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People Can Accurately (But Not Adaptively) Judge Strangers' Antigay Prejudice from Faces

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Abstract

The ecological theory of social perception suggests that people's first impressions should be especially accurate for judgments relevant to their goals. Here, we tested whether people could accurately judge others' levels of antigay prejudice and whether gay men's accuracy would exceed straight men's accuracy in making these judgments. We found that people judged men's (but not women's) levels of antigay prejudice accurately from photos of their faces and that impressions of facial power supported their judgments. Gay men and straight men did not significantly differ in their sensitivity to antigay prejudice, however. People may therefore judge others' levels of prejudice accurately regardless of their personal stake in its consequences.

Keywords Accuracy · Antigay prejudice · Person perception · Power

People can make accurate first impressions of others' states and traits based on minimal nonverbal cues, such as those available in a static face (e.g., Ekman et al. 1969; Tskhay and Rule 2013). Whereas a great deal of research has concerned the accuracy of face-based first impressions, relatively less research has focused on the factors that moderate accuracy (see Alaei and Rule 2016, for a review). The ecological theory of social perception predicts that first impressions will be especially accurate for judgments relevant to one's goals (i.e., when accuracy is adaptive; McArthur and Baron 1983; Zebrowitz and Montepare 2006). Here, we tested this prediction by investigating whether gay men judge strangers' antigay prejudice from their static faces more accurately than straight men do.

The ecological theory of social perception argues that people observe others to realize their social goals (McArthur and Baron 1983; Zebrowitz and Montepare 2006). Indeed, people can accurately infer a variety of socially useful information about strangers from their appearance and behavior, such as their emotional states, personality traits, and affiliation with particular social groups (e.g., Ekman et al. 1969; Penton-Voak et al. 2006; Tskhay and Rule 2013). In further support of the adaptiveness of social perception, one study reported that heterosexual women judged men's (but not women's) sexual orientation more

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accurately when motivated to select a mate (Rule et al. 2011), another found that people low in socioeconomic status perceive others more accurately because they seek control over the precarious nature of their circumstances (e.g., Keltner et al. 2003; Kraus et al. 2010), and an additional study found that Black individuals judged strangers' levels of anti-black prejudice better than White individuals (Richeson and Shelton 2005). Thus, people's first impressions can advantageously guide them as they navigate the social world.

Adaptiveness may not always elicit accuracy, however. For instance, rewards and incentives tend not to facilitate accuracy, and people often fail to accurately judge others' trustworthiness, despite the adaptive value that doing so could provide (Hall et al. 2009b; Rule et al. 2013). Moreover, a great deal of perceptible nonverbal information bears no obvious evolutionary relevance (Zebrowitz 1997). Some accurate first impressions may, therefore, show clear adaptive value whereas others do not, leaving the role of adaptiveness in first impression accuracy somewhat unclear.

Here, we investigated a class of judgments that one might expect to have high adaptive value: judging others' prejudice. Prejudice threatens the cognitive, emotional, and physical well-being of its victims (e.g., Dardenne et al. 2007; Katz-Wise and Hyde 2012; Larson et al. 2007). Accordingly, people often go to great lengths to avoid prejudice, sometimes even by concealing their identity (e.g., Ragins et al. 2007). Individuals vulnerable to discrimination would therefore greatly benefit from identifying prejudiced individuals so that they can avoid them.

Previous studies found that participants could accurately discern strangers' levels of sexism and racial prejudice from nonverbal cues (Goh et al. 2017; Hehman et al. 2013). Although these findings indirectly support the adaptiveness of prejudice judgments, minority group members did not achieve greater accuracy than majority group members when judging the racial prejudice of majority group targets (even though they would have benefitted more from doing so), suggesting homogeneity in individuals' ability to accurately judge strangers' biases from their faces. Indeed, some research suggests that accuracy differences primarily emerge from differences between targets rather than differences between perceivers (Bond and DePaulo 2008; Tskhay et al. 2016; Tskhay and Rule 2017). Yet, other work shows pervasive individual differences in accuracy. For instance, individuals lower in social class, higher in intelligence, and higher in positive traits (e.g., internal locus of control, openness, and social-emotional competence) tend to judge others better (Bjornsdottir et al. 2017; Hall et al. 2009a; Murphy and Hall 2011).

Previous studies examining judgments of others' prejudice have thus far only examined groups characterized by obvious stigmas (i.e., racism and sexism). Targets of prejudice who cannot conceal their stigma might, therefore, differ from those who can conceal their stigma because the latter might feel more able to escape discrimination (whereas the former might experience a sense of learned helplessness about discrimination's inevitability; e.g., Heslin et al. 2012). On the other hand, individuals with concealable stigmas may not need to avoid prejudiced people if they can effectively modulate their stigma's legibility. To help resolve these competing possibilities, we investigated whether individuals with concealable stigmas might judge strangers' prejudice against their group more accurately than individuals who do not share their stigma.

Recent research has identified several social categories with perceptually ambiguous boundaries that perceivers can nevertheless decipher better than chance (see Tskhay and Rule 2013). One example is sexual orientation. Previous studies have found that people quickly, accurately, and unintentionally categorize men and women as heterosexual and nonheterosexual from their faces and minimal nonverbal behaviors (see Rule and Alaei 2016, for a review). To examine whether adaptiveness explains the accuracy of judging

prejudice, we therefore explored the accurate perception of antigay prejudice by gay and straight male perceivers. Past research has found that gay men and lesbian women outperform their heterosexual counterparts in accurately perceiving others' sexual orientations, though this may depend on the source of information (see Rule 2017). Whether nonheterosexual perceivers might show greater sensitivity to other subtle cues to social characteristics remains an open question, however.

Of course, accurate interpersonal judgments depend on the legibility of targets as much as the sensitivity of perceivers (Funder 1995). Given that more dominant individuals tend to express more homophobic attitudes (Haddock et al. 1993), perceivers might accurately judge others' antigay prejudice because they infer it from their apparent dominance (a quality that is quite legible from facial cues; e.g., Rule et al. 2012). Indeed, people with greater facial width-to-height ratios (fWHR), a cue to dominance, express greater racial prejudice (Hehman et al. 2013). Therefore, we tested whether individuals' facial power (a holistic impression of dominance that includes perceptions of facial maturity and masculinity; Oosterhof and Todorov 2008; Zebrowitz 1997) and fWHR might cue their antigay prejudice (Study 1). Moreover, we tested the adaptiveness of these antigay prejudice judgments by comparing the accuracy of gay versus straight men's antigay prejudice perceptions (as knowing someone's level of antigay prejudice should benefit the former more than the latter), and by examining the relationship between how threatened a person feels by homophobia and that person's accuracy in perceiving antigay prejudice in others (Studies 2A and 2B).

Study 1

In Study 1, we investigated whether photos of people's faces convey their antigay prejudice. To accomplish this, we analyzed whether face-based first impressions of targets' homophobia correlated with their self-reported levels of antigay prejudice. Goh et al. (2017) found hostile sexism more legible in the behavior of men than in the behavior of women. We, therefore, tested whether men's levels of antigay prejudice are more perceptible than women's. In a subsequent analysis, we tested whether perceived facial power and measured fWHR mediated the accuracy of these judgments.

Method

We recruited 142 men (M_{age} = 20.00 years, SD = 6.61; 77 White, 65 non-White) and 180 women (M_{age} = 19.47 years, SD = 3.22; 107 White, 73 non-White)[1] to serve as targets, thus achieving approximately 99% power in a multiple regression model with three predictors (see "Results and Discussion") when assuming the average effect size in face-based accuracy studies (r = .29; Tskhay and Rule 2013). We instructed the targets to pose neutral emotional expressions while photographed. Later in the experimental session, each target completed the Modern Homonegativity Scale (Morrison and Morrison 2003; α = .87). We used the 12-item version assessing contemporary negative attitudes toward gay men, containing items such as "[m]any gay men use their sexual orientation so that they can obtain special privileges." Targets reported their agreement to each item (1 = *Strongly Disagree*,

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[1] We did not collect the ages of 97 of these participants due to a programming error.

7 = *Strongly Agree*); the lowest possible score is 12 (minimally antigay) and the highest possible score is 60 (maximally antigay). Our sample displayed nearly the full range (13–56). We cropped the photos just below the chin and around the head (ears and hair included), converted them to grayscale, and standardized their height before presenting them to perceivers.

We then recruited 784 participants from Amazon's Mechanical Turk (MTurk) and randomly assigned them to judge one of the targets' dominance (1 = *Submissive*, 7 = *Dominant*), maturity (using a slider to select an age from 1 to 100 years old), femininity (1 = *Not at all feminine*, 7 = *Very feminine*), antigay prejudice (1 = *Definitely not homophobic*, 7 = *Definitely homophobic*), or masculinity (1 = *Not at all masculine*, 7 = *Very masculine*). Assuming that most of our participants would be White (indeed, 76% were), we randomly assigned them to judge either White male (i.e., 77 targets), White female (i.e., 107 targets), non-White male (i.e., 65 targets), or non-White female targets (n = 73 targets) so that we could avoid target-group contrast effects and control for possible ingroup biases (e.g., Biernat and Manis 1994). On average, 24.5 (SD = 8.88) individuals participated in each condition and demonstrated acceptable inter-rater consistency in their judgments (Cronbach's αs > .70), except those who rated the antigay prejudice of White and non-White women (Cronbach's αs = .63 and .62, respectively). Two research assistants measured the fWHR of all of the White targets (r = .91) and two others measured the fWHR of all of the non-White targets (r = .90).

Results and Discussion

Target-Level

We first aggregated the participants' ratings such that the target served as the unit of analysis. Because the masculinity and femininity judgments strongly correlated, r(321) = − .93, p < .001, we reverse-scored the femininity ratings and created a single Masculinity composite by averaging the two.

We then estimated a multiple regression with targets' actual self-reported antigay prejudice as the outcome variable and targets' average perceived antigay prejudice, sex (effect-coded as − 1 = *female*, 1 = *male*), and antigay prejudice by sex interaction as predictor variables (see Table 1 for intercorrelations and summary statistics). Consistent with previous research on gender differences in prejudice, men self-reported greater antigay prejudice than women did (Herek 2004). Although perceptions of the targets' antigay prejudice did not predict their actual self-reported antigay prejudice overall, it significantly interacted with their sex: men's antigay prejudice significantly predicted their self-reported antigay prejudice whereas women's did not (Table 2).

A principal components analysis demonstrated that perceived dominance, facial maturity, and Masculinity loaded onto one facial component explaining 66% of the variance in ratings. We, therefore, aggregated standardized scores for the targets' perceived dominance, facial maturity, and Masculinity into a single "Facial Power" composite, testing whether it mediated the association between men's self-reported and perceived antigay prejudice to ascertain the potential basis for accurate judgments of male targets' antigay prejudice. Consistent with our hypothesis, we observed a significant indirect effect of men's self-reported antigay prejudice on their perceived antigay prejudice through their Facial Power, ab = .13, 95% CI [.02, .25],[2]

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[2] Confidence intervals obtained by bootstrapping the analysis 5000 times.

Table 1 Summary of intercorrelations and descriptive statistics for targets' facial power, facial width-to-height ratio (fWHR), perceived antigay prejudice, and self-reported antigay prejudice in Study 1

Measure	1	2	3	4	M	SD
1. Facial power	–	.14	.58***	.22**	0.00	0.81
2. fWHR	.11	–	.13	− .04	1.89	0.14
3. Perceived antigay prejudice	.36***	.09	–	.23**	3.58	0.64
4. Self-reported antigay prejudice	− .07	.01	− .03	–	32.48	8.18
M	0.00	1.85	3.18	28.62	–	–
SD	0.69	0.12	0.52	7.62	–	–

Intercorrelations for male targets ($n = 142$) presented above the diagonal and intercorrelations for female targets ($n = 180$) presented below the diagonal

Means and standard deviations for male targets presented in rightmost columns, and for female targets in the bottom rows

Mean facial power represents an average of z-scores

For all measures, higher means indicate more extreme responding in the direction of the construct assessed (e.g., greater perceived Facial Power)

**$p < .01$; ***$p < .001$

Table 2 Standardized regression coefficients and test statistics for the multiple regression model in Study 1 predicting male and female targets' self-reported antigay prejudice from their perceived antigay prejudice and sex

Predictor variable	β	t	p
All targets			
Perceived antigay prejudice	− .03	− 0.32	.75
Sex	.41	3.60	.001
Perceived antigay prejudice × sex	.26	2.26	.02
Female targets			
Perceived antigay prejudice	− .03	− 0.34	.74
Male targets			
Perceived antigay prejudice	.23	2.85	.01

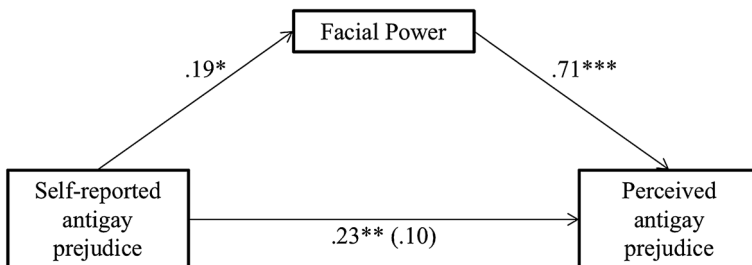Sex effect-coded as − 1 = female, 1 = male; $n = 180$ for female targets, $n = 142$ for male targets

Fig. 1 Illustration of the model testing whether facial power mediates the association between targets' self-reported and perceived antigay prejudice. Path coefficients represent standardized estimates

that accounted for 56% of the total effect (Fig. 1). The reverse pathway was not significant ($ab = .08$, 95% CI [−.04, .20]). Conversely, men's fWHR did not relate to their Facial Power, perceived antigay prejudice, or self-reported antigay prejudice (all $rs \le .15$, all $ps \ge .08$).

Perceiver-Level

Perceptions of female targets' antigay prejudice may not have predicted their actual antigay prejudice at the target level because of the low inter-rater reliability inherent in their scores. We therefore tested accuracy with the perceiver as the unit of analysis by correlating each participant's ratings of the targets' antigay prejudice with the targets' self-reported antigay prejudice. After transforming each participant's correlation coefficient into a Fisher's z score, we tested whether they exceeded chance ($z_r = 0$). Reflecting the target-level analyses above, the transformed correlations significantly exceeded chance among the participants who judged male targets ($\bar{r} = .13$, $SD = .12$), $t(54) = 7.93$, $p < .001$, $r_{\text{effect Size}} = .73$, 95% CI [.58, .83], but not among the participants who judged female targets ($\bar{r} = .03$, $SD = .11$), $t(51) = 0.93$, $p = .36$, $r_{\text{effect Size}} = .13$, 95% CI [−.15, .39]; the two groups significantly differed, $t(105) = 5.18$, $p < .001$, $r_{\text{Effect Size}} = .45$, 95% CI [.28, .59].

Therefore, it seems that people can infer men's (but not women's) levels of antigay prejudice from photos of their faces because of how powerful they look. These results replicated previous work finding that people's racial prejudice and sexism are perceptible from nonverbal cues (Goh et al. 2017; Hehman et al. 2013). Whereas the previous research examining racial prejudice found that fWHR and a powerful face cued perceivers' judgments, only the latter explained participants' accuracy here. Facial Power may thus constitute a general cue to prejudice, whereas fWHR may only cue certain types. In Study 2, we tested whether these judgments' adaptive benefits to potential victims (i.e., gay men) facilitate their accuracy.

Study 2

In Study 1, we found that people accurately inferred men's (but not women's) levels of antigay prejudice from photos of their faces. In Study 2, we investigated the adaptiveness of these perceptions by comparing the accuracy of gay versus straight men. If people accurately perceive antigay prejudice for adaptive purposes (just as they do racial prejudice; Richeson and Shelton 2005), then we would expect gay men to more accurately perceive antigay prejudice than straight men because it would benefit them to avoid the consequences that might come from encountering people high in antigay prejudice. Along those lines, we also tested whether individual differences in how threatened the participants felt related to their accuracy (and might possibly explain any potential group differences). We first conducted a pilot study (Study 2A) and then used the results to conduct a power analysis for the main study (Study 2B) in which we extended our investigation by adding several individual difference measures not initially included in the pilot.

Study 2A

Method

We recruited 44 men (25 gay, 11 straight, 5 bisexual, 1 "hetero/bi," 1 pansexual, and 1 queer; $M_{\text{age}} = 35.53$ years, $SD = 16.30$; 24 Caucasian, 6 South Asian, 4 Middle Eastern, 2

Black, 2 East Asian, 2 mixed, 1 "French-Canadian," 1 Latin, 1 Pacific Islander, and 1 did not indicate his race) from the local annual Pride celebration. Although we specifically hypothesized that gay and straight men should differ in accuracy, we compared all of the recruited sexual minority individuals to the straight men, assuming that all members of the sexual minority group would benefit from avoiding antigay prejudice (particularly as past research suggests that perceivers often do not distinguish between different sexual minorities; Ding and Rule 2012).

The participants viewed the same target faces from Study 1 in random order and judged their antigay prejudice in the same manner described above. We only used the male faces here, however, given that women's antigay prejudice was not legible in Study 1. Afterward, the participants reported their familiarity with homophobic men ("How familiar are you with homophobic men in your daily life?") and how threatened they felt by homophobia ("How threatened do you feel by homophobia in your daily life?") from 1 (*Not at all familiar* [*threatened*]) to 7 (*Extremely familiar* [*threatened*]).

Results and Discussion

Target-Level

Confirming the results of Study 1, the target-level analysis indicated accurate perceptions of men's antigay prejudice from photos of their faces, $r(140) = .24$, 95% CI [.08, .39], $p < .001$. In other words, men's self-reported antigay prejudice correlated with their perceived antigay prejudice.

Perceiver-Level

Perceiver-level analysis also demonstrated accuracy, $\bar{r} = .09$, $SD = .10$, $t(43) = 6.47$, $r_{\text{effect Size}} = .70$, 95% CI [.51, .83], $p < .001$. In addressing our primary questions of interest (the comparison between gay and straight men's accuracy and the association between accuracy and feelings of threat), we did not test for significance in this pilot study and instead used the data to estimate the effect sizes to help with planning a later test using a larger sample. Surprisingly, the data suggested that sexual minority men, $\bar{r} = .09$, $SD = .10$, may be less accurate than straight men, $\bar{r} = .11$, $SD = .09$, yielding an effect size of $r = .13$ for the mean difference between the two groups. Unexpectedly, the more that participants felt threatened by homophobia in their daily lives, the *lower* their accuracy in this pilot sample, $r(42) = -.17$, and their familiarity with homophobic men did not predict accuracy much at all, $r(42) = .03$.

Thus, the pilot study suggested that gay men might perceive antigay prejudice less accurately than straight men and that feeling threatened may mediate this difference. Although these trends contradicted our predictions, one could speculate that gay men might judge others' antigay prejudice less accurately than straight men because the stress of thinking about antigay prejudice results in more deliberative processing (which can lower accuracy; e.g., Rule et al. 2009). Similarly, perceivers' felt threat may have negatively correlated with their accuracy because it identified their ruminative (i.e., overly deliberative) tendencies. To test the possibility that such tendencies may have reduced gay men's accuracy, we repeated our tests with a larger sample in 2B and measured whether broad indices of rumination and agitation (neuroticism and locus of control) relate to accuracy.

Study 2B

Method

Participants We assumed the effect size of $r = .13$ obtained in Study 2A in a power analysis (one-tailed, 95% power), leading us to recruit 632 MTurk Workers (with a quota set for 316 gay man and 316 straight men). During data collection, we noticed that some participants re-entered the survey until they gained access by changing how they reported their sexual orientation. We did our best to replace such participants, thus yielding a final sample of 779 participants, 256 of whom we excluded from analysis for misrepresenting their identity. The final sample thus consisted of 523 men (308 straight, 215 gay; $M_{age} = 32.11$ years, $SD = 10.46$; 363 White, 64 Black, 45 Latino or Hispanic, 23 East Asian, 16 South Asian, 12 "Other"), achieving approximately 91% power.

Materials We used the same male target faces as above. Participants completed the Neuroticism subscale of the Big Five Aspect Scales (DeYoung et al. 2007), which consists of 10 items measuring volatility (e.g., "I get angry easily") and 10 items measuring withdrawal (e.g., "I am filled with doubts about things") on scales anchored at 1 (*Strongly Disagree*) and 7 (*Strongly Agree*). To additionally measure how easily participants become agitated, we also asked them to complete the 29-item Locus of Control Scale (Rotter 1966) in which respondents choose between alternative views on issues or events (e.g., "Many of the unhappy things in people's lives are partly due to bad luck" vs. "People's misfortunes result from the mistakes they make"). Participants choosing more items corresponding to external control (the former item in the example) tend to show a greater tendency towards stress and agitation (e.g., Anderson 1977; Sandler and Lakey 1982).

Procedure After rating the targets' faces for how homophobic they appeared, participants completed the homophobia threat and familiarity questions described in Study 2A, the Neuroticism subscale, and the Locus of Control Scale in counterbalanced order. We also took some additional measures to help ensure the validity of our participant samples. First, we only granted access to the study if participants indicated being a gay or straight man at the beginning of the study. At the end of the study, we asked this again, excluding the data of participants who responded differently than they had at the beginning of the study ($n = 126$). We also excluded the data of 130 participants whose MTurk Worker Identification Numbers suggested that they had gained access to the study by responding with a different identity to the original screening question. Finally, because it took longer to recruit as many gay men as straight men and we wanted a balanced sample, we denied 1581 additional straight participants access to the study because we had already reached the quota ($n = 316$) for straight men.

Table 3 Summary of intercorrelations, means, and standard deviations for perceivers' accuracy, familiarity with homophobic men, locus of control, neuroticism, and perceived threat of homophobia in Study 2B

Measure	1	2	3	4	5	6	*M*	*SD*
1. Accuracy	–	−.12	.12	.10	.15*	−.06	.09	.10
2. Familiarity with homophobic men	−.01	–	.12	−.04	−.01	.32***	4.87	1.76
3. Locus of control	.01	.06	–	.14*	.30***	.10	11.91	4.20
4. Neuroticism-volatility	−.05	.06	.20***	–	.59***	.25***	2.85	0.62
5. Neuroticism-withdrawal	−.06	.03	.29***	.60***	–	.24***	2.93	0.89
6. Perceived threat from homophobia	−.09	.23***	−.05	.14*	.10	–	3.64	1.83
M	.10	3.80	10.77	2.63	2.54	1.72	–	–
SD	.10	1.82	4.26	0.63	0.88	1.22	–	–

Intercorrelations for gay perceivers (*n*=215) presented above the diagonal and intercorrelations for straight perceivers (*n*=308) presented below the diagonal

Means and standard deviations for gay perceivers presented in rightmost columns and for straight perceivers in the bottom rows

For all measures, higher means indicate more extreme responding in the direction of the construct assessed (e.g., greater accuracy)

*$p<.05$; ***$p<.001$

Results and Discussion

Target-Level

Replicating the previous two studies, the target-level analyses again demonstrated that men's self-reported antigay prejudice correlated with their perceived antigay prejudice, $r(140)=.29$, 95% CI [.13, .43], $p<.001$.[3]

Perceiver-Level

Participant-level analyses also demonstrated accuracy, $\bar{r}=.10$, $SD=.10$, $t(523)=21.38$, $r_{\text{effect Size}}=.68$, 95% CI [.63, .72], $p<.001$. Contrary to the trends observed in Study 2A, gay men's accuracy ($\bar{r}=.09$, $SD=.10$, $t(214)=13.30$, $r_{\text{effect Size}}=.67$, 95% CI [.59, .74], $p<.001$) did not significantly differ from straight men's accuracy ($\bar{r}=.10$, $SD=.10$, $t(307)=16.69$, $r_{\text{effect Size}}=.68$, 95% CI [.61, .74], $p<.001$), $t(521)=0.25$, $p=.80$, $r_{\text{Effect Size}}=.01$, 95% CI [−.11, .13]. Relatedly, none of the additional individual difference measures (familiarity with homophobic men, locus of control, neuroticism, or perceived threat from homophobia) related to either gay or straight men's accuracy (all |r|s<.12, all ps≥.08), apart from the correlation between gay men's accuracy and neurotic withdrawal, $r(213)=.15$, $p=.02$ (Table 3). Although significant, the latter correlation is marginal (and not significant with Bonferroni correction), thus requiring replication.

Overall, the results of Study 2B thus suggest that gay and straight men can both accurately judge other men's levels of antigay prejudice. The effect size of the difference between their accuracy levels suggests that if a difference does exist, it is exceedingly small

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[3] As in Study 1, the Facial Power composite again mediated the accuracy of these judgments ($ab=.13$, 95% CI [.02, .25]).

(it must be smaller than $r_{effect\ Size} = .13$, according to equivalence testing, $t(460.60) = 1.80$, $p = .04$; see Lakens 2017). Moreover, feeling threatened by homophobia did not significantly relate to the perceivers' accuracy. Adaptiveness may therefore not explain why people can accurately judge others' levels of antigay prejudice, as this ability appears equally shared by gay and straight men.

General Discussion

The ecological theory of social perception suggests that people will form more accurate first impressions for judgments relevant to their goals (McArthur and Baron 1983; Zebrowitz and Montepare 2006). One would accordingly expect that targets of prejudice would judge strangers' levels of prejudice more accurately than individuals not subject to prejudice. The present results did not support this hypothesis, however. Although we found that people could judge men's (but not women's) levels of antigay prejudice from photos of their faces, gay men did not perform better than straight men, nor did individuals' concerns about prejudice correlate with their accuracy. Thus, the personal adaptive benefit of identifying prejudice may not explain why individuals can detect others' prejudice accurately.

Rather, face-based accuracy may represent a fundamental skill shared across perceivers. Previous work suggests that target differences, but not perceiver differences, typically explain the variability in accurately judging deception and social category membership (Bond and DePaulo 2008; Tskhay et al. 2016; Tskhay and Rule 2017). Yet, the literature on individual differences in accurate face-based first impression judgments still remains relatively nascent and limited (Alaei and Rule 2016). Indeed, other research suggests that many individual differences may explain interpersonal accuracy (e.g., Bjornsdottir et al. 2017; Hall et al. 2009b). Overall, then, our studies align with Hehman et al.'s (2013) work by showing that people achieve similar accuracy when judging strangers' prejudice from their faces regardless of whether they belong to the group bearing the brunt of that prejudice. Future research should systematically investigate how individual differences between both perceivers and targets contribute to accuracy differences generally, however.

Despite the absence of these differences, adaptiveness could still play a role in accurate prejudice judgments. For instance, everyone might benefit from avoiding highly prejudiced individuals. Given popular censure against holding prejudicial attitudes, individuals who espouse prejudicial beliefs may suffer from poor social skills (see Andrzejewski et al. 2009). Because people with poor social skills tend not to be well-adjusted, people may find them unpredictable and experience stress when interacting with them. Thus, all individuals may benefit from identifying and avoiding such persons. The capacity to identify prejudiced people might, therefore, provide a general adaptive ability to discriminate strangers' social skills among a wide swath of perceivers. Alternatively, perhaps aggressors of prejudice identify prejudiced others as well as targets of prejudice because the aggressors have grown up in more prejudiced environments and thus possess sufficient familiarity with the types of people that share their beliefs that they too can accurately identify prejudice in others (Carney and Harrigan 2003).

Notably, inferences of traits related to power mediated the association between perceived and actual antigay prejudice here, and between perceived and actual racial prejudice in previous work (Hehman et al. 2013). This suggests that more powerful-looking individuals may be less likely to conform to social norms or to inhibit their impulses, consistent with the behavior observed of more powerful people (Griskevicius et al. 2006; Mehta

and Beer 2009). Relatedly, perhaps accurate perceptions of men's antigay prejudice, sexism, and racism more generally identify men's capacity for aggression (Goh et al. 2017; Hehman et al. 2013). Additional research would need to test these possibilities but, if true, facial power should indicate other socially undesirable attitudes in individuals as well.

Researchers would also benefit from further investigating the role of fWHR in first impressions of prejudice. Previous studies showed that fWHR relates to participants' aggression and self-reported racial prejudice (Haselhuhn et al. 2015; Hehman et al. 2013). We did not find an analogous association between fWHR and antigay prejudice here, however, perhaps because we overestimated the true effect size and thus lacked sufficient power to observe a statistically significant association (see Haselhuhn et al. 2015). Further inquiry would help to resolve this discrepancy between the prior and current work.

In conclusion, we found that people accurately judged men's antigay prejudice from photos of their faces. These judgments seem to emerge because they stem from a general interpersonal accuracy skill rather than because they help particular individuals to avoid prejudiced strangers. Still, more work should investigate this and other related questions to determine how adaptiveness affects judgments of prejudice and first impressions more generally.

Author's Contribution Experimental design: RA and NOR; Data collection: RA and NOR; Data analysis: RA; Writing: RA and NOR.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Standards All procedures performed in this study followed the ethical standards of the University of Toronto Research Ethics Board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent We obtained informed consent from all participants included in the study.

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