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**Not all eyewitnesses are equal:**

**Accent status, race and age interact to influence evaluations of testimony**

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**Abstract**

Extralegal factors such as accent status, race and age may affect how someone is perceived in courtrooms. Even eyewitnesses who are not on trial may be rated less favorably as a result of such features. The current study measured accent status, race and age with 254 participants listening to oral witness statements. Results indicate eyewitnesses with higher-status accents were rated more favorably than those with lower-status accents and younger black eyewitnesses were rated higher than older black witnesses. White eyewitnesses were more favorably rated than black witnesses although this was qualified by results suggesting anti-norm deviance. The findings provide the criminal justice system with reasons to question how interactions among witness characteristics and with observer characteristics may influence court decisions.

*Key words:* eyewitness, accent status, race, age

**Not all eyewitnesses are equal:****Accent status, race and age interact to influence evaluations of testimony**

There is considerable concern about institutional racism and other forms of prejudice in the justice system in the UK (Holroyd, 2015). Social discontent and conflict can arise where it is perceived that the criminal justice system is not even-handed in its treatment of different social groups. So, it is important to explore the factors that can lead to perceived or actual prejudice towards different social groups. This applies not only to those accused of crimes but also to those giving evidence, whose testimony may be regarded as more or less valid and reliable depending on their demographic characteristics. The present research examines the impact of the accent and voice of an eyewitness on the perceived value of their testimony. The accent and voice provide the listener with a reference as to the demographic background of the speaker. The attributes investigated were the accent status, and the race and age of the witness, indicated by the accent and the voice. The interactions of these three factors and their interaction with participant race were also examined. The research used auditory stimuli to focus on the accent and voice of the eyewitness not confounded with issues of appearance, e.g. clothing, grooming, attractiveness, etc.

The high-status accents in the current study were chosen so as to suggest individuals associated with a higher level of education, professional (white collar) occupation, and upper and middle social classes. The low-status accents were chosen to suggest individuals associated with a lower level of education, manual (blue collar) employment, and membership of the working class. Throughout this paper we use the term “race” to indicate whether the witness is Black or White. It is not easy to separate the characteristics of accent and voice (such as frequency, timbre, etc.); both refer to spoken language and both can be used to infer the race of the speaker.

Therefore, this paper makes no assumptions about how participants inferred the race of the eyewitness.

### **Accent Status**

Using accent prestige theory (Anderson et al., 2007; Fuertes, Potere, & Ramirez, 2002) it can be seen that an individual's accent and voice are important because they convey information that impacts how others perceive and form impressions about the speaker (Cantone, Martinez, Willis-Esqueda, & Miller, 2019; Ko, Judd, & Stapel, 2009; Krauss, Freyberg, & Morsella, 2002). The theory has two dimensions termed *status* and *solidarity*: *status* includes intelligence, education, and social class; and *solidarity* includes friendliness, trustworthiness, and kindness, and is of less relevance to the present study. The theory posits that listeners will form judgments about the status of a speaker on the basis of the accent and that this will influence reception of the content of a message.

Various researchers have confirmed that accent is one of the most salient aspects of speech (Bayard, Gallois, Pittam, & Weatherall, 2001; Foon, 2001; Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2012; Hansen, Rakić, & Steffens, 2017; Kinzler, Shutts, Dejesus, & Spelke, 2009; Rakić, Steffens, & Mummendey, 2011). The use of accent associated with high social status in the UK, traditionally spoken by the upper and middle classes, has historically commanded the highest ratings of prestige compared with other UK accents (e.g., Coupland & Bishop, 2007). Empirical research confirms that accents of dominant social groups are rated more favorably than those of non-dominant groups (Anderson et al., 2007).

There is little prior work on accent and perceptions of testimony in a legal setting, but the few studies available suggest that accent should be examined further. Dixon, Mahoney and

Cocks (2002) compared a high-status white accent in the UK (Received Pronunciation, RP) with a regional urban accent which they described as third-class; a suspect who spoke with RP accent was evaluated as less guilty. This study suggests that crime statements delivered in an accent denoting higher-status would be viewed more favorably. Incidentally, a later study by Dixon and Mahoney (2004) did not replicate this finding hence further investigation is required. More recently, Kurinec and Weaver (2019) showed that defendants speaking African American Vernacular English (AAVE), compared to Generalized American English (GAE), were evaluated negatively and these evaluations led to more guilty verdicts. In a study about negligence, Cantone et al. (2019) found Black defendants were judged harshest even though both Black and Mexican American defendants were found more negligent than White defendants. This may be as a result of accent even when compared to another ethnic minority group.

Defendant accent should not play a role in judgements of guilt. Witness accent is even less relevant as the witness is likely involved in the case only because the person was in a particular place at a given time. Yet, research has shown that the accent does affect how the witness is viewed. Specifically, Frumkin (2007) compared foreign and native accents in the US and found more positive impressions of witnesses with higher-status German-accented English compared to witnesses with lower-status Lebanese Arabic-accented English. Kurinec and Weaver (2019) found that AAVE witnesses were viewed as less professional and educated compared with GAE witnesses. Frumkin and Thompson (in press) show that witnesses speaking RP in the UK were rated more favorably when compared with witnesses speaking either of two regional urban accents, Birmingham or Multicultural London English (MLE).

Beyond research, there is evidence that witness accent can influence courtroom decisions. It is unclear whether it was the testimony alone, but much has been made of Rachel Jeantel's

speech on the witness stand in the 2013 Zimmerman v State of Florida case. If the jury was as dismissive of Jeantel's testimony as the public and media, it will likely have done nothing to help the defense make its case of guilt against George Zimmerman in the killing of Trayvon Martin (Rickford & King, 2016). Zimmerman was ultimately acquitted.

## **Race**

Accent and voice are strong indicators of race (Bayard et al., 2001; Rakić, Steffens, & Mummendey, 2011). Race can be confounded with country of origin and most of the research has looked at the latter rather than the former. The research is summarized here as it may offer insights into the processing of race within the same country but should be treated with some caution. For example, in a study investigating self-perceptions, US accents (likely the same as GAE) were rated better than Hispanic- or Asian-accented English (Gluszek & Dovidio, 2010). Mirshahidi (2017) found that when an accent was identifiable by location (e.g. Iranian accented English) and that location was undesirable, listener's attributed more negative traits towards the speaker. This suggests that an accent and voice associated with a negatively-perceived nationality might result in the speaker being viewed less favorably. An accent and voice linked with the dominant racial group should be associated with higher social status (Giles & Billings, 2004) and yield advantages for the speakers on the political, economic, and educational fronts (Gluszek & Dovidio, 2010). These findings predict that white speakers would be rated more favorably than black speakers.

In hiring decisions, individuals with heavily accented speech indicating they were a racial minority (i.e., African American, Spanish or Asian accented American English) were rated as less employable (Carlson & McHenry, 2006). Segrest et al. (2006) found job applicants with an ethnic-minority name and accent were viewed less favorably than applicants with an ethnic-

minority name and no accent. These studies are supported by earlier studies by Lippi-Green (1994) and Matsuda (1991).

This leads to the first possibility regarding the effect of race; an accent attributed to a dominant racial group would lead to more positive evaluations of the speaker than an accent attributed to a non-dominant racial group. Whites are the dominant racial group in the UK thus likely to be viewed more positively (Tajfel & Turner, 1979).

A second view predicts more positive ratings for members of the same racial group as the participant. This is supported by social identity theory, which explains how identity may depend on group membership (Tajfel, Billig, Bundy, & Flament, 1971). Individuals strive to achieve a good group identity by developing a positive evaluation of members of their own group. Negative associations with racial out-group members identified by their speech occur in automatic and uncontrollable ways (Greenwald & Banaji, 1995; Kawakami, Dion, & Dovidio, 1998; Sommers & Ellsworth 2000, 2001). These unconscious thoughts may influence one's social perceptions (Dovidio & Gaertner, 1993; Gaertner & Dovidio, 2014). Evidence suggests that people tend to identify their own or similar accent favorably in employment (Carlson & McHenry, 2006; Lippi-Green, 1994; Matsuda, 1991; Segrest et al., 2006) and mock courtroom settings (Frumkin, 2007). This indicates that eyewitness testimony might be rated more favorably if the speaker seems to come from the same racial group as the listener.

A third view is based on the concept that group members prefer individuals who contribute to the maintenance of a positive group norm. Anti-norm deviance is the idea that members of one's own group may be perceived to deviate from the desirable group norm. Research suggests that anti-norm deviance may be penalized by negative evaluation (Abrams, Marques, Bown & Henson, 2000; Frings, Hurst, Cleveland, Blascovich & Abrams, 2012). In the

context of the present study this suggests that if the speaker appears to come from the same racial group as the participant, and the speaker deviates from a desirable group norm by speaking with a low-status accent, the participant may symbolically marginalize the speaker by offering lower ratings.

Taking these sets of findings into consideration, there would appear to be three potential effects of perceived race on the evaluations of a speaker. There might be a general tendency to view a member of a dominant racial group more favorably; more favorable ratings might be given to a member of the same racial group as the listener; or less favorable ratings might be given to a member of the same racial group with a low-status accent (perceived anti-norm deviant).

### **Age**

The final demographic factor considered here is age. Based on recorded speech, listeners formed judgments about speakers based on characteristics such as age showing that speech alone permits inferences about it (Krauss et al., 2002). There is evidence that older speakers tend to be viewed more negatively including being thought of as less mentally competent (Cuddy & Fiske, 2002; Fiske, Cuddy, Glick & Xu, 2002; Kite, Stockdale, Whitley, & Johnson, 2005). Other evidence suggests that listeners are less comfortable with people whose speech sounds older (Montepare, Kempler & McLaughlin-Volpe, 2014). The meta-analysis by Kite et al. (2005) examined studies with a range of different age contrasts, finding ratings of lower competence for older adults over a range of older and younger targets, including people in their 50s.

On the other hand, people in their 50s often tend to be at the height of their career and this age is not generally associated with cognitive decline. Hence, the reason for the lower

ratings of competence is unclear for people in their 50s. The present study used eyewitnesses in their 50s to engage the assumption that they would still be in employment, as unemployment is known to bias ratings of competence (e.g., Kite et al., 2005). The current research focused attention on age but not competence. The older eyewitnesses were contrasted with younger eyewitnesses in their 20s. Taking all of this into account, there is a weak prediction that older eyewitnesses will be rated less favorably than younger eyewitnesses.

### **The present study**

The research used auditory stimuli to focus on the accent and voice of the eyewitness not confounded with issues of appearance (e.g. clothing, grooming, attractiveness). Other aspects of speech were not included, for example: language variation (hesitations), vocabulary, grammar and non-native accents. It is recognized that these are relevant aspects of speech but beyond the scope of the study.

The current study sought to investigate three hypotheses.

- H1, eyewitnesses with accents associated with higher-status social groups would be rated more favorably than witnesses with accents associated with lower-status social groups.
- H2, race would have an effect on evaluations of eyewitnesses: 2a) white witnesses might be rated more favorably than black witnesses; 2b) more favorable ratings might be given to a member of the same race as the participant; or 2c) less favorable ratings might be given to a member of the participant's own race who speaks with a low-status accent.
- H3, older witnesses would be rated less favorably than younger witnesses.

## Method

### Participants

There were 254 online participants who completed the study, 161 females and 93 males, with ages ranging from 18 to 75, mean 26 years, and standard deviation 9.6 years. Self-defined race was 76 black, 99 Asian, 25 whites, 14 mixed (e.g., white and black, black and Asian, etc.), and 40 other (none of the above). Three participants were excluded who reported being unable to hear the testimonies clearly, so 251 participants' data were analyzed. All participants were required to have been resident in the UK from the age of 5 to ensure familiarity with accents common in the UK. Participants were not asked about their own accent; doubts about the accuracy of self-described accent, and the risk of deterring participants by asking them to submit a recording of their speech, suggested that the difficulty in gathering data on participant accent outweighed the potential benefit of exploratory investigation of its impact in the absence of any prediction. The majority of participants were living and working in and around East London, and many were also students. These factors account for the racial mix of the participant sample.

### Design

There were four factors in the design: two within-participant factors of witness age (young vs. older) and witness accent status (high-status vs. low-status), and two between-participant factors of witness race (black vs. white) and participant race (see Table 1). The young eyewitnesses were aged between 20-25 years, while the older eyewitnesses were aged 50-55. This latter age range was chosen to represent a clear difference with the young eyewitnesses but still being of an age to be active in employment. All the eyewitnesses were male to remove the factor of gender from consideration. There was a single dependent variable calculated as an

average of the eight evaluation items (see under Materials). Questions were also asked about the perceived occupational and educational status of the eyewitnesses. Additional items were included for possible exploratory findings to lead to future studies but not used for the present study as they are less relevant to the current hypotheses.

Insert Table 1 about here.

Discrimination on the basis of race has been recognized as a serious social issue for several decades; the Race Relations Act 1965 outlawed discrimination on the grounds of race but age discrimination was not outlawed until 2010 (and there are many exceptions). Accent discrimination is not recognized by any UK law. Culturally then, race is likely a more salient aspect of self-identity than either age or accent, so the design was restricted to considering potential interactions involving participant race but not participant age or accent.

## **Materials**

Two fictional crimes were created (shoplifting and burglary) so that each involved theft but not violence. For each crime, two witness accounts were created, consistent with each other but not covering exactly the same content. Thus, there were four written witness testimonies (two crimes by two accounts). All accounts positively identified a culprit who was given an Asian name so that the race of the perpetrator was not confounded with the race of the witnesses. The four eyewitness testimonies were of the same length, gave the same level of detail, and reported the same seriousness of crime whether it was shoplifting or burglary.

Each participant in the study heard all four pieces of testimony, one each in the categories of young high-status, young low-status, older high-status, and older low-status witness. The testimonies were rotated around the categories in a fully counter-balanced design. Participants,

irrespective of their own race, heard testimony from only white or only black witnesses. This was done so that witness race varied between, and not within participants. This limited the number of testimonies each participant was asked to listen to and avoided speculation about the aims of the study that could have been invoked by the observation of witnesses of different race.

Sixteen people, all resident in the UK since before the age of 5 years, were recruited to produce audio recordings of the witness testimonies: two for each combination of race (black vs. white) by age (young vs. older) by accent (high-status vs. low-status) so the results would not be dependent on one single witness voice in each category. Each of these individuals recorded all four witness testimonies (two crimes by two accounts) so that the testimonies could be rotated around the four conditions of age by accent status in a completely counter-balanced design.

The individuals displaying the high-status and low-status accents were chosen by the researchers to represent the appropriate accents following consultation with the individuals themselves, other colleagues and research assistants, all native to the UK. The high-status accents were those likely to be spoken by people with a high level of education, from an upper class or middle-class family background, working in professional (white collar) occupations. The low-status accents were those associated with a lower level of education, from a working-class family background, working in manual (blue collar) occupations. The Black/White testimonies were voiced by individuals who self-identified as Black British/White British and were normally resident in London, UK. The young/older testimonies were voiced by individuals between 20-25 (young) or between 50-55 (older). All statements were equivalent in fluency so were located towards the powerful end of the powerful/powerless continuum.

A witness name suitable for race, social standing and age was created for each of the experimental categories and was read out, along with the eyewitness age, at the start of the

testimony. This was done to highlight the demographics of the witness. It is realistic for a jury member to have such information and consistent with the purpose of the study to provide this information.

Post-hoc ratings were obtained to verify that the spoken testimonies were perceived as intended. Fifteen participants contributed to the post-hoc ratings, ten females and five males, with ages ranging from 21 to 52, mean age 32, standard deviation 11.3 years; two gave their race as Asian, five as white, six as black, and two as other. All these participants listened to eight pieces of testimony, one for each combination of accent status, race and age. For perceptions of accent status/ race/ age, a mean of 83%/ 81%/ 75% of the testimonies, respectively, were correctly perceived. While not perfect, these post-hoc ratings demonstrate that the demographics of the witnesses giving spoken testimony were broadly perceived as intended. The effect of any misperceptions by the experimental participants would have been to weaken the statistical results (by adding noise to the data) and so the findings presented here can be regarded as a lower estimate of the real effects.

A Likert style questionnaire was used to capture evaluations of the witnesses, on a scale of 1 to 10, that covered a broad spectrum of factors. Perceptions of witness competence included accuracy of testimony, confidence of witness, strength of evidence, perceived truthfulness, and credibility; and the effect of the testimony included ability to convince others, guilt assigned to culprit, pleasing nature of the witness. Most of these are the ratings used in previous research (Frumkin, 2007). The average of the eight ratings described above formed the dependent variable, *Favorability*. Exploratory factor analysis indicated that these eight variables all formed a single factor. Cronbach's alpha ranged from 0.92 to 0.94 (calculated separately for

the within-participant combinations of young high-status accent; young low-status accent; older high-status accent; and older low-status accent). (See Appendix A).

In addition, two questions asked for an evaluation of the occupational status and educational status of the eyewitnesses. These evaluations were also provided on a scale of 1 to 10 and may be found in Appendix B.

## **Procedure**

Participants were invited to participate via social media and personal invitation. The experiment was presented online. After reading information about the study, which confirmed that participants could withdraw at any time without consequence and that their participation was anonymous, participants indicated explicit consent as per British Psychological Society ethics guidelines. The four eyewitness testimonies were presented one at a time in an audio recording. After each recording the participant answered a series of questions to probe their opinion of the eyewitness. The study was approved by the University of East London Research Ethics Committee before data collection commenced.

## **Results**

### **Educational Level and Occupation Perceived**

Two separate ANOVAs were performed with factors of witness accent, witness age, witness race, and participant race, and the dependent variable was either perceived educational level or perceived occupation. For both dependent variables there was a main effect of accent such that witnesses with a high-status accent were perceived to have a higher level of education [ $F(1,94) = 56.3, p < 0.001$ ] and occupation [ $F(1,94) = 39.8, p < 0.001$ ] than witnesses with a low-status accent. For both dependent variables there was also a three-way interaction of accent

status, race, and age, such that an older, white witness with a high-status accent was perceived to have a higher level of education [ $F(1,94) = 6.66, p=0.011$ ] and occupation [ $F(1,94) = 3.78, p=0.055$ ; note this is marginally significant] compared to all other categories. Figure 1 illustrates the interaction for educational level, and the picture for occupation was very similar (refer to Table 2).

Importantly, there was no main effect or interaction involving participant race. The ratings of inferred educational level were equivalent whether the participant was the same or different race to the witness. This suggests that participants were well able to detect the difference between high-status accent and low-status accent in a witness of a different race. (This becomes relevant for one potential explanation for the observed pattern of anti-norm deviance).

Insert Table 2 and Figure 1 about here.

### **Favorability ratings**

There were no values out of range and no missing data as the computer program used for the study required all the questions be answered before questionnaire submission. A single Favorability rating was calculated as the average of the eight variables (see Appendix A) for each eyewitness. Thus, each participant generated four Favorability ratings: young high-status accent, young low-status accent, older high-status accent and older low-status accent. The Favorability rating was used as the dependent variable in the analysis of variance and t-tests. Favorability ratings in all conditions showed a good approximation to a normal distribution.

Repeated-measures ANOVA was performed with two within-participant factors of witness age and witness accent status, and two between-participant factors of witness race and participant race. For this analysis all participants were included so that participant race had levels

of Asian, Black, White, and other (including mixed-race, e.g., white and black, black and Asian, etc). Effect size in the ANOVA was calculated as partial eta squared ( $\eta^2$ ) and effect size in subsequent t-tests was calculated as Cohen's *D*.

There was a main effect of accent,  $F(1, 243) = 40.8, p < 0.001, \eta^2 = 0.144$ , apparent in all conditions, such that a high-status accent was viewed more favorably than a low-status accent (see Table 3). This supports hypothesis 1. There was also a significant main effect of witness race,  $F(1, 243) = 3.90, p < 0.05, \eta^2 = 0.016$ , showing that white witnesses were given higher favorability ratings than black witnesses, supporting hypothesis 2a. This main effect was qualified by two interactions. There was an interaction of accent status with witness race and participant race,  $F(3, 243) = 3.79, p = 0.011, \eta^2 = 0.045$ , and a separate interaction of witness race with witness age,  $F(1, 243) = 7.87, p = 0.005, \eta^2 = 0.031$ . No other main effects or interactions were significant. Follow-up analyses were conducted to investigate these findings.

The interaction of accent status with witness race and participant race was examined first. Since witnesses were either black or white, and the hypotheses concerned effects of same versus different race, only the white and black participants were included in the breakdown of the interaction. Analysis of simple effects, using Bonferroni correction for multiple tests, showed that black participants viewed the high-status accent more favorably than the low-status accent in a black witness,  $t(33) = 5.33, p < 0.001, D = 1.07$ , but not in a white witness,  $t(38) = 1.93$ , not significant. The number of white participants was too small to permit a rigorous analysis though a similar pattern was observed; there was a tendency for white participants to view the high-status accent more favorably than the low-status accent in a white witness but not in a black witness. This interaction of accent status with witness race and participant race is consistent with the prediction of Hypothesis 2c, that is, anti-norm deviance, for the black participants.

The interaction of witness race and witness age was examined next. The favorability ratings for older witnesses and younger witnesses were averaged over high-status and low-status accents; refer to Table 3. Bonferroni correction for multiple tests was applied. Paired-samples *t*-tests showed that the older black witnesses were viewed less favorably than the younger black witnesses,  $t(122) = 2.94$ ,  $p=0.005$ ,  $D = 0.29$ , and independent-samples *t*-tests showed that older black witnesses were viewed less favorably than the older white witnesses,  $t(249) = 3.58$ ,  $p<0.001$ ,  $D = 0.45$ . There was no age difference for the white witnesses,  $t(126) = 1.38$ , not significant. Thus, it appears that the older black witnesses were viewed less favorably than the other witness categories (see Figure 2).

Insert Figure 2 about here.

Insert Table 3 about here.

Hypothesis 3 predicted a main effect of age, with more favorable evaluations of younger witnesses compared to older witnesses, so the observed interaction with witness race was not expected. Post-hoc interpretations will be offered and should be interpreted with caution. Turning back to the analysis of perceived education level (refer to Figure 1 and Table 2) it was observed that the older, white witnesses with high-status accents were assumed to have a higher level of education. Similarly, the favorability ratings were higher for the older, white witness with a high-status accent, though this three-way interaction did not reach statistical significance,  $F(1,243) = 1.79$ ,  $p=0.18$ . This enhancement of favorability rating for the older, white witness with the high-status accent contributed to an overall higher favorability rating for the older white witness. Hence there was no main effect of age, but rather an interaction with witness race so that the older black witnesses were less favorably perceived.

### Discussion

The first hypothesis, that high-status accents would be regarded more favorably than low-status accents, was strongly supported and was apparent for all categories of witness age, witness race, and participant race. Hypothesis 2a was supported by the observation of a main effect of race, with white witnesses being rated more favorably than black witnesses. This was qualified by support for Hypothesis 2c which predicted an effect of anti-norm deviance; the effect of accent status on favorability ratings was stronger for a black participant listening to a black witness than listening to a white witness. There was no support for hypothesis 2b, that there would be a more favorable evaluation of a witness of the same race as the participant compared to a different race. The third hypothesis, that older (50-55) witnesses would be regarded less favorably than younger (20-25) witnesses, was supported only among the black witnesses. The interaction of race and age resulted in lower favorability ratings for older black witnesses compared to younger black witnesses, but older white witnesses were relatively highly rated.

The finding that high-status accents were regarded more favorably than low-status accents in all categories is consistent with previous research (e.g., Bayard et al., 2001; Cantone, et al., 2019; Coupland & Bishop, 2007; Frumkin, 2007; Giles & Billings, 2004; Gluszek & Dovidio, 2010; Greenwald et al., 1998; Kawakami et al., 1998). It seems that favorability ratings are so strongly aligned with the high-status accent that they surface regardless of the demographics of participants or witnesses. It seems plausible that speakers from the respected, formal speech groups of the country in which the research is conducted would be regarded as holding a relatively high position in the social hierarchy of the country (Bayard, et al., 2001).

According to Fuertes et al. (2002) status includes education, social status, success and intelligence, and any of these inferred attributes could have been responsible for the effect of

accent status on favorability ratings. The observation of higher evaluations of occupation and education applied to witnesses with high-status accents, for all categories of witness race, witness age, and participant race, supports the possibility that inferred occupation and/or education may have mediated the effect of accent status on favorability ratings of the witness testimonies.

The observation of a main effect of race, with white witnesses being rated more favorably than black witnesses, is consistent with prevalent views on bias (e.g., Mitchell, Haw, Pfeifer & Meissner, 2005). This was qualified by the observed effect of anti-norm deviance (Abrams, et al., 2000; Frings, et al., 2012) with black participants judging witnesses of their own race particularly harshly when the witness used a low-status accent compared to a high-status accent. There are two possible explanations for this finding. First, perhaps same-race listeners are better able to detect the status of the accent (Perrachione, Chiao, & Wong, 2010) and therefore more likely to make status judgments on the accent. This explanation is rendered less plausible by the absence of any effect of participant race on inferred occupation and education, suggesting that participants were equally able to detect the status of the accent in the same and other race witnesses.

The second explanation is based on the concept of anti-norm deviance which is the idea that members of one's own group are not seen as conforming to the appropriate group norm (Abrams, et al., 2000; Frings, et al., 2012). Perhaps the speaker is viewed as letting down their racial group by speaking with a low-status accent. This explanation attributes the pattern of findings to the more critical evaluation, rather than superior detection, of accent status in the same race compared to the other race. It is proposed that black participants acted to penalize those black witnesses perceived to be anti-norm deviants through lower ratings (Abrams, et al.,

2000; Frings, et al., 2012). In other words, members of the black participant's own race who deviated by speaking with a low-status accent from a desirable group norm were punished with less favorable evaluations. This explains why the lower ratings of the eyewitnesses who spoke with the low-status accent were only applied to black witnesses; the white witnesses would not invoke the desire to punish anti-norm deviance. This is a new finding that could open up an additional area of research.

The third hypothesis was supported for the black witnesses with the finding that older black witnesses were evaluated less favorably than younger black witnesses. In contrast, and unpredicted, older white witnesses were evaluated as favorably as younger white witnesses. Examination of the data reveals that the higher ratings for older white witnesses were especially pronounced with the high-status accent, though this did not reach statistical significance. The relatively high ratings of older white witnesses with high-status accents were also observed on ratings of inferred occupation and educational level. This provides a potential explanation for the pattern of findings regarding age. The older white witnesses with high-status accents were assumed to have high occupation and educational level, and so their favorability ratings were good. This precluded the observation of a youth preference for white witnesses. The older black witnesses, even those with high-status accents, were not assumed to have high occupation and educational level so their favorability ratings were relatively low. This may be a plausible explanation for the unpredicted interaction but it is speculative in the absence of a clearer statistical picture.

An alternative explanation finds support in the economics literature; it suggests that older people from ethnic minority groups are discriminated against in employment (e.g., Drydakis, MacDonald, Chiotis, & Somers, 2017). If this finding from economics is part of a

more general view then it would suggest that discrimination could also arise in the criminal justice system. The current study offers support for this possibility. This is consistent with recent investigations that many older black people were relegated to a lower status in society, and so their testimony may be perceived less favorably. For example, the BBC website (3<sup>rd</sup> May 2018) reported that the “Windrush generation” (Caribbean immigrants recruited to work in the UK following WWII) were confined to menial jobs in low-status occupations, and that discrimination in the workplace, housing, and in social activities was widespread. It is possible UK citizens still expect to find older Black people in lower-status roles even though the younger Black population has broken some of the barriers the older generations faced. In contrast, one is accustomed to seeing older white people in positions of authority (e.g., teachers, doctors, Members of Parliament). This might stimulate unconscious biases that lead to a more respectful rating of the older white person compared with the older black person. There is evidence from economic research showing higher rates employment for Whites compared to ethnic minorities and for the younger compared to aged 50 plus populations (Hotopp, 2005). These are potential explanations and more research would shed further light on these possible explanations.

It is worth noting that previous research has found racial minorities are viewed less favorably than the dominant racial group in general. Though this effect was found in the present study it was weak and qualified by interactions with other factors. This may be due to the inclusion in the present study of more participants from racial minority groups which may have facilitated the detection of interactions involving participant and witness race. This study highlights the importance of looking at the intersection of participant and target race, and of considering how cultural and political changes may impact expressions of prejudice.

### **Limitations**

Some limitations should be noted. First, the potential interaction between witness and participant age was beyond the scope of this study but could be examined in further experiments. Second, participant accent was not recorded and this might have interacted with other experimental factors. Third, the interaction of witness age and race was not specifically predicted so will require replication. Finally, the post-hoc categorization of the eyewitness speech as younger/older, Black/White, and high-/low-status was imperfect. This would have contributed random noise to the results and so stronger findings could be expected in a genuine courtroom in which jury members could also see the witnesses.

### **Future studies**

The current study examined evaluations only of black and white eyewitnesses. Future research could investigate ratings of eyewitnesses from other racial groups and nationalities. Other variables such as gender of witnesses could be assessed as well. Most participants were based in London, UK, which has a very diverse community and where participants would likely mix with individuals from a variety of racial groups on a daily basis. Different, or stronger, results might have been obtained from participants with less experience of everyday interactions within a multi-racial community. Another avenue for future research would explore the existence of bias against anti-norm deviants in the field of perceptions of accent. Finally, perceptions of older black witnesses should be re-examined given the changing patterns of interracial relations.

### **Conclusion**

This study both corroborates previous research and yields new and interesting findings. Accent status, as previously shown, is a strong contributing factor in evaluations of eyewitnesses. The current research lends support to the idea that in the high-stakes courtroom setting, race and

age also contribute to influence ratings of speakers. The other evidence of the impact of race and age are from employment settings. Employment is a high-stakes setting, but quite a different one to a courtroom so this study is a step in acknowledging how those factors may influence judicial proceedings. These findings are crucial in courtrooms because judgements are formed not only on what is said, but how it is said and who says it. The current research shows that accent, race and age seep into perceptions of witness statements and this information is relevant in the criminal justice system. Police and the courts need to be aware of how such biases may affect decision making. Witnesses should be able to make their statements but the judicial system may want to consider who is making the statements since this could affect the acceptance of the testimony.

Knowledge of the listener's demographic group is essential to anticipate the impact of an eyewitness statement as this research shows that the listener is an essential feature of the interaction. An older black male witness's statement may be viewed more harshly than that of a young and/or white witness providing the identical testimony. Defense and prosecution teams should be able to call on any relevant witness to provide a statement in court but this work shows witness demographics might affect the way the testimony is viewed.

This study offers a glimpse at the intersectionality that attorneys may want to consider when thinking about whether to put the witness on the stand or not. In the court the jury is an unknown entity. The accent, race and age of a witness should not influence the jury's perceptions of the testimony; the quality of the testimony should be what matters. This study adds to the small body of literature on bias towards witnesses and hopefully more research will examine these to better understand their effects in the judicial system.

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**Table 1**

*Depiction of the within and between subject study design*

Within participant		Between participant	
Accent	Age	Witness race	Participant race
High-status	Young (20-25)	Black	Black
Low-status	Older (50-55)	White	White

**Table 2**

*Means and SDs for perceived educational level by witness age, witness accent status, witness race, and participant race*

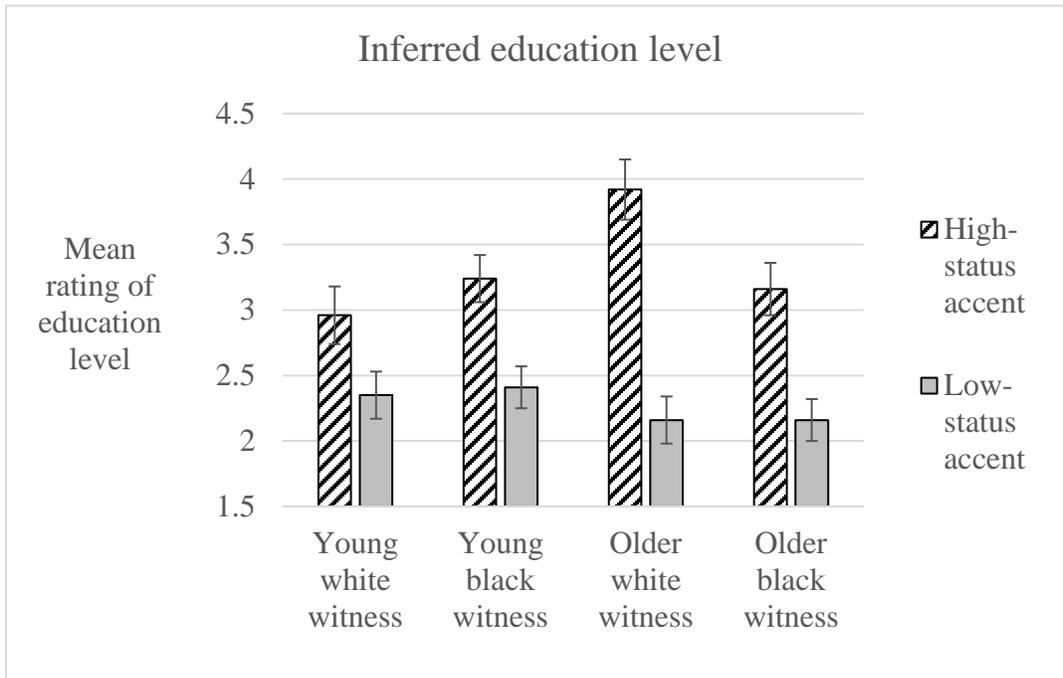
Witness category	Young high-status		Young low-status		Young (total)		Older high-status		Older low-status		Older (total)		High-status (total)		Low-status (total)		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
White witness																	
White participant	3.00	1.25	2.60	1.07	2.80	1.11	4.20	1.55	2.30	1.06	3.25	1.01	3.60	1.07	2.45	0.98	
Black participant	2.95	1.07	2.28	1.02	2.62	0.69	3.85	1.33	2.13	1.06	2.99	0.80	3.40	0.82	2.21	0.82	
Asian other	3.13	0.89	2.69	0.99	2.91	0.71	3.82	0.95	2.39	1.23	3.11	0.79	3.48	0.74	2.55	0.89	
Total	3.12	1.01	2.58	1.03	2.85	0.77	3.92	1.13	2.33	1.18	3.12	0.82	3.52	0.82	2.45	0.89	
Black witness																	
White participant	2.87	1.19	2.20	0.94	2.53	0.77	2.53	1.19	2.13	1.13	2.33	0.90	2.70	1.01	2.17	0.75	
Black participant	3.30	1.18	2.46	1.02	2.88	0.90	3.38	1.21	2.16	0.97	2.77	0.82	3.34	0.98	2.31	0.77	
Asian other	3.28	1.04	2.57	1.13	2.88	0.87	3.13	1.14	2.33	1.05	2.74	0.91	3.21	0.86	2.45	0.86	
Total	3.25	1.10	2.50	1.07	2.87	0.88	3.14	1.18	2.27	1.03	2.71	0.88	3.19	0.93	2.38	0.82	

*Note.* There are relatively high ratings for the older white witness with high-status accent.

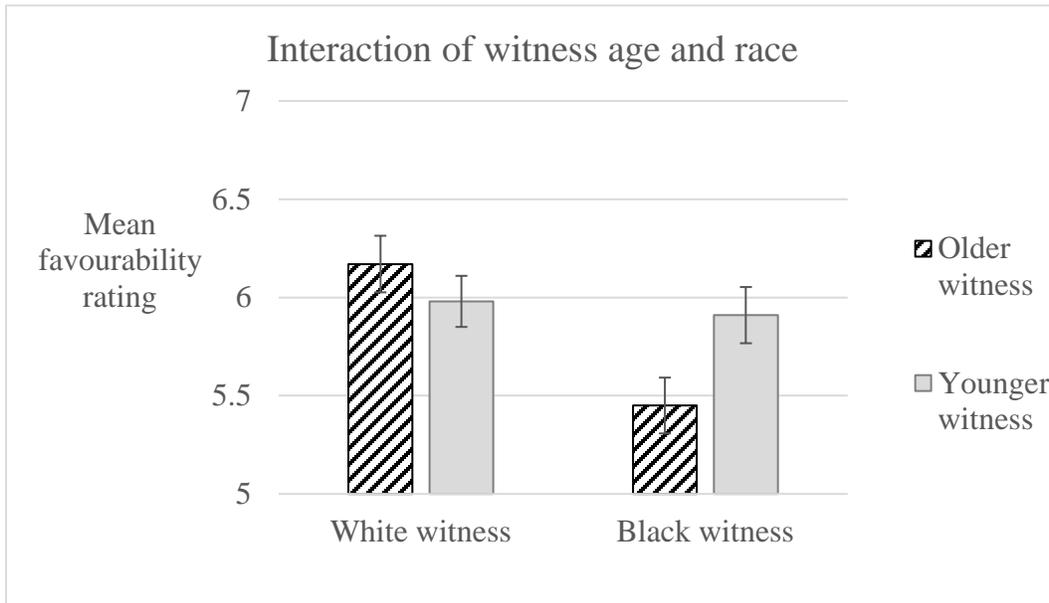
**Table 3**

*Means and SDs for the favorability ratings by witness age, witness accent status, witness race, and participant race*

Witness category	Young high-status		Young low-status		Young (total)		Older high-status		Older low-status		Older (total)		High-status (total)		Low-status (total)		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
White witness																	
White participant	5.83	1.85	5.10	1.97	5.46	1.64	6.34	1.71	5.14	2.58	5.74	1.93	6.08	1.10	5.12	2.18	
Black participant	6.35	1.67	5.73	1.70	6.04	1.47	6.67	1.84	6.38	1.80	6.52	1.28	6.51	1.36	6.05	1.38	
Asian other	6.17	1.92	5.98	1.78	6.08	1.45	6.71	1.86	5.52	2.16	6.11	1.69	6.44	1.56	5.75	1.65	
Total	6.19	1.84	5.77	1.81	5.98	1.47	6.66	1.80	5.68	2.17	6.17	1.63	6.42	1.46	5.72	1.66	
Black witness																	
White participant	5.83	2.20	5.33	1.92	5.58	1.68	5.12	2.21	5.08	1.88	5.10	1.73	5.48	1.85	5.21	1.57	
Black participant	6.91	1.01	5.37	1.73	6.04	1.17	6.46	1.91	4.83	1.94	5.62	1.53	6.48	1.42	5.18	1.70	
Asian other	6.22	2.17	5.54	1.95	5.88	1.57	5.82	1.93	5.02	2.00	5.42	1.57	6.02	1.70	5.29	1.47	
Total	6.34	1.95	5.47	1.87	5.88	1.59	5.90	1.98	4.99	1.94	5.44	1.55	6.07	1.64	5.25	1.53	



**Figure 1:** Interaction of witness accent status, age, and race on inferred educational level. Older white witnesses were evaluated as having a higher level of education compared to all other categories, and this effect did not depend on participant race. Error bars denote the standard error of the mean.



**Figure 2:** Interaction of witness age and witness race illustrating lower favourability ratings for older black witnesses. Error bars denote the standard error of the mean.