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LIKE FATHER, LIKE SON: STEREOTYPICAL BLACK FACIAL FEATURES IN  
CHILDREN CAUSING TROUBLE

by

ALESHA D. BOND

Under the Direction of Heather Offutt, PhD

ABSTRACT

This present study investigated whether face-type (stereotypical or nonstereotypical) facilitates stereotype-consistent categorization and decision-making. Previous literature regarding adults has suggested an associative link between stereotypically Black facial features and assumed criminality. This study seeks to extend these findings by investigating whether the same heuristic processes that underpin biased decisions regarding adult phenotypic racially stereotypical features (e.g., broad nose, full lips) extend to children's faces. That is, do the negative stereotypes (i.e., criminal Black male) that influence face-type judgments in adults extend to child face-type judgements as well. In two studies testing face-type categorization and disciplinary judgments, people were more likely to miscategorize children with stereotypical faces into negative roles more than positive roles. People were also more likely to increase their disciplinary judgments from one infraction to another for children with stereotypical faces compared to atypical faces. Results suggest that face-type cues do extend to children and also engender negative associations.

INDEX WORDS: Categorization, Memory, Stereotype, Face processing

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CHILDREN CAUSING TROUBLE

by

ALESHA D. BOND

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2017

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Alesha Bond  
2017

LIKE FATHER, LIKE SON: STEREOTYPICAL BLACK FACIAL FEATURES IN  
CHILDREN CAUSING TROUBLE

by

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Georgia State University

August 2017

## **DEDICATION**

This research is dedicated to the over sixty thousand minors incarcerated in our juvenile detention centers and their loved ones.

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## 1 INTRODUCTION

Stereotypes are widely held positive or negative beliefs associated with a particular groups' behavior and attributes (see review in Fiske, 1998). Stereotypes influence judgment via categorization, such that people assign stereotypic attributes (positive or negative) to those who appear to fit into the social group. Men with stereotypically Black facial features (e.g. dark skin, wide nose, full lips; also called, *Afrocentric features*) are more likely to be stereotyped than men with fewer stereotypical features. Research suggests that compared to Black men with atypically Black features, people demonstrate biased judgment toward Black men with stereotypical facial features, not only in shoot decisions but in misidentifications (Oliver & Fonash, 2002) and death penalty sentencing (Jennifer L Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006). These face-type/stereotype associations are likely due to short-cuts in processing, or heuristics. Heuristics facilitate the use of the “criminal black male” stereotype when encountering a stereotypically Black face because this face-type is prototypical of the category “Black” and thus readily associated with category traits/behaviors. This activation may aid in the biased/categorical encoding of faces (e.g., stereotypical) based on the extent to which a face is representative of a social category (e.g., negative criminal role). Research suggests that this encoding process may lead to a face source memory error such that stereotypical faces are more likely to be accurately recategorized and miscategorized into negative role labels compared to positive roles and atypical (non-Afrocentric) faces are more likely to be accurately re-categorized and miscategorized into positive role labels compared to negative roles (Kleider, Cavrak, & Knuycky, 2012).

The current study investigated whether heuristic biases associated with Black stereotypical face-types extend to Black children's faces. Research suggests that ‘childhood’ is

an essential category that tends to assume a level of innocence that is often not extended to adults (Giroux, 2000; Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014; Haslam, Rothschild, & Ernst, 2000). Because research suggests childhood is viewed this way, people are more likely to extend social protections and considerations that would otherwise not extend to adults. This may be part of the reason that the criminal justice system extends provisions towards juvenile offenders wherein they are perceived as less culpable for their crimes compared to adults and therefore receive less severe punishment for similar crimes (Arya, 2010; DeNunzio, 2006). These provisions towards juveniles become complex however, when juvenile offenders commit “adult enough” crimes in which case justification for “adult punishment” is considered (Arya, 2010; Rattan, Levine, Dweck, & Eberhardt, 2012).

What is known about children and racial bias in the real world is that over the past decade, research has highlighted a disparity in school discipline across race wherein Black students are more likely to receive school suspension/expulsion compared to White students for similar/equivalent offenses (Dillon, 2010). Further, Black children are more likely to be sentenced to adult prison facilities compared to White children and are more likely to receive longer juvenile sentencing compared to White children (Poe-Yamagata, 2009). These systemic racial disparities are consistent with biases found in adult studies wherein incarcerated Black men receive significantly longer sentences compared to White men (Rehavi & Starr, 2014). Because research suggests that the association between face-type (i.e., stereotypical) and negative stereotypes (i.e., criminal Black male stereotype) may be an influential factor in criminal justice and legal decision making (i.e., death penalty sentencing) regarding adults, biased judgments made via heuristics may also play a role in the racial sentencing disparities seen in the juvenile criminal justice system as well.

Given these findings, it would follow that Black children with stereotypical features may be most likely to be associated with the negative stereotypes that are associated with the “Black race” category and are therefore less likely to receive the social protections that are extended to the “childhood” category because they may be perceived as less childlike. The research objective was to investigate whether the same heuristic processes that underpin biased decisions regarding adult stereotypical features extend to children’s faces. The expectation was that the negative stereotypes (i.e., criminal Black male) that influence face-type judgments in adults will extend to child face-type judgments.

### **1.1 Heuristics**

To aid in the ability to balance quick (and yet efficient) decisions that maximize optimal outcomes, people rely on heuristics to make decisions, particularly about uncertain events. Classic research conducted by Tversky and Kahneman (1974) investigates the way people make decisions, particularly when faced with uncertain events or situations. They suggested that the use of heuristics, or mental shortcuts, help people quickly arrive at conclusions by reducing the amount of cognitive processes that may otherwise be necessary to make decisions and solve problems. The authors make a further distinction between the types of heuristics that are utilized in the decision-making process. Representative heuristics are mental shortcuts that rely on the probability an event will occur based on previous experience. People make decisions about other people or events by judging how similar that person or event is to the prototypical person or event in that category. Alternatively, availability heuristics are based on the cognitive availability of verifying information. People make decisions via availability heuristics by making decisions based on how readily available the information comes to mind. Both of these processes, however, come with potential systematic errors.

### ***1.1.1 Adults and Stereotypes***

Stereotypes are a type of availability heuristics that could result in systematic errors. Stereotypes are positive or negative societal beliefs held about a particular groups' behavior and attributes (see review in Fiske, 1998). There is an abundance of literature, for example, to suggest that racial stereotypes regarding African Americans are largely negative often associating Black males in particular with crime and violence (Correll, Park, Judd, & Wittenbrink, 2002; Devine & Elliot, 1995; Dovidio, Evans, & Tyler, 1986; Niemann, Jennings, Rozelle, Baxter, & Sullivan, 1994). Although perpetuated from historical origins (Kleider-Offutt, Bond, & Hegerty, 2017), Dixon & Maddox (2005) suggest that media consumption may further perpetuate this association due to the misrepresentation of Black Americans as the perpetrators of crime (Dixon & Linz, 2000a, 2000b). Because stereotypes are heuristics, they are often thought to be, not only conscious, but unconscious or automatic processes as well (Fiske & Taylor, 1991) and thus, may influence both implicit and explicit judgments. These processes aid individuals by filtering out and filling in information associated with the stereotype to make decision-making more efficient in uncertain situations.

### ***1.1.2 Prototypes and Physiognomy***

Alternatively, the use of prototypes are a type of representative heuristic. Prototypes are considered to be the best-fit, or most central members, of a category (Rosch, 1973). From this perspective, judgments and decisions made about potential members of a category are determined based on how closely they resemble or represent, the central member of the category (Rosch, 1975). Similar to stereotypes, there is a significant amount of literature to suggest that certain facial features may be perceived as more prototypical of a particular race than other (i.e., atypical) facial features. Research suggests that certain faces may be perceived to be more

prototypical of race than others based on the physiognomy of the faces. Physiognomy is defined as the spatial organization of specific facial features on the face (Hassin & Trope, 2000) and the decisions that are made due to the organization of these facial features. This definition converges well with literature suggesting that “prototypical” faces seem to retain a culmination of racially stereotypical facial features spatially orientated such that this face-type is most associated with that race that influences subsequent decision making (Kleider-Offutt et al., 2017).

### Face-type

Previous research has shown that Black men with stereotypical facial features tend to represent the “prototypical” Black male and therefore, Black men may be categorized on the basis of the degree to which they possess stereotypically Black features (i.e., some combination of darker skin, broad nose, and full lips, wide-set eyes; Blair, Judd, & Chapleau, 2004; Blair, Judd, Sadler, & Jenkins, 2002; Eberhardt, Goff, Purdie, & Davies, 2004; Knuycky, Kleider, Cavrak, 2014). It follows that prototypical faces within race may be considered most representative of that race and therefore more likely to be subjected to judgment and categorization via the stereotypes typically associated with that race. Similar to availability heuristics (i.e., stereotypes) the employment of representative heuristics have also shown to be unconscious and further, potentially automatic processes.

### ***1.1.3 Face Recognition and Categorization***

Heuristics used in judgment and decision making are also used in perception and face recognition. Faces provide a great deal of information such as the mood or intention of a person. More importantly, faces help to identify others (Bruce & Young, 1986). Shapiro and Penrod (1986) contend that, although humans are great face recognizers, many factors influence accuracy in face perception. One factor that influences accurate face perception is the manner in



which faces are encoded. The way faces are encoded may influence how faces are categorized and subsequently recalled during the decision-making processes.

Face recognition theories suggest that semantic information about a category may influence how we remember faces associated with that category. Shepherd, Ellis, McMurrin, and Davies (1978) had participants view a photograph that was described as a murderer or a lifeboat captain. The participants were then asked to re-create a sketch of the photo they saw and to rate their initial impression of the photo. Results suggest that the lifeboat captain sketches were rated with significantly more positive attributes than the murderer sketches, suggesting that the semantic meaning people have for certain categories (positive or negative) influences facial recognition and retrieval as seen in the re-created facial sketches. Klatzky, Martin, and Kane (1982) extended these findings suggesting that faces may be selectively encoded based on the category label most representative of that face. During this study, participants were shown faces that had been pre-rated to be stereotypical of certain occupations (i.e., athlete, rock musician). Each face was presented with an occupation congruent or incongruent priming label. Results suggest that face-occupation incongruence led to slower responses while face-occupation congruency resulted in varied responses (sometimes quicker, sometimes slower) suggesting that face-occupation congruency may enhance memory and moreover, that occupation labels do seem to convey facial information that is encoded during face processing. Hills, Lewis, and Honey (2008) added to this literature by further suggesting that semantic information may be relevant during the facial encoding process such that faces may be stored in memory to the extent that the face matches categorical expectations (e.g., stereotypes). Similar to Klatzky et al. (1982), participants were presented with faces that were pre-rated to be representative of a certain occupational label (i.e., criminal or actor) paired with either a congruent or incongruent prime.

Results, again, suggest that face-occupation congruency (e.g., criminal face with a criminal label) enhanced memory for faces that were paired with consistent occupation labels. Congruent face-occupation pairs also led to more false alarms for faces that had not previously been viewed. Together, these findings suggest that items like occupational labels have inherent and relevant meaning that may be processed during the facial encoding process. This encoded semantic information may further influence facial recall and recognition.

Kleider and colleagues (2012) extend these findings suggesting that this encoding process leads to a face source memory error such that certain face-types (i.e., stereotypical) may be more likely to be miscategorized and/or accurately recategorized compared to others. Participants were shown panels of faces paired with a role label that was either positive (e.g., artist) or negative (e.g., drug dealer). After being distracted briefly, participants were shown the previously viewed faces individually and were asked to recategorize the faces into their original roles. Stereotypical faces were more likely to be accurately recategorized and miscategorized into negative role labels compared to positive roles. Atypical faces were more likely to be accurately re-categorized and miscategorized into positive role labels compared to negative roles.

Similar to the above findings, more recent research conducted by Cassidy and Gutchess (2015) investigated the influence appearance-behavior pairs have on memory. During this study, participants viewed pre-rated faces on certain appearances (i.e., trustworthiness) paired with a positive or negative behavior (i.e., this person helps the homeless) and completed subsequent memory tasks. The authors found that congruent appearance-behavior enhanced memory compared to incongruent appearance-behavior pairs suggesting that certain faces may be most representative of certain characteristic traits whether positive or negative. These findings further

suggest that certain face-types may be more associated with certain social categories (positive or negative) than others and these associations influence how we remember them.

## **1.2 Children and the Criminal Justice System**

Thousands of children are sentenced to adult correctional facilities every year (Goff et al., 2014; Redding, 2008; Snyder & Sickmund, 2006). This statistic is particularly troubling because, relative to children who are sentenced to juvenile facilities, children who are sentenced as adults are more likely to be assaulted and commit suicide. These findings are particularly concerning for Black children who are 18 times more likely to be sentenced as adults compared to White children (Poe-Yamagata, 2009). Because of the similarity of these statistics to adult Black male statistics within the criminal justice system, it could be that Black children are also associated with similar negative stereotypes as their adult Black counterparts influencing biased decision-making.

### ***1.2.1 Childhood Essentialism***

Research conducted by Haslam et al. (2000) suggests that ‘children’ (i.e.) represent a certain social category that is “essential” (i.e., natural, distinct) and thus includes a sense of innocence and need for protecting (Giroux, 2000). Kitlinger (1988) supported this finding illustrating that photos of children are often used in the media during times of war, crisis and famine (Moeller, 2002) due to our ideological view of childhood leading to a “drive” to help and protect children in unfortunate circumstances. Further, Heins (2007) suggests it is partly because of our association between childhood and innocence that, as a society, we censure items viewed as indecent or inappropriate for children (i.e., movie ratings). Given these findings, it could be that ‘childhood’ is a type of heuristic that is used when making judgment and decisions specifically geared towards children. However, it is worth considering whether the association

with innocence follows for children with faces that display phenotypic racial stereotypicality. Children with stereotypical features may more often be associated with innocence compared to adults, but less than age-matched children with atypical features. This association may lead to differences in judgments towards children (i.e., with stereotypical) compared to adults (i.e., with stereotypical features).

### ***1.2.2 Troublemaker Stereotype***

The ‘school-to-prison pipeline’(Christle, Jolivette, & Nelson, 2005; Herbert, 2007; Lieberman, 2012) is a term used by recent news media coverage addressing the racially disproportionate sentencing of Black children compared to White children largely influenced by the racially disproportional discipline practice that begin within the school system (Lewin, 2012). Many studies have investigated this link between school disciplinary practices and subsequent delinquency (Christle et al., 2005; Gottfredson, Gottfredson, & Hybl, 1993) and specifically how these disciplinary actions differ for Black and White students. Black children seemingly being disciplined and arrested to a greater extent than their White counterparts for similar disturbances and offenses (Herbert, 2007). Research suggests that these differences may partially be attributed to cultural ignorance. For example, teachers often misinterpret the actions of African Americans as inappropriate when that is not the intention (i.e., overlapping speech misinterpreted as disrespect, ritualized humor misinterpreted as legitimate insults; Hanna, 1988). However, research also suggests that the criminalization of African Americans, predominantly African American males, may contribute most to this disparity (Monroe, 2005). Monroe (2005) suggests that stereotypes may implicitly guide the perception teachers have of African American male students as being deviant and requiring greater control than their peers.

Research conducted by Rattan et al. (2012) investigated the influence of a racial prime in the perception and sentencing of a juvenile offender. During this study, participants read a crime scenario about a 14-year-old male with 17 prior convictions who was being prosecuted for rape. The only factor manipulated in this study was the race of the 14-year old male (Black or White). Results suggest that people considered the juvenile significantly more culpability for his actions and more deserving of life in prison without parole when he was described as Black male compared to a White male. These results further support the associative link between Black men and assumed criminality and the possibility that this link does extend to children as well. However, other literature provides an alternate explanation for this implicit perception of Black males as deviant and in need of greater control and provides a possible premise for the assumed association between Black males and crime.

Okonofua and Eberhardt (2015) hypothesized that Black children may be more associated with a “troublemaker” label compared to White children and that this associative link would influence subsequent decision making. After having participants provide disciplinary ratings for two school house infractions, the authors found that people were significantly more likely to report higher disciplinary action for Black children after the second offense compared to White children. Further, at the conclusion of the study, participants were more likely to label Black children as “troublemakers” compared to White children that had committed two school house infractions. These findings suggest that the “criminal Black male” stereotype may extend to children as well, even if to a lesser extent/degree.

Research suggests that adult Black male faces are consistently associated with stereotypical categorical labels and assumed criminality. This is especially true for Black males with stereotypical (compared atypical) Black features. Literature has yet to investigate whether

heuristic biases associated with Black stereotypical face-types extends to Black children's faces. The present research objective is to investigate whether the same heuristic processes that underpin biased decisions with adult face-types extend to children's faces. This will be tested by manipulating face-type (i.e., stereotypical or atypical) measured by (1) correct categorization and miscategorization of faces into class role labels and (2) disciplinary scores for school house infractions.

### **1.3 Overview of Studies**

A replication of previous work with adults was conducted to determine proof of concept. Pilot data was collected investigating whether biased stereotypical face type judgments found in adult studies extends to children's face judgments. Results suggest that, after controlling for attractiveness, certain child faces are perceived as being significantly more stereotypical than other faces (see Table 1). Because previous research has suggested that, prior to the age of nine, both Black and White children are perceived to be equally innocent, this present study focused on late childhood (i.e., 10-12 years old).

The purpose of Study 1 was to investigate whether stereotype associations in memory facilitate facial recognition and subsequent categorization. During Study 1, all children's face stimuli were judged following the protocol of Kleider and colleagues (2012), with minor changes made to ensure the study was relevant for the judgment of children's faces. The hypothesis, consistent with previous findings, was that participants would miscategorize stereotypical faces into negative role label more than atypical faces and participants would correctly re-categorize stereotypical faces into negative roles significantly more than atypical faces. The purpose of Study 2 was to investigate whether face stereotypicality biases judgment and decision-making. To index biased judgment, Study 2 investigated whether people would consider minor school

infractions to be more troubling (i.e., more severe, more irritating to the teacher, and more of a hindrance to class performance) when committed by children with stereotypical faces compared to atypical faces. Further, whether people would prescribe harsher disciplinary measures towards children with stereotypical faces for school-house infractions, compared to atypical faces. The hypothesis was that participants would find school infractions to be more troubling when committed by children with stereotypical faces compared to atypical faces. Further, people would prescribe children with stereotypical faces harsher discipline than those with atypical faces.

## 2 PILOT STUDY

### 2.1 Methods

#### *Participants*

The participants included 44 Georgia State University undergraduate students. All the students participated for course credit and self-reported their age (range = 18-60 years), gender (33 female, 11 male) and race (22 Black, 11 White, 11 other).

#### *Materials*

Fifty-two Black male children's faces were obtained from online model and actor databases and were cropped to include only the face.

#### *Procedure*

Participants viewed a series of 31 Black child faces and were asked to rate the faces on attractiveness and stereotypicality. The faces were presented randomly. Participants were asked to use their own subjective criteria of what they believe a Black stereotypical or attractive face to be. For example, participants were instructed, "Your task is to rate a series of faces on how stereotypically Black you find them. Your ratings should be based on your own opinions and criteria for what a stereotypically Black appearance means." The same wording was used for attractiveness. Ratings were assessed with a 1-7 Likert scale (1 = not all stereotypical/attractive, 7 = very stereotypical/attractive). Last, participants were asked to rate the age they perceived the face to be (1 = 6 -7 years old, 2 = 8 - 9 years old, 3 = 10 - 11 years old, 4 = 12 - 13 years old).



## 2.2 Results

*Face Ratings.* Because previous literature has suggested perceived innocence of children holds until the age of nine, regardless of race (Goff et al., 2014), children rated to have a perceived age of 9 or younger were excluded from analysis ( $n = 5$ ). Average attractiveness and stereotypicality ratings were calculated for each face (see Table 1), and then each face was categorized into a face type group (*atypical*, range = 3.72–4.18,  $n = 8$ ; *medium typical*, range = 4.19–4.37,  $n = 9$ ; *stereotypical*, range = 4.40–4.77,  $n = 8$ ), via trichotomous split, and attractiveness groups (*not attractive*, range = 3.14– 3.77,  $n = 13$ ; *attractive*, range = 3.78– 5.49,  $n = 12$ ), via median split. The trichotomous split resulted in tertiles with the upper tertile categorized as stereotypical and the lower tertile categorized as atypical. A 2 (face type: stereotypical, atypical)  $\times$  2 (attractiveness: attractive, not attractive) between-subjects analysis of variance (ANCOVA) was conducted with attractiveness as a covariate to test whether the stereotypical faces were more stereotypical than the atypical faces. As expected, although the differences in face-ratings were minimal, there was a significant main effect of face type, such that regardless of attractiveness, stereotypical faces ( $M = 4.59$ ) were rated as significantly more stereotypical than atypical faces ( $M = 3.99$ ),  $F(1, 11) = 76.97$ ,  $p < .001$ ,  $\eta^2 p = .88$ .

### 3 EXPERIMENT1

As mentioned, previous research has shown that stereotypical Black males are more likely to be inaccurately re-categorized into a criminal role-type (i.e., Drug Dealer) as opposed to a neutral or positive role-type (i.e., Teacher; Kleider et al., 2012). The purpose of Study 1, was to replicate Kleider and colleagues' (2012) study by investigating whether this miscategorization effect would occur with children as well, based on school-relevant role labels (i.e., peer mentor, troublemaker). The expectation, consistent with previous findings, was that participants would miscategorize stereotypical faces into negative role labels (i.e., troublemaker) more so than positive roles (i.e., peer mentor), and that participants would accurately re-categorize stereotypical faces into negative role labels significantly more often than into positive roles.

#### 3.1 Participants

Participants (N = 54) were Georgia State University students. All the students participated for course credit and self-reported their age (range = 18-60 years), gender (42 female, 12 male) and race (26 Black, 9 White, 19 other).

#### 3.2 Materials

##### 3.2.1 *Category/Face Panels*

Eighteen faces from the pilot study were used to create three panels of six faces. Each panel had the category label (peer mentor, peer tutor or troublemaker) in the center of the panel with six faces surrounding the panel (two stereotypical, two medium typical and two atypical). Stereotypicality of the faces was matched for the three panels (peer mentor, peer tutor, troublemaker).

### 3.3 Procedure

Participants were told that we were creating an educational movie about bullying for middle school students. Participants were further told that they would be seeing a series of child-actor faces, representing children who applied for a role in our movie. These particular roles include portraying a student as either a peer mentor, peer tutor or class troublemaker. Participants were told that their job is to determine how believable and memorable that child would be in portraying the particular role to which they had applied. Participants were then shown each panel of faces and then completed a distracter task (i.e, Word Search) for approximately 20 minutes. Each face was then presented individually, and participants were asked to indicate in which class role the face had been shown earlier.

### 3.4 Results

#### Correct Re-categorization.

The first hypothesis was that activated social stereotypes about positive and negative behavior would facilitate correct re-categorization when the target face was consistent with the label. To determine whether stereotypicality facilitated memory or accurate recategorization, proportions of correct re-categorization were first calculated for each Face type x Class Role cell. That is, the number of correct face re-categorizations divided by the total opportunities to re-categorize a given face type correctly (see Table 2). Then, a 2 (face type: atypical, stereotypical) x 3 (class role: peer mentor, peer tutor, troublemaker) repeated measure ANOVA was conducted to test whether face type influences accurate re-categorization. There were no significant main effects for face type,  $F(1, 53) = 3.15, p = .08, \eta^2_p = .06$  or class role,  $F(2, 106) = 3.07, p = .051, \eta^2_p = .06$ ; nor was

there a significant interaction between face type and class role,  $F(2, 106) = 1.91, p = .15, \eta^2_p = .04$ .

Last, we did not have a priori expectation about the influence of participant race on accurate recategorization as previous literature has shown participant race not to be an influential factor (Kleider et al., 2012). However, a 2 (face type: atypical, stereotypical) x 3 (class role: peer mentor, peer tutor, troublemaker) x 2 (participant race: in-group vs out-group membership) repeated measures ANOVA was conducted to confirm previous findings. In-group membership refers to all participants that self-identified as Black or African American. Out-group membership refers to all participants that did not identify as Black or African American. There was a significant three-way interaction between participant race, class role and face type,  $F(2, 104) = 4.60, p = .01, \eta^2_p = .08$ . In-group members were more likely to accurately recategorize stereotypical faces into the troublemaker role ( $M = .462$ ) more so than the two positive roles ( $M_{\text{mentor}} = .327, M_{\text{tutor}} = .308$ ). In-group members showed no significant difference in accurate recategorization of atypical faces. Out-group members were more likely to accurately recategorize stereotypical faces into the two positive roles ( $M_{\text{mentor}} = .321, M_{\text{tutor}} = .375$ ) than the troublemaker role ( $M = .232$ ). However, out-group members were also more likely to accurately recategorize atypical faces as troublemakers ( $M = .589$ ) compared to the two positive roles ( $M_{\text{mentor}} = .393, M_{\text{tutor}} = .321$ ). All other main effects and interactions were not significant.

#### Miscategorization.

The second hypothesis was that activated social stereotypes about positive and negative behavior would facilitate miscategorizations when the target face was inconsistent with the label. Proportions of errors made for each face-type were calculated for each Face

Type X Class Role cell. That is, for each participant, the number of total incorrect face recategorizations divided by each participants' incorrect recategorizations by face-type (Note: This is not simply incorrect-categorization rates, which would be the mathematical complement to the correct-recategorization rates previously reported). Then a 2 (face type: stereotypical, atypical) x 3 (class role: peer mentor, peer tutor, troublemaker) repeated measures ANOVA, was conducted to test miscategorization rates. There were no significant main effects for face type,  $F(1, 53) = .68, p = .42, \eta^2_p = .01$ , or class role,  $F(2, 106) = .909, p = .41, \eta^2_p = .02$ . However, there was a significant interaction between face type and class role,  $F(2, 106) = 4.37, p = .02, \eta^2_p = .08$  (see Figure 12). The interaction was decomposed by running a series of repeated measures ANOVAs on each class role. There was a significant difference in miscategorizations of atypical faces into the positive peer mentor role ( $M_{\text{peer mentor}} = .238$ ) compared to the negative troublemaker role ( $M_{\text{troublemaker}} = .187$ ) in the expected direction. There was also a significant difference in miscategorizations of stereotypical faces into the negative troublemaker role ( $M_{\text{troublemaker}} = .259$ ) compared to the positive peer mentor role ( $M_{\text{peer mentor}} = .168$ ) in the expected direction. However, there was no significant difference in miscategorizations into the troublemaker role ( $M_{\text{atyp}} = .187, M_{\text{stereo}} = .259$ ) and peer tutor role ( $M_{\text{atyp}} = .221, M_{\text{stereo}} = .242$ ) for either face type (see Figure 1).

Again, although we did not have a priori expectation about the influence of participant race on miscategorizations, a 2 (face type: atypical, stereotypical) x 3 (class role: peer mentor, peer tutor, troublemaker) x 2 (participant race: in-group vs out-group membership) repeated measures ANOVA was conducted to confirm previous findings.

There was no interaction between participants race, class role and face type,  $F(2, 106) = 1.38, p = .26$  nor were any other significant main effects or interactions.

## 4 EXPERIMENT 2

If there is an association between face-type and biased categorization (which was partially supported in Study 1), it would follow that face-type also facilitates biased punishment/discipline judgment and decision-making. Previous research has found Black children to be held more culpable for negative actions compared to White children (Goff et al., 2014; Rattan et al., 2012) as well as more deserving of life in prison without parole (Rattan et al., 2012). Okonofua and Eberhardt (2015) found that participants were more likely to prescribe harsher disciplinary measures towards Black children who had committed multiple school infractions compared to White children. Further, they were more likely to label Black children as being a future “troublemaker” after committing multiple infractions compared to White children. Taken together, it follows that children with stereotypically Black facial features are considered the most culpable for their actions and therefore deserving of harsher discipline for school infractions, particularly if the student has a history of minor infractions.

### 4.1 Participants

Participants ( $N = 101$ ) were Georgia State University students who received course credit for their participation. All the students participated for course credit and self-reported their age (range = 18-60 years), gender (77 female, 24 male) and race (47 Black, 19 Asian, 35 other).

## 4.2 Procedure

Following similar procedures utilized by Okonofua and Eberhardt (2015), participants were first shown a picture of a middle school and were asked to imagine themselves as a teacher there. Participants then viewed a fictional school record for a student that had committed two minor school infractions. Each school record was paired with a child's face (stereotypical or atypical). Participants then read about the student's infractions (one for insubordination and the other for class disturbance), the order of which was counterbalanced across participants. After each infraction, participants were asked: "How severe was the student's misbehavior?" "To what extent is this student hindering you from maintaining order in your class?" "How irritated do you feel by the student?" and "How severely should the student be disciplined?" All questions were rated separately on scales ranging from 1, not at all, to 7, extremely.

Last, the application of the 'troublemaker' stereotype was tested by asking participants at the end of study, the likelihood they would assign a "troublemaker" label to the student (from 1, not at all, to 7, extremely).

## 4.3 Results

Following the methods of Okonofua and Eberhardt (2015) severity and hindrance were combined to create one composite "troublesome" variable. A 2 (face-type: stereotypical or atypical) x 2 (number of infractions: one or two) mixed factorial analysis of variance (ANOVA), was conducted to test the hypothesis that face-type (between-subjects factor) and number of committed infractions (within-subjects factor) influences how troubled participants feel regarding students committing multiple school infractions and the degree to which those students should be disciplined (see Table 3 and 4). There was an expected main effect for number of infractions on disciplinary ratings,  $F(1, 99) = 25.173, p < .001, \eta^2_p = .20$ . Although infractions

were counterbalanced, participants reported higher levels of disciplinary action for the second infraction ( $M = 4.29$ ) compared to the first infraction ( $M = 3.56$ ). There was also a significant main effects for number of infractions on troublesome ratings,  $F(1, 99) = 4.864, p = .03, n^2_p = .05$ . Again, although infractions were counterbalanced, participants reported the second infraction to be more troublesome than the first. However, there was no significant interaction between face type and number of infractions on disciplinary ratings,  $F(1, 99) = .17, p = .69, n^2_p = .002$ , or troublesome ratings,  $F(1, 99) = 2.87, p = .55, n^2_p = .003$ . There was also no significant difference between stereotypical face photos and atypical face photos in likelihood to label a child a troublemaker,  $t(99) = 1.91, p = .44$  (see Table 5).

Last, the main analyses were repeated with participant race (in-group, out-group) as an additional between-subjects independent variable. There was no significant interaction between participant race, face type and troublesome ratings,  $F(1, 97) = .28, p = .60, n^2_p = .003$ . There was no significant interaction between participant race, face type and disciplinary ratings,  $F(1, 97) = .41, p = .53, n^2_p = .004$ . No other main effects or interactions were significant.

Although this task mainly investigated controlled responses, automatic cues likely informed the decision process. In the current study, participants may have been very aware of how high reported disciplinary scores were per face-type (and therefore intentionally measured responses with regard to face-type). However, the change in disciplinary scores between infractions is likely not monitored for balance and fairness the way other aspects of the tasks were. If this is the case, participants should display a face-type bias wherein they are more likely to increase their score for stereotypical faces compared to atypical faces, as this would indicate less of an attempt to balance judgments by face type. For this reason, a post hoc binary logistic regression analysis was conducted to investigate the likelihood of participants increasing their



disciplinary score from one infraction to another for each face-type. The logistic regression model was statistically significant,  $\beta = .38$ , Wald  $\chi^2(1) = 5.38$ ,  $p = .02$ . The model explained 70.0% (Nagelkerke  $R^2$ ) of the variance in disciplinary scores. Participants were approximately 2.5 times more likely to increase their score after repeated infractions, for stereotypical faces compared to atypical faces (See Figure 2 and Table 6).

Last, participant race was included into the model. Although the model remained significant, the chi-square difference ( $X^2 = 2.84$ ) was not,  $p = .09$ . Participant race was not a significant predictor in the overall model,  $\beta = 2.07$ , Wald  $\chi^2(1) = 2.76$ ,  $p = .10$ .

#### 4.4 General Discussion

The Office for Civil Rights (2012) surveyed more than 70,000 schools and consistently found that Black students are more than three times as likely to be suspended/expelled than their White peers. These findings can be particularly troubling due to their contribution to the racial-achievement gap. Further, such findings may at least partially increase the likelihood of youth incarceration. Many studies have investigated the link between school disciplinary practices and subsequent delinquency (Christle et al., 2005; Gottfredson et al., 1993) and specifically how these disciplinary actions differ for Black and White students. As mentioned, they have referred to this potential systemic link as the ‘school-to-prison pipeline’ (Christle et al., 2005; Herbert, 2007; Lieberman, 2012). Surprisingly, however, very little research has been conducted to investigate the psychological processes and cognitive mechanisms that may underpin these racial disparities.

In two experiments, the way in which people perceive, judge and make decisions about children’s faces was investigated. Specifically, how does the “troublemaker” stereotype

associated with Black children (possibly an extension of the "criminal Black male" stereotype associated with adult Black males) influence these judgments and decisions? Do people perceive certain faces to be more stereotypical than others and if so, does this perception influence the way they categorize (or miscategorize) these faces? Further, this research examined whether the ways in which faces are perceived and categorized influenced subsequent disciplinary decisions about those faces. The primary question tested was whether people use face-type when making decisions about children as found with adults even if children are categorized as part of a protected entity.

In Study one, the hypothesis was that, stereotypical faces would be more associated with negative stereotypical knowledge (i.e., troublemaker stereotype) than would atypical faces and thus more likely to be accurately recategorized/miscategorized into negative roles than positive roles. The reverse effect should follow for atypical faces wherein they are more likely to be accurately categorized/miscategorized into positive roles compared to negative roles. This stereotypical knowledge would act as an availability heuristic and facilitate memory for certain faces in certain roles and act as a default mechanism when source memory fails. The hypothesis, consistent with previous findings for adult faces, was that participants would accurately recategorize stereotypical faces into negative role labels (i.e., troublemaker) more so than positive roles (i.e., peer mentor) and participants would miscategorize stereotypical faces into negative role labels significantly more than positive roles. Further, that participants would accurately recategorize atypical faces into positive roles more so than negative roles. The results partially supported these hypotheses showing that children with stereotypical facial features are more often associated with negative stereotypes than are children with atypical features, and this associative link serves as a heuristic that people rely on when making decisions about faces.

Results showed no significant difference in accurate recategorizations, although there were differences in accurate recategorization between in-group and out-group members. Results suggest out-group members may have more likely to consciously suppress making biased decisions compared to in-group members. However, results showed that people were significantly more likely to miscategorize children with stereotypical faces into negative (i.e., troublemaker) roles compared to positive (i.e., peer mentor) roles. People were also more likely to miscategorize atypical faces into positive roles compared to negative roles. These findings suggest that stereotypical features may act as a facial-feature cue such that the association between face type and “troublemaker” was used as a default when source memory failed.

During Study 2, it was investigated whether people would consider minor school infractions to be more troubling (i.e., more severe, more irritating to the teacher, and more of a hindrance to class performance) when committed by children with stereotypical faces compared to atypical faces. Further, the study investigated whether people would prescribe harsher disciplinary measures towards children with stereotypical faces for two school house infractions, compared to atypical faces. The expectation was that participants would find school infractions to be more troubling when committed by children with stereotypical faces compared to atypical faces. Further, the expectation was that people would prescribe children with stereotypical faces harsher discipline than those with atypical faces. The initial hypotheses were not supported. There was no significant difference in how troublesome participants rated children with stereotypical faces who committed multiple infractions compared to children with atypical faces. There was also no significant difference in the disciplinary action prescribed to children with stereotypical faces who committed multiple infractions compared to children with atypical faces.

Because literature suggests that people make both controlled and automatic decisions for all tasks (Evans, 2003), a post hoc analysis was conducted to better probe any potential automatic process that may have influenced decision-making that was not captured in the current response task. The post hoc analysis did suggest the people may have been relying on negative stereotypes, even though they were unaware of this tendency, as there was evidence of biased disciplinary actions meted out by face-type. When people did make the decision to increase in disciplinary action from one infraction to another, they were 2.5 more likely to do so when children with stereotypical faces had committed the infractions compared to children with atypical faces. Although we did not use implicit tasks, the change between infractions is likely not monitored for balance and fairness the way the other tasks were. This may indicate that automatic cues were utilized more so in determining the change in discipline between infractions than in other aspects of the task.

Together, these findings suggest that stereotype-based negative bias may have contributed to the outcomes from both studies. Previous work suggests that negative bias may operate on more of an automatic and involuntary level of cognition despite controlled attempts to appear racially unbiased. (Greenwald & Banaji, 1995; Tversky & Kahneman, 1974). Decision-making is a combination of controlled and automatic processes, depending upon the task and context, one component of the process may carry more weight. Heuristics are mental shortcuts that aid in making quick decisions particularly when we are uncertain or even when making judgments about ambiguous information (Rule, Ambady, & Hallett, 2009; Rule & Sutherland, 2017; Tversky & Kahneman, 1974). This may have been the case in Study 1. It is possible that when participants were certain of their source memory (the label was associated with the familiar face), they were accurate and thus, the study found no significant difference in accurate

recategorization of faces into the original paired role. However, when participants made errors in their categorical judgments, possibly due to uncertainty, they were more likely to rely on their heuristic biases miscategorizing children with stereotypical faces into negative roles significantly more than children with atypical faces. Further, Greenwald and Banaji (1995) stated that investigations of implicit cognition require indirect measures wherein the subject is not informed of what is being assessed nor are they self-reporting. It could be argued that although participants were aware of the actual disciplinary measures, they were not aware of the type of analysis conducted with these measures. Participants may have been very aware of how high reported disciplinary scores were per face-type (and therefore made more controlled responses with regards to face-type). However, participants may have been more focused (i.e., aware) and felt justified of a change/increase in their scores because of the repeated offense and as such, were less aware of increasing their score per face-type (and therefore made more automatic response with regards to face-type). If this is true, then Study 2 would also support the idea that heuristic biases may be operating on more of an automatic rather than controlled level. This could explain why people did not show any difference in the level of disciplinary action but did show a stereotype-face bias *when* they decided to increase disciplinary judgment. In both studies, children with stereotypical faces were more likely to be associated with negative role labels (i.e., miscategorizations) and were more likely to elicit negative racially biased judgments (biased change in disciplinary scores) compared to children with atypical faces. As mentioned, children with atypical faces likely have less stereotypical features and are therefore less associated with negative racial stereotypes.

Many studies have investigated the racial disparity in school discipline finding that although there is a much higher proportion of Black children being punished for offenses

compared to White children, there is very little evidence to suggest this disparity is due to differential rates of behavior (McCarthy & Hoge, 1987; Skiba et al., 2011; Wu, Pink, Crain, & Moles, 1982). In a longitudinal study conducted Elliot et al. (1978; 1979; 1980), there was no significant difference in the number of self-reported offenses committed, although Black students were two times more likely to be suspended compared to White students. Skiba, Michael, Nardo, and Peterson (2002) investigated the types of infractions for which Black and White students were referred to the office. They found that although there were no differences in the severity of the behavior, Black students were more likely to be referred to the office for offenses that required more subjective interpretation (i.e., disrespect) than White students who were referred for more objective offenses (i.e., vandalism). This is interesting when considering the empirical research to suggest that teachers often misinterpret the actions of African Americans as inappropriate when that is not the intention (i.e., overlapping speech misinterpreted as disrespect, ritualized humor misinterpreted as legitimate insults; Hanna, 1988). Taken together, this lack of an evidence-based rationale for school racial disparities in discipline supports the hypothesis that the criminal stereotype (and its historical origins; Kleider-Offutt et al, 2017) associated with adult Black males may extend to children as well. It seems, similar to adult Black males, especially Black males most representative of the category “Black”, that this troublemaker stereotype is also ubiquitous and entrenched in the cognitive network such that it facilitates a face-type bias wherein children with stereotypical faces are more likely to be associated with negative roles and elicit a higher likelihood of discipline increase compared to children with atypical faces.

As mentioned, many of the hypotheses were not supported. This could suggest that there is indeed something unique about children such that face-type is less of a cue to threat/trouble

than found with adults. It is important to address the null hypothesis that face-type bias may not extend to children in the way that it extends to adults. Although we had some children categorized as stereotypical and other children categorized as atypical, it could be that overall, children's facial features are not as distinct as adult facial features. If this is the case, we would not expect for children's facial features to garner the same expectations that adult facial features do and therefore may be less likely to elicit a face-type bias.

As mentioned, research conducted by Haslam et al. (2000) suggests that children represent a social category that is considered "essential" (i.e., natural, distinct) and that this category is associated with a sense of innocence and need for protecting (Giroux, 2000). It could be that "childhood" is a type of heuristic that was used when making judgment and decisions specifically geared towards children. If people have an age-related bias wherein a "childhood" heuristic interferes with negative heuristics, this could lead people to pay particular attention to children's faces (more so than adults) and thus being more likely to accurately re-categorize faces into their original role (Study 1). Further, people may have been more likely to extend social provisions/protections to children that they would not otherwise extend to adults, which could relate to the finding of less harsh punishment overall compared to punishment typically prescribed to adults (Study 2). Thus far, very little research has investigated childhood essentialism as a type of heuristic that may impede judgments. Further, very little research has been done of the recognition or processing of children's faces by adults.

Further, one potential limitation and another possible reason for the unexpected findings of these studies is the use of only faces displaying a positive emotion. Not only has research suggested that happy facial expressions are recognized faster other emotions like sadness (Crews Jr & Harrison, 1994) or neutrality (Hugdahl, Iversen, & Johnsen, 1993), but faces displaying a

happy expression were rated as more familiar than the same faces with neutral expression (Baudouin, Gilibert, Sansone, & Tiberghien, 2000). Last, Foa, Gilboa-Schechtman, Amir, and Freshman (2000) found that faces with happy expressions were better remembered both in free and cued recall tasks than angry and neutral faces. It is possible that emotional expression aided in the recall task presented in Study 1 and the reduced face-type disciplinary bias in Study 2. Future studies will investigate how faces with neutral expression may influence categorization and decision-making for child faces.

Last, another theory that could explain my unexpected findings could be stereotype suppression. In general, people try to resist making stereotypical judgments and that these efforts are usually motivated by a desire to be fair to others and to be viewed as favorable by others (Plant & Devine, 1998). Situational cues that make social norms against stereotyping salient tends to encourage stereotype suppression (Wyer, Sherman, & Stroessner, 1998). These efforts may be compounded when making judgments about children. Stereotype suppression is a controlled process (Galinsky & Moskowitz, 2007) and is therefore utilized when making conscious decisions. Seeing a child with stereotypical features may have caused participants to consciously suppress making any potential biased decisions. Participants may have been even more inclined to resist making stereotypical judgments to appear fair and balanced. Similarly, the design of the experiment may have inadvertently caused demand characteristics wherein participants picked up on the expected outcomes and adjusted their responses accordingly. This may have been particularly true and explain some of the findings from Study 1 wherein in-group members were more likely to accurately recategorize children with stereotypical faces into negative compared to positive roles while out-group members were more likely to accurately recategorize children with stereotypical faces into positive compared to negative roles. Further,



out-group members were more likely to accurately recategorize children with atypical faces into negative roles compared to positive roles. In-group members may naturally feel as though they are not be biased towards their own group, however, literature has shown that in-group members are just as likely to have similar biases towards their own group as out-group members. Because of this, in-group members may have not attempted to control their judgments and thus stereotypical knowledge was more likely to aid in making quick and accurate judgments towards children with stereotypical features. Out-group members, however, may have been more conscious of trying to control their responses to appear unbiased.

Nevertheless, implications from these studies do suggest that the negative stereotypes and face-type bias associated with adult Black males may extend to Black children as well in some circumstances as when misremembering information. These findings confirm that perceiving stereotypical features is not restricted solely to adult faces but children's faces as well (although to a lesser extent). It is noteworthy that although all of the measures were explicit, automatic processes may have influenced certain decisions more so than others. These findings may further contribute to the abundance of literature investigating the disciplinary gap in schools to facilitate potential policy reform. These findings may also aid in the development of early interventions related to racial bias. Because these face-type biases are perceived as early as middle school-age students, this may be a starting point for training and interventions. Future studies will investigate categorization errors and disciplinary ratings with neutral faces to determine how emotion expression may have impacted face-type judgments.

## 5 FIGURES AND TABLES

Table 1: *Mean stereotypicality (1-7, with 7 representing the most extreme score; presented with standard deviations)*

	<u>Stereotypicality</u>			
	<u>Atypical Faces</u>		<u>Stereotypical Faces</u>	
Black male faces	3.94	(0.1)	4.60	(0.14)

Table 2: *Proportions accurate categorization of faces by face-type and category*

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	Atypical	Stereotypical
Peer Mentor	.361 (.28)	.324 (.32)
Peer Tutor	.333 (.32)	.343 (.33)
Troublemaker	.500 (.32)	.343 (.30)

Table 3: *Mean disciplinary ratings for each infraction per face-type*

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	Atypical	Stereotypical
First infraction	3.63 (1.21)	3.48 (1.22)
Second infraction	4.42 (1.38)	4.16 (1.39)

Table 4: *Mean troublesome ratings for each infraction per face-type*

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	Atypical	Stereotypical
First infraction	4.43 (1.20)	4.09 (1.43)
Second infraction	4.78 (1.51)	4.25 (1.49)

Table 5: *Mean troublemaker ratings per face-type*

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	Atypical	Stereotypical
Troublemaker	4.49 (1.43)	4.14 (1.48)

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Table 6: *Likelihood (number of participants) to increase/decrease in disciplinary action by face-type*

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	Atypical	Stereotypical
Increase	16	42
Decrease	23	22

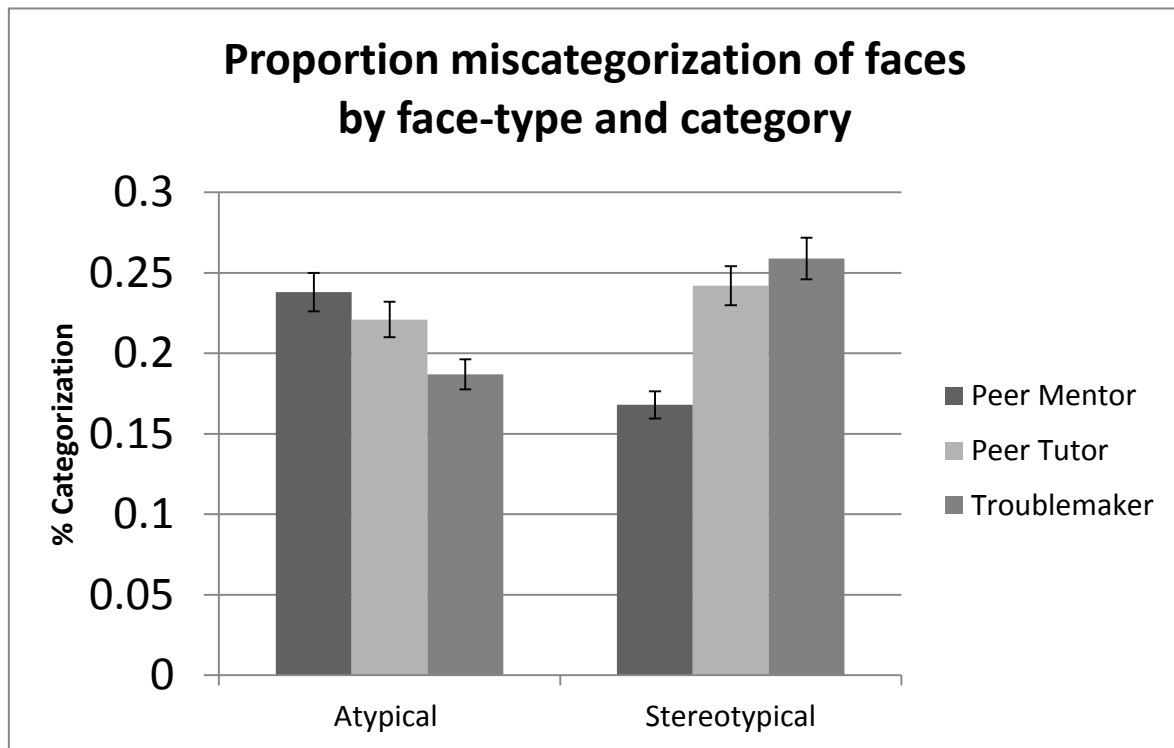


Figure 1: *Proportion of miscategorization of Black children's faces by face-type and category label*



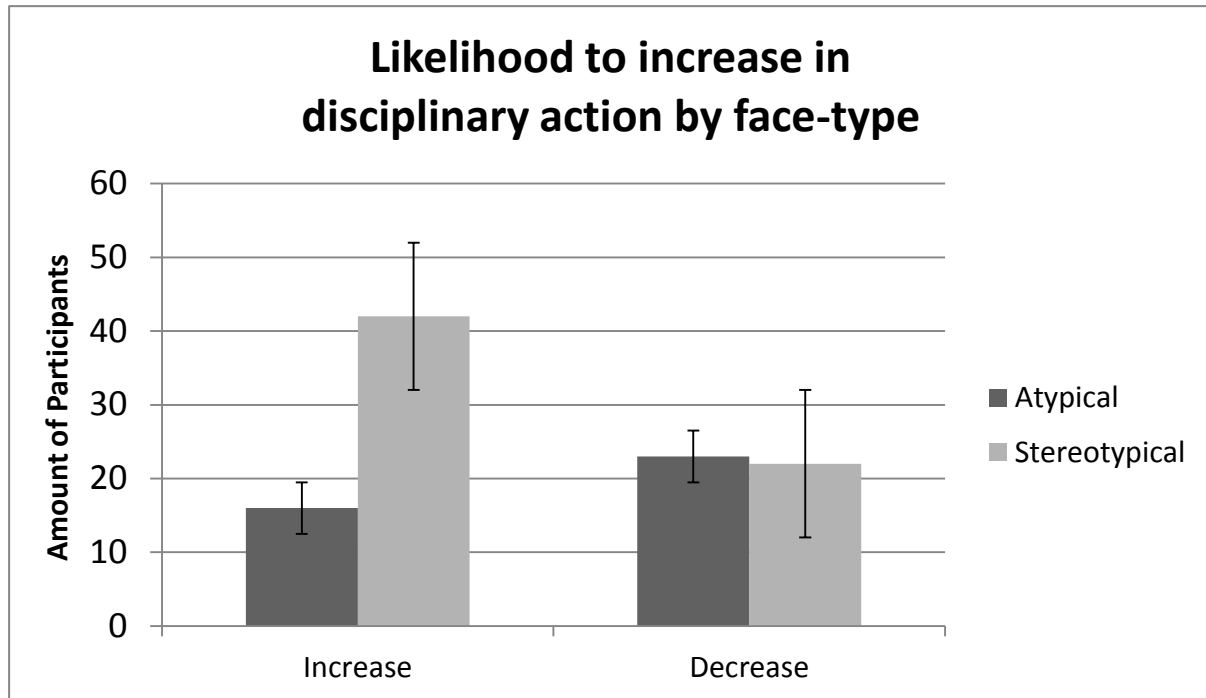


Figure 2: *Likelihood (number of participants) to increase and decrease in disciplinary action by face-type*

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