, and other concerns about the costs and benefits of incarceration, the activation of those associations leads to the perception that an offender with more Afrocentric features is more dangerous or culpable than other offenders from the same racial group. Furthermore, this feature-based stereotyping occurs independently of category-based stereotyping, which the present data suggest is well controlled.

The racial category of the inmates in our sample was determined by the court records available to judges. On the basis of appearance alone, some of these individuals might be judged racially ambiguous. Thus, we cannot entirely eliminate the possibility that the effects of spontaneous racial categorization by judges and the effects of Afrocentric features are confounded to some degree in these data. Our attempt to separate effects due to race categorization and those due to Afrocentric features may have been only partially successful.

The finding that is initially surprising is that race made a significant difference in sentences once criminal history and Afrocentric features were both controlled: White offenders were given longer sentences than Black offenders, given equivalent criminal histories and equivalent Afrocentric facial features. It is this last statement that helps explain this result. As Figure 1 reveals, race and Afrocentric features were highly related ($r = .74, p < .001$). Although there is some overlap, most of the White inmates appear on the left half of the figure and most of the Black inmates appear on the right. Clearly, the two groups had very different mean levels of Afrocentric facial features. At the two within-group mean levels, there was no difference in sentence lengths between the groups. Yet within each group, inmates with more Afrocentric features received longer sentences than those with less Afrocentric features. This means that White inmates with high levels of Afrocentric features (relative to their racial group) received more severe sentences than White inmates on average. And Black inmates with low levels of Afrocentric features (relative to their racial group) received less severe sentences than Black inmates on average.

As a result, when we examined the race difference in sentence length controlling for Afrocentric features, we were comparing White inmates with relatively high levels of Afrocentric features and Black inmates with relatively low levels. And because the two groups on average received the same sentences, White inmates who were above their group mean in Afrocentric features were punished more severely than Black inmates who were below their group mean. Thus, the race difference emerged when we controlled for Afrocentric features. Another finding that may seem surprising is the lack of effects for facial attractiveness and babyish features. One might expect that more attractive inmates and those with more babyish features might receive lighter sentences. However, prior research has shown that the effects of attractiveness and babyish features are not always straightforward. For example, Downs and Lyons (1991) found that compared with less attractive defendants, more attractive defendants received lower bail and fine amounts for misdemeanor charges, but not for felonies; Stewart (1980) found that more attractive defendants received shorter prison sentences than less attractive defendants, but attractiveness had no effect on whether the defendants were convicted or acquitted. Zebrowitz and McDonald (1991) found that in small-claims court, having babyish features increased defendants’ likelihood of winning cases involving intentional actions, but decreased their likelihood of winning cases involving negligent actions. Zebrowitz and McDonald also found that some outcomes depended on whether the plaintiff, as well as the defendant, had babyish features.

Taking the results as a whole, some readers might be tempted to say that the picture is fairly positive. Race is not being used in sentencing decisions, and, if anything, the minority group is coming out ahead (i.e., when Afrocentric features are equated). But such a conclusion is a serious misinterpretation of our results. Racial stereotyping in sentencing decisions is still going on, but it is not a function of the racial category of the individual. Instead, there is perhaps an equally pernicious and less controllable process at work. The racial stereotyping in sentencing that is now occurring is based on the facial appearance of offenders. Be they White or Black, offenders who possess more Afrocentric features are receiving harsher sentences for the same crimes, compared with less Afrocentric-looking offenders. Our research shows that addressing one form of bias does not guarantee that the other will also be eliminated. Both must be considered to achieve a fair and equitable society.

Acknowledgments—Support for this research was provided by National Institute of Mental Health Grants R03-MH63372 and R01-MH5049 to the first and second authors, respectively. We thank Sandy Schmieder for her assistance with this project, Bill Pizzi for his consultation on criminal law, and the University of Colorado Stereotyping and Prejudice Lab for their helpful comments.

REFERENCES


(Received 8/29/03; Revision accepted 12/15/03)