
The influence of target and perceiver race in the categorisation of male sexual orientation

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Abstract. Although sexual orientation can be judged from faces, in previous work Caucasian or racially unspecified targets and perceivers have been primarily studied. Here, target and perceiver race were considered in the accurate categorisation of male sexual orientation. Asian, Black, and Caucasian participants categorised the sexual orientations of Asian, Black, and Caucasian men. Accuracy was significantly above chance and consistent across all combinations of perceivers and targets. Response bias scores showed that targets were significantly more likely to be categorised as straight, rather than gay, regardless of target or perceiver race. Moreover, judgments of individual targets were significantly correlated for perceivers from all three groups, suggesting cross-race consistency in target legibility. The perception of sexual orientation from faces therefore appears to be robust against variations in target and perceiver race.

1 Introduction

Whether passing someone on the street, standing in line at the market, or rubbing elbows at a cocktail party, we are always forming impressions of other people. Often our conclusions about others are based on little information and a body of work has shown that we spontaneously and automatically extract information about people from cues in their appearance (eg Zebrowitz 1997). Indeed, we immediately categorise individuals according to their age, race, and sex (Macrae and Bodenhausen 2000). These cues are usually easy to read from individuals' appearances because they are perceptually obvious. Age, race, and sex all have clear physical markers that facilitate their perception (eg Brown and Perrett 1993; Ellis et al 1975).

Unlike age, race, and sex, there are many social dimensions for which group membership is not obvious but ambiguous. One such distinction is sexual orientation. The boundary between who is gay and who is straight is not easily perceived but can be judged with accuracy that is significantly better than chance guessing (Ambady et al 1999). Differentiating between gay and straight individuals often relies on extracting information from cues that are not obvious and of which perceivers may not even be aware (Rule et al 2008). Yet judgments of sexual orientation from very limited nonverbal cues are surprisingly robust. For instance, one study showed that judgments of men as gay and straight from photographs of faces were just as accurate when perceivers saw the faces for 50 ms as when they had unlimited time to make their judgments (Rule and Ambady 2008).

Despite the growing evidence that the reliable perception and categorisation of sexual orientation is rather robust, there are reasons to believe that the accuracy of judging sexual orientation might be nuanced by other factors. For instance, folk logic and stereotypes suggest that sexual orientation may be easier to judge among Caucasian targets. The principal reason supposed for this is that stereotypes about other racial groups are often confounded with notions of gender (Glenn 1992, 1999; Johnson et al, in press; Lorde 1984; Pinar 2001). Specifically, Asians are believed to be associated with femininity and Blacks with masculinity, at least in the US (see Goff et al 2008). Indeed, Johnson and Ghavami (2011) recently reported that Asian women and Black men were less likely to be categorised as lesbian and gay, respectively, owing to associations between race and gender. In addition, Asian men were viewed as more feminine (and more likely to

be categorised as gay) and Black men were viewed as more masculine (and less likely to be categorised as gay) than Caucasian men. Given that the majority of participants in the study were Caucasian and perceiver race was not tested as a factor, it is curious whether racial ingroup members might show the same effects. Individuals rely more heavily on stereotypes when perceiving outgroup members than ingroup members (eg Macrae and Bodenhausen 2000); thus, the association between specific racial groups and qualities of gender may vary when individuals judge their racial ingroup.

Gender is an essential component in the perception of sexual orientation. Historically, sexual orientation has been considered a case of gender inversion (Pillard 1991; see also Sell 1997)—the notion that gay and lesbian individuals are men and women existing in female and male bodies, respectively. Much research has shown evidence that gay men and lesbians are perceived through the lens of inversion. Deaux and Lewis (1984), for example, found that men who walked with a gait stereotypical of women were perceived as gay and women who walked with a gait stereotypical of men were perceived as lesbian (see also Frable 1987; Freeman et al 2010; Friedman and Zebrowitz 1992; Johnson et al 2007; Rieger et al 2010).

Given that race affects perceptions of gender, and gender affects perceptions of sexual orientation, it seems plausible that targets' races might influence perceptions of their sexual orientation. Johnson and Ghavami (2011) showed evidence that this may be the case. One complication of their study is that the participants made simultaneous evaluations of masculinity and femininity when categorising the targets as gay and straight, which might have influenced their judgments. The question whether sexual orientation can be accurately categorised for other racial groups therefore remains somewhat unclear and the role of perceiver race is unknown.

Despite these indications that judgments of sexual orientation may vary according to target and perceiver race, the majority of research examining the accuracy of judgments of nonverbal behaviour across social groups has actually shown evidence of cross-group consistency. Emotional expressions can be judged accurately across different racial groups (eg Gitter et al 1972) and across cultures (Ekman et al 1969). There is high consensus in ratings of facial attractiveness and personality traits across both racial and cultural groups as well (Albright et al 1997; Cunningham et al 1995; Rule et al 2010; Zebrowitz et al 1993). These data may favour the hypothesis that sexual orientation will be consistently judged across different racial groups—as do the findings reviewed above suggesting that judgments of sexual orientation are fairly robust. Yet it is also possible that sexual orientation will be an exception among this body of work on cross-group consistency in social perception. The present research therefore aimed to explore whether sexual orientation might be judged differently or similarly across racial groups.

To investigate the influence of target and perceiver race in the categorisation of male sexual orientation, participants were asked to categorise the sexual orientations of Asian, Black, and Caucasian men from photographs of their faces. In study 1, a racially diverse sample of participants judged faces from all three racial groups in random order. In study 2, however, separate groups of Asian, Black, and Caucasian participants categorised the faces of Asian, Black, and Caucasian targets. In both studies, signal detection analyses were applied to measure not only the accuracy of participants' categorisations of the targets as gay and straight, but also the threshold, or 'response bias', that they used to distinguish between gay and straight targets.

2 Study 1

Most previous work examining the accuracy of judgments of sexual orientation from nonverbal and facial appearance cues has either employed entirely Caucasian or racially unspecified groups of targets. The first step in examining whether race may have an impact upon judgments of sexual orientation, then, was to ask perceivers to categorise

the sexual orientations of a racially diverse group of targets. Participants in study 1 thus categorised the sexual orientations of Asian, Black, and Caucasian men from their faces in a repeated-measures design.

2.1 Method

2.1.1 *Participants.* Seventy-five undergraduates (thirty-four men, thirty-eight women, and three sex-unspecified) participated in exchange for partial credit in an introductory psychology course. Twenty-three participants self-reported their race as East Asian, one self-identified as Black, twenty-eight self-identified as Caucasian, and the rest identified with another racial group, or opted to not report their race. Three participants were removed from the final sample because they categorised all targets as straight. All participants were treated in accordance with the ethical guidelines of the Declaration of Helsinki.

2.1.2 *Stimuli.* Photographs of the faces of 300 men seeking either men (150 photos) or women (150 photos) as partners were downloaded from the same Internet dating website. One-third of the photos were of self-identified Asian men, another third were of self-identified Black men, and the remaining third were of self-identified Caucasian/White men.

The photos came from personal advertisements posted in various major, non-local US cities. Equal numbers of Asian, Black, and Caucasian gay and straight targets came from each city. Photos were collected by hypothesis-blind research assistants who were instructed to download the first 50 photos of each type of face that they encountered, provided that they met the following criteria: each target's full face was directed toward the photographer's camera and they did not have any facial adornments, such as glasses, piercings, or facial hair (eg beards or moustaches). The search for targets was also limited to individuals indicating that they were between the ages of 18 and 30 years (ie the participants' age-based peer group). Critically, the website used to cull the photos ordered the presentation of the faces based on how recently users had logged in to the site, versus sites that order the faces based on the profiles that are most downloaded, most popular, or most viewed. Thus, by choosing the faces first encountered in the search, we were presented with a relatively random selection of individuals and, in many cases, the faces meeting our selection criteria nearly exhausted the choice of faces in a particular geographic area.

Once collected, targets' faces and hair were extracted from their original background, standardised for size, and converted to gray-scale (see figure 1 for sample stimuli). Given that men and women are stereotyped to differ in emotional expressivity (eg Hess et al 2005) and that gay men are stereotyped as being gender-inverted (eg Pillard 1991), naive research assistants coded the faces for affective expression on a



Figure 1. Sample stimuli representing the Asian, Black, and Caucasian targets. Individuals pictured are volunteers and were not used in the actual experiments.

7-point scale (1 = neutral, 4 = happy, and 7 = very happy) to ensure that differences in attributions of sexual orientation would not simply be based on displays of facial affect. The raters showed high agreement [Asian ($n = 2$): Spearman–Brown $R = 0.83$; Black ($n = 2$): Spearman–Brown $R = 0.83$; and Caucasian ($n = 2$): Spearman–Brown $R = 0.80$] and so their scores were averaged for each target. Two-sample t -tests comparing the gay and straight targets showed no significant differences: Asian: $t_{98} = 0.13$, $p = 0.90$; Black: $t_{98} = 1.43$, $p = 0.16$; Caucasian: $t_{98} = 0.04$, $p = 0.97$.

2.1.3 Procedure. Participants were seated approximately 61 cm from a computer monitor and instructed that they would be seeing a series of men's faces and that they were to categorise each as either gay or straight according to his probable sexual orientation. Following the instructions, each of the 300 faces appeared on a computer screen individually in a random order, subtending $10.36 \text{ deg} \times 11.55 \text{ deg}$ of visual angle. There were no practice trials and no feedback was given to the participants about any of their responses. Trials were separated by 1000 ms of rest during which the computer screen was blank. Participants made their categorisations via key-press (gay = Z, straight = /) and the response labels were presented on the computer screen along with the faces. Although the participants were not restricted in the amount of time they were allowed for each judgment, they were encouraged to work quickly and to rely on their gut instinct ($M_{\text{response latency}} = 1236 \text{ ms}$, $\text{SE} = 58 \text{ ms}$). After completing the categorisations, participants were prompted by the computer to input their race and sex, with the option of no response, and were debriefed. Finally, participants were asked if they had recognised any of the targets; none did.

2.2 Results and discussion

Data were analysed using signal detection (see Sporer 2001 for review). Categorisations of gay faces as gay were counted as hits and categorisations of straight faces as gay were counted as false alarms. Categorisation accuracy (ie the ability to distinguish a gay face from a straight face) was then calculated using the formula for A' provided by Rae (1976), which yields scores functionally equivalent to bias-corrected measures of percent correct (Rule and Ambady 2008). Participants were significantly more accurate than chance (0.5) in their categorisations of the faces (see table 1 for summary statistics). Moreover, this was true for all of the Asian, Black, and Caucasian groups of targets after applying the Simes–Hochberg correction for multiple comparisons. A repeated-measures univariate ANOVA of the participants' A' scores for the three target groups showed no significant difference, suggesting that participants were equally accurate in their categorisations of all three racial groups: $F_{2, 142} = 1.04$, $p = 0.36$, $\eta_p^2 = 0.01$.

Whereas A' provides a measurement of perceivers' sensitivity in distinguishing two classes of stimuli, such as gay versus straight faces, the companion statistic B' can be used to measure participants' threshold for categorising a face into one of the two groups. Thus, to measure participants' response bias, or tendency to categorise faces

Table 1. Descriptive statistics and one-sample significance tests for participants' categorisations of Asian, Black, and Caucasian targets in study 1.

Target race	Hits		False alarms		Accuracy (A')				Response bias (B')			
	M	SD	M	SD	M	SD	t	d	M	SD	t	d
Asian	0.33	0.19	0.28	0.19	0.56	0.10	5.43***	0.64	0.06	0.25	2.11*	0.25
Black	0.21	0.18	0.19	0.18	0.54	0.12	2.72**	0.32	0.11	0.32	3.00**	0.35
Caucasian	0.41	0.20	0.36	0.20	0.54	0.11	3.20**	0.38	0.06	0.21	2.42*	0.29
All	0.32	0.17	0.28	0.17	0.55	0.07	6.15***	0.72	0.06	0.12	4.56***	0.54

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; all tests significant following Simes–Hochberg correction for multiple comparisons.

as belonging to one group versus the other, the proportions of hits and false alarms were entered into the formula provided by Quanty et al (1975). Overall, participants showed a positive response bias that was significantly greater than 0 (no bias), meaning that they were more likely to categorise the faces as straight rather than gay (see table 1). This was consistent across all three groups of Asian, Black, and Caucasian targets following correction for multiple comparisons. However, the three groups did not significantly differ when tested via a one-way repeated-measures ANOVA: $F_{2,142} = 0.96$, $p = 0.39$, $\eta_p^2 = 0.01$. Participants were therefore no more likely to categorise an Asian man's face as gay than they were a Black or Caucasian man's face. None of the effects for accuracy or response bias differed according to participant sex: $t_s < 1.48$, $p_s > 0.14$; the sex-unspecified participants were excluded from these analyses but included in all other analyses.

Asian, Black, and Caucasian men's sexual orientations were therefore categorised with equivalent levels of accuracy and the three groups were all more likely to be categorised as straight, rather than gay, with no significant differences between the groups. One limitation of this study is that approximately equal numbers of Asian and Caucasian individuals participated in the study, as compared to only a single Black participant. Additionally, asking participants to rate targets from all three racial groups might have affected the results of the study by creating a context within which targets from the three groups may be judged comparatively to one another, possibly anchoring the judgments to particular racial groups (see Biernat and Manis 1994). In study 2, therefore, samples of Asian, Black, and Caucasian perceivers were asked to separately categorise targets from each of the same three racial groups.

3 Study 2

In study 1, the accuracy and threshold (ie response bias) for categorising men as gay and straight were equivalent across Asian, Black, and Caucasian targets. One limitation in the previous research on the perception of sexual orientation is that perceiver race has not been considered. This limitation was also present in study 1. In study 2, therefore, Asian, Black, and Caucasian participants were asked to judge the sexual orientations of Asian, Black, and Caucasian male targets. However, rather than present all of the targets to every participant, separate groups of Asian, Black, and Caucasian perceivers independently categorised the targets from each of the three racial groups in an effort to ensure that the judgments were not influenced by comparisons between the racial target groups.

3.1 Method

A total of one hundred and eighty-nine undergraduates (seventy men, one hundred twelve women, and seven sex-unspecified) participated in exchange for either partial credit in an introductory psychology course or monetary compensation. Approximately one-third of the participants identified as Asian (sixty-one), Black (sixty-seven), and Caucasian (sixty-one). Of the sixty-one Asian participants, twenty-one categorised Asian men's faces, nineteen categorised Black men's faces, and twenty-one categorised Caucasian men's faces; of the sixty-seven Black participants, twenty categorised Asian men's faces, twenty-five categorised Black men's faces, and twenty-two categorised Caucasian men's faces; and of the sixty-one Caucasian participants, twenty-two categorised Asian men's faces, twenty categorised Black men's faces, and nineteen categorised Caucasian men's faces. All participants were treated in accordance with the ethical guidelines of the Declaration of Helsinki.

The procedures and stimuli were the same as in study 1, with an important exception. Rather than view all 300 faces, participants viewed only the faces of one racial group. That is, participants categorised the sexual orientations of either Asian, Black, or Caucasian

men, and never saw the faces from the other two groups; nor were they informed that there were multiple conditions in the experiment or that race was a variable of interest. The mean response latency across all 3×3 conditions was 1362 ms (SE = 48 ms). No participants recognised any of the targets.

3.2 Results and discussion

Data were analysed using signal detection, as in study 1 (see table 2 for summary statistics). One-sample *t*-tests comparing the participants' accuracy against chance guessing (0.5) showed that participants categorised men's sexual orientations significantly better than chance for all of the 3 (perceiver race) \times 3 (target race) groups following correction for multiple comparisons. Similarly, participants showed a statistically significant tendency towards assuming the targets were straight, rather than gay, across all 3×3 combinations of perceiver and target race (see table 2).

Table 2. Descriptive statistics and one-sample significance tests for Asian, Black, and Caucasian participants' categorisations of Asian, Black, and Caucasian targets in study 2.

Participant	Target	Hits		False alarms		Accuracy (A')				Response bias (B')			
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>d</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>d</i>
Asian	Asian	0.29	0.18	0.24	0.17	0.57	0.09	3.64**	0.80	0.12	0.26	2.15*	0.47
	Black	0.25	0.11	0.19	0.13	0.58	0.09	3.93***	0.90	0.14	0.16	3.81***	0.87
	Caucasian	0.36	0.14	0.29	0.13	0.58	0.10	3.35**	0.73	0.06	0.12	2.34*	0.51
Black	Asian	0.37	0.15	0.31	0.16	0.58	0.09	4.01***	0.89	0.08	0.13	2.77**	0.62
	Black	0.32	0.17	0.27	0.15	0.56	0.07	4.39***	0.88	0.06	0.11	2.53**	0.51
	Caucasian	0.41	0.12	0.37	0.14	0.55	0.09	2.64*	0.56	0.05	0.11	2.05*	0.44
Caucasian	Asian	0.32	0.17	0.27	0.16	0.55	0.08	3.37**	0.72	0.06	0.11	2.59*	0.55
	Black	0.26	0.09	0.22	0.10	0.57	0.10	2.45*	0.55	0.10	0.20	2.16*	0.48
	Caucasian	0.38	0.12	0.32	0.11	0.55	0.07	3.98***	0.91	0.05	0.08	2.53*	0.59

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; all tests significant following Simes–Hochberg correction for multiple comparisons.

Critically, the results of a 3 (perceiver race: Asian, Black, Caucasian) \times 3 (target race: Asian, Black, Caucasian) between-subjects ANOVA on participants' accuracy scores showed statistically equivalent levels of accuracy across both perceiver ($F_{2,180} = 0.84$, $p = 0.43$) and target ($F_{2,180} = 0.17$, $p = 0.85$) race. Moreover, target and perceiver race did not interact ($F_{4,180} = 0.27$, $p = 0.90$) and the addition of participant sex (men and women only) as a factor showed neither a main effect ($F_{1,164} = 0.05$, $p = 0.82$), nor interactions with target or perceiver race (all F s < 1.18 , all p s > 0.32). Similar results were found for response bias (all F s < 1.67 , all p s > 0.19). Moreover, a contrast between the perceivers' own-race versus other-race judgments showed no significant effects for either measure (F s < 0.05 , p s > 0.83). Thus, accuracy and response bias were similar across target and perceiver race.

Although participants reached the same overall conclusions in their categorisations of the faces, it is possible that they achieved this through different means. One way of measuring this is to examine how the individual faces were categorised to see whether participants appeared to have judged the same targets in the same way. Participants' categorisations were therefore coded as correct and incorrect and the percentage of correct responses was calculated for each target, within each participant group. As illustrated in table 3, Asian, Black, and Caucasian perceivers' categorisations of Asian, Black, and Caucasian men's sexual orientations were all significantly correlated. This suggests consistency across perceivers in their categorisations of the faces from all three racial groups with as much as 80% shared variance in judgments across perceiver race. Thus, there was rather strong cross-race consistency in judgments of sexual orientation from individual targets.

Table 3. Correlations between Asian, Black, and Caucasian perceivers' categorisations of Asian, Black, and Caucasian targets in study 2.

Target race	Perceiver race	1	2	3	4	5	6	7	8	9
Asian	Asian		0.87***	0.83***						
	Black			0.87***						
	Caucasian									
Black	Asian				0.85***	0.92***				
	Black					0.89***				
	Caucasian									
Caucasian	Asian							0.75***	0.78***	
	Black								0.77***	
	Caucasian									

Note: *** $p < 0.001$; degrees of freedom = 0.98.

The results of study 2 therefore suggest that the effects observed in study 1 may translate across variations in perceiver race. Thus, it may be that categorisations of sexual orientation could be robust against variations in target and perceiver race and not merely the effect of the intermixed presentation of different-race faces in study 1.

4 General discussion

Previous studies have reported that sexual orientation can be accurately judged from men's faces (eg Rule et al 2008). The racial group memberships of the targets and participants in nearly all of these studies, however, have been either unspecified or heterogeneous, and mostly Caucasian. This has obfuscated the opportunity to examine the role that race may play in the categorisation of sexual orientation. In the present work we therefore investigated whether the outcome and process of categorising men according to their sexual orientations might vary according to target and perceiver race. All of Asian, Black, and Caucasian men's sexual orientations were found to be judged with equivalent levels of above-chance accuracy, regardless of the perceiver's race, and the results for response bias paralleled these effects (ie all groups of perceivers showed a tendency towards categorising targets as straight more often than gay for all target races). Moreover, both same-race (ingroup) and other-race (outgroup) perceivers' judgments were highly correlated.

These data contribute to the growing literature on intergroup consensus in judgments of nonverbal behaviours. Past work has shown high agreement in the ratings of attractiveness and attributions of personality traits made to targets from a number of racial and cultural groups by a diverse set of ingroup and outgroup judges (eg Albright et al 1997; Cunningham et al 1995; Rule et al 2010; Zebrowitz et al 1993). Most similar to the current work, previous research has also demonstrated that most emotional facial expressions can be decoded with accuracy that is better than chance across numerous ethnic, racial, and cultural groups (eg Ekman et al 1969; Elfenbein and Ambady 2002, 2003). This is true when both the targets and perceivers vary in group membership. The findings reported here showed similar results: men's sexual orientations were categorised more accurately than chance for racially diverse groups of targets, as judged by groups of perceivers from multiple racial groups. Moreover, the sizes of these effects were also similar: intergroup judgments of emotion recognition show an average of 58% accuracy (Elfenbein and Ambady 2002) and the mean level of accuracy for judgments of men's sexual orientations in the current work was about 56%.

These data also contribute to the emerging literature showing that the perception of sexual orientation from minimal nonverbal cues is rather robust. For instance, previous research has found that (a) brief glimpses of the face provide sufficient information to

categorise sexual orientation more accurately than chance; (b) these judgments occur automatically; and (c) cues as minimal as a pair of eyes allow perceivers to correctly categorise targets' sexual orientations (Rule et al 2009). Although the current findings show no differences across racial groups, further work may be needed before one can assume that the qualities for speed, automaticity, and minimal cues found in the previous work might apply to other racial groups as well.

Interestingly, these data do not accord with research on ingroup advantages in perception and cognition. Perhaps the most robust such effect is what is known as the own-race bias (also known as the other-race effect or cross-race effect), wherein individuals show better recognition for racial ingroup members than for racial outgroup members (Sporer 2001). Although the most pronounced examples of the own-race preference pertain to memory for faces, a related and crucial component process may be the capacity to perceptually distinguish between individuals belonging to other groups, captured by the lay notion that "they [outgroup members] all look alike" (eg Zebrowitz et al 1993). Although little is known about how social group membership affects the categorisation of ingroup versus outgroup members, the present data suggest that the categorisation of sexual orientation may not be susceptible to ingroup–outgroup differences in perception. This could possibly be because knowledge about differences in sexual orientation may emerge past some critical period at which ingroup face recognition has already been solidified, or perhaps that sexual orientation is not learned in a race-specific manner.⁽¹⁾ More research is needed in these and related areas to increase understanding of how one's social group memberships influence the categorisation of others.

Indeed, the present work is not without limitations. Only three racial groups were examined and the findings may therefore not generalise to groups not included in the present investigation. Indeed, as separate racial groups may represent distinct sub-cultures of a society, it would also be interesting to study how more pronounced group differences may affect the outcomes and processes involved in categorising sexual orientation, as could be achieved from a cross-cultural study. Another interesting future direction would be to study the cues that may be involved in judging sexual orientation across different racial groups. Previous research has isolated three critical facial features as distinctive for male sexual orientation: the eyes, the mouth, and hairstyle (Rule et al 2008). That work was conducted with a majority of Caucasian perceivers and targets. Although the overall accuracy of judging men's sexual orientations in the current work did not differ by race, this does not necessarily mean that the same features support these judgments. This may therefore be an interesting direction for future research.

In addition, like much of the previous work on judgments of sexual orientation from faces, photos of individuals that had been posted in personal advertisements were used. Although this affords many advantages by allowing a researcher to collect photos of individuals that are unlikely to be recognised in a specific geographic location, it undoubtedly introduces some selection bias among the images (eg targets are liable to post the photos that make them look most attractive). Previous research has suggested that people tend to portray themselves as counterstereotypical in their personal advertisements (Bailey et al 1997; Rule et al 2008, 2009) meaning that, if such a bias was systematic and strong enough to affect the present results, it would have resulted in an underestimation of the levels of accuracy observed here. Certainly, although levels of accuracy in categorising the faces were significantly greater than chance, they were not especially high in practical terms. Thus, levels of accuracy may actually be higher than they appear here.

A similar issue that may have limited the levels of accuracy observed in the present work concerns the definition of who is gay and who is straight. Not all individuals seeking same-sex or opposite-sex partners in personal advertisements identify as gay and straight,

⁽¹⁾ Thanks are expressed to an anonymous reviewer for suggesting these possibilities.

respectively. It is possible, then, that some of the targets representing the gay group in the present study may not consider themselves to be gay, for example. Future work should seek to disentangle whether self-identified sexual orientation has a significant influence upon the perception of sexual orientation from facial cues, or if component predictors (eg same-sex sexual attractions, behaviours, fantasies, or experiences) might be better indicators of who is perceived as gay versus straight.

Indeed, although the judgments of individual targets were significantly correlated across perceiver groups, and despite the fact that the present study was sufficiently powered to detect a difference in perceivers' processing time, one must also question whether the current absence of differences for accuracy and response bias might have been due to insufficient power. One previous study did show differences in accuracy for categorising male sexual orientation between groups of perceivers (gay and straight men; Rule et al 2007). A power analysis based on those data indicated that a sample of approximately sixty participants would be needed to achieve power of 0.80 under the current design. Thus, given that study 2 employed more than three times that number of participants, it is unlikely that the absence of effects for accuracy and response bias was due to limitations in statistical power. In terms of target race, Johnson and Ghavami (2011) found a significant difference between target races for response bias. Based on their results, a sample of approximately forty people would be needed to achieve power of 0.80. As the current samples in both studies 1 and 2 were in great excess of that number, statistical power is also unlikely to have been a limitation for observing an effect of target race. Rather, it is perhaps more likely that differences in methodology between their study and those reported here may have accounted for the difference. Further experimental testing may be warranted to fully isolate the differences between the two sets of findings.

In sum, the present research has shown evidence for consistency in the accurate judgment of sexual orientation across races. Stereotypical associations between race and gender may nevertheless influence the processes involved in these judgments. These data speak to the relatively robust nature of judgments of sexual orientation from nonverbal cues and show that men's sexual orientations can be reliably judged across multiple racial groups.

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