An Attractiveness Halo on Perceived Friendliness is Stronger for Direct versus Averted Gaze Faces

Spring 2022 - Fall 2022

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Abstract

The Attractiveness Halo refers to a tendency for people to attribute more positive traits to more attractive faces. Although the Attractiveness Halo is broadly replicable, little work has examined effects of other non-verbal cues on this relation. Because direct relative to averted gaze elicits perceptions of greater approachability, we tested whether gaze direction also affects the Attractiveness Halo. We defined the Attractiveness Halo as the expected positive relation between facial attractiveness and evaluated friendliness. 200 adult participants viewed a set of 36 facial stimuli with either direct or averted gaze one at a time, as well as reporting the ratings of specific traits through a questionnaire. The traits measured were trustworthiness, competence, dominance, and friendliness. People perceived direct relative to averted gaze faces as being more friendly. Moreover, the positive relation between facial attractiveness and evaluated friendliness was stronger for direct relative to averted gaze faces. These findings suggest that different non-verbal cues act in concert to elicit face evaluations. Moreover, these findings suggest that the strength of the Attractiveness Halo depends on other non-verbal behavior perceived on target faces.

Keywords: Gaze Direction, Attractiveness, Positive Trait Association, Friendliness

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There is a common societal understanding of the sentiment that being considered "beautiful" or attractive are more likable and favorable, therefore being "good." Inversely, things that are considerably "ugly" are associated with things that are "bad." The positive and "good" associations when perceiving attractiveness in faces tend to induce broad stereotypes that more attractive people tend to have more positive trait attributes (Dion et al., 1972). This is referred to as the attractiveness halo, where the phrase "what is beautiful is good" is supported. (Rhodes, 2006).

There are limitless traits that are positively associated with individuals who are relatively more attractive than others. However, trustworthiness, competence, friendliness, and dominance are the primary traits selected to be utilized in the current study. These specific ratings were used to define the "halo" in the attractiveness halo effect, as trustworthiness and friendliness are traits that can allude to positive approachability and compatibility. Competence is a positive trait in regards to the halo, as those who are attractive may be perceived as more efficient and capable. Lastly, although dominance isn't typically a measure in determining valence of attractiveness (Oosterhof & Todorov, 2008), dominance is a trait measured since the connotation of dominance involves extraversion or leadership potential.

The attractiveness halo has been a time-honored interest to researchers; however, what directly influences this halo? Beyond an arousing smile or confident posture, researchers have studied that social cues such as relative facial symmetry is fundamental to perceived facial attractiveness (Rhodes, 1998). This was achieved by having 64 participants (32 males, 32 females) view 48 black and white images of faces. The facial stimuli were edited to vary

between perceived symmetry, as faces were either presented to the participants with low, normal, high, or perfect symmetry. Participants were asked which of the presented faces they preferred. Ultimately, results showed that individuals had higher preference ratings to the stimuli with relatively higher facial symmetry. However, facial symmetry is known as a static, non-communicative feature that influences perceived attractiveness (Perrett et al., 1999).

Gaze direction, on the other hand, is a highly communicative and impactful social cue in which perceivers can effectively read and evaluate human expression (Adams & Kleck, 2005). In Adams & Kleck (2005), the researchers had participants rate faces in three studies. In the first study, the participants were asked to rate the emotions of faces with neutral expressions with either direct or averted gaze. The results showed that gaze direction had an effect on the assigned trait to the stimulus, as well as the severity of the trait, including anger, sadness, joy, or fear. The second study shared similar results, as gaze direction was influential in deciding whether a face was fearful or angry. For example, participants rated faces to be more fearful when gaze direction was averted, and more angry when direct. The last study examined how gaze direction affects perceptions of stereotypical facial expressions. Participants rated facial expressions to be more intense depending on gaze direction. These findings provide high interest in the effects that gaze direction has on facial perception. Therefore, it's beneficial to literature to examine gaze direction effects on phenomena such as the attractiveness halo.

Being attentive with appropriate direct gaze during a job interview or a date can be good examples of this positive social cue. Moreover, gaze direction is non-verbal and often described as minimal in physical expression. Although gaze direction is debatably "subtle", being so minimal compared to other bodily expressions and body language; gaze direction can be enough for a perceiver to decide whether or not someone is deemed approachable (Hietanen et al., 2008).

The current study examined whether gaze direction has a direct effect on this attractiveness halo, that is if direct gaze can potentially increase positive traits induced by the attractiveness halo. A direct link between direct / averted gaze and the attractiveness halo has yet to be tested, therefore these results contribute to the literature.

Past work suggests facial symmetry is not exclusive to attractiveness ratings, as gaze being directed toward the viewer increases attractiveness ratings and overall preference (Ewing et al., 2010). In Ewing et al. (2010), 32 male participants (mean age = 26.6 years, SD =8.6) were asked to view facial stimuli. The stimuli were images of faces with the face pointed towards the participant, and some with faces pointed away from the participant. Alongside face direction, the stimuli were also factored with gaze direction, where the stimuli had either direct or averted gaze. While viewing the stimuli, the participants were asked to answer which face that they preferred when presented with two randomly selected stimuli. After the study was completed, results showed that individuals preferred faces that were symmetrical (pointed towards the participant) with direct gaze (direct eye contact). These results suggest that gaze direction has an effect on perceived attractiveness (Ewing et al., 2010); however, the halo of positively associated traits was not tested nor considered. As mentioned prior, there is no distinct literature that empirically supports gaze direction and the effects on the halo.

Direct gaze direction has been suggested to have a positive effect on attractiveness perception. In Jones et al. (2006), Participants (N = 269; mean age = 23.57 years, SD = 5.14; 165 female) were asked to report their preference of two faces presented to them. The faces were either smiling or not smiling, along with either direct or averted gaze. results showed that men found female faces more attractive with direct gaze rather than averted, similar to the results of Ewing et al. (2010). However, the smiling implementation as a factor in the presented stimuli

found interesting results. Faces that were smiling with direct gaze were significantly more attractive overall. However, gaze direction was an amplifier in both directions, as the stimuli that was averted, yet smiling, was rated considerably less attractive overall, likely due to attentiveness and lack of engagement with the participant perceiver (Jones et al., 2006). Once again, the halo effect of positive or negative trait associations was not considered within the study.

Further, in support of the current hypothesis, past research suggests that reward-based regions of the brain are activated when direct eye gaze is perceived (Kampe et al, 2001). This study is similar to Ewing et al. (2010), conducted with the addition of an fMRI scan. Participants were asked to rate the attractiveness of symmetrical facial stimuli, again with either direct or averted gaze. As previously predicted and suggested, results showed that participants preferred the direct gaze stimuli and were found more attractive overall. Further, the fMRI scan showed that the brain region referred to as the ventral striatum was activated when participants viewed the direct gaze stimuli (Kampe et al., 2001). The ventral striatum is a dopaminergic region associated with reward and positive associations (Kampe et al., 2001). Since the factors of facial attractiveness and direct gaze activate the brain region that is associated with reward, there is potential evidence that supports direct gaze's effect on the attractiveness halo. The present study directly tests this.

Given previous research, as well as the idea that positive trait evaluations are correlated with facial attractiveness evaluations (Dion et al., 1972), an attractiveness halo could potentially be amplified with the consideration of direct gaze versus averted gaze. The present study directly tests this, being the first study to examine gaze direction and the attractiveness halo. The study expected a stronger attractiveness halo effect when faces have direct gaze rather than averted.

Because past research has included participants of one gender (Ewing, 2010), the present study examines participant gender as a factor in the design in exploratory analysis. The present study expands on previous research, using the addition of trait attribute ratings, confirming the potential attractiveness halo with direct versus averted gaze. The study expects a stronger attractiveness halo effect when faces have direct gaze rather than averted. Because past research has included participants of one gender (Ewing, 2010), the present study examines participant gender as a factor in the design in exploratory analysis.

The current study has two primary hypotheses. First, paralleling past research (Jones et al., 2006 & Ewing et al., 2010), it was predicted that a fixed effect of gaze direction in that direct gaze faces would be evaluated more positively than averted gaze faces. Second, it predicted an interaction between perceived attractiveness and gaze direction. Specifically, the study predicted that a positive facial attractiveness effect on trait ratings would be stronger when faces display direct gaze relative to when they display averted gaze.

Method

Participants

A total of 200 adult participants were recruited through Amazon Mechanical Turk for the study. Participants reported their gender, race, ethnicity, age, and educational levels. However, these demographic reports were simply intended to describe the sample. No other exclusion criteria were necessary beyond participants being above the age of 18.

Materials

Facial stimuli that were presented to the participants have been chosen through the Radboud Database (see Figure 1). The stimuli itself consisted of images of faces that have a head direction facing directly towards the camera. Since specific emotions were not measured, the

facial stimuli consisted of neutral expressions. Out of 36 selected facial stimuli, 18 are female, and 18 are male. Due to the availability of stimuli, the facial stimuli were all Caucasian. Two versions of each stimulus were implemented, one with direct gaze (eyes faced directly at camera/participant), and the other with averted gaze (eyes faced away from camera/participant, either left or right). Participants viewed the facial stimuli through a Qualtrics survey, as well as report trait ratings through the survey program. There were two task versions counterbalancing whether faces are viewed as having direct or averted gaze. Each face was viewed once during the experiment.

Design

The present study is a 2 (Gaze direction: direct, averted) x 2 (Face gender: man, woman) x Facial attractiveness (continuous) design, aimed to examine if gaze direction would affect the attractiveness halo. Dependent variables to measure the attractiveness halo are trustworthiness, competence, friendliness, and dominance.

Procedure

The study was conducted online through a Qualtrics survey. Participants were presented with the facial stimuli one at a time in a random order. As mentioned prior, the facial stimuli was either presented with direct or averted gaze. Since the present study utilizes a within subjects' design, each participant viewed each of the 36 selected facial stimuli. The study consists of two task versions, counterbalancing whether faces have a direct or averted gaze. Participants were not informed that the faces would vary in gaze direction, as they were required to use their "gut instinct" when selecting trait ratings.

Participants evaluated each face on different traits. These ratings include attractiveness, trustworthiness, competence, friendliness, and dominance. The ratings were gathered through a 7

point Likert scale, as participants rated each of the 36 selected faces on a scale ranging from 1 (not at all [trait]) to 7 (very [trait]). There was one block per trait rating, for a total of five randomly-presented blocks of 36 trials each. Participation is expected to take approximately 15 minutes.

Results

A linear mixed effects model was used to regress trait endorsements (i.e., friendliness, dominance, competence, trustworthiness, attractiveness) on Gaze Direction (averted = -1, direct = 1), Face Gender (Female = -1, Male = 1), perceived attractiveness (standardized for each participant around their mean attractiveness rating), and their interactions as fixed effects. The model included a random effects structure such that intercepts varied by participant and by face identity. It also varied effects of Gaze Direction and perceived Attractiveness by participants and Gaze Direction effects by face identity.

Evaluated Friendliness

There was a main effect of attractiveness on evaluated friendliness (see Table 1), such that faces with higher relative attractiveness were evaluated with higher levels of friendliness, b=.3108, t(221.8)=12.096, SE=.02569, p<.0001. As expected, a main effect for gaze direction was significant, b=.07839, t(6351)=3.723, SE=.02106, p<.001, where direct gaze faces were evaluated as more friendly (M=3.88, SE=0.0766) compared to the averted gaze faces (M=3.72, SE=0.0839), t(62.8)= -3.722, SE=0.0421, p<0.001. Also as expected, there was a significant interaction between gaze direction and attractiveness, b=.03819, t(1501)=2.733, SE=.01397, p<.05. The positive attractiveness effect was stronger for direct, b=.349, SE=.0291, t(352)=11.975, p<.0001, 95% CI [.292, .406], relative to averted, b=.273, SE=0.0295, t(371)=

9.227, p<.0001, 95% CI [.214, .331]. Estimated difference=-0.0764, SE=0.0283 t(1478)=-2.702, p=0.007.

A face gender and gaze direction interaction was also significant, b=.05147, t(33.45)=3.004, SE= .01714 p=.00502. Male faces presented with direct gaze (M=3.92, SE=0.0920) were perceived as more friendly than male faces presented with averted gaze (M=3.66, SE=0.1010), Estimated difference=-0.2597, t(49.3)= -4.785, SE=0.0543, p<.0001. There was no difference for female faces presented with direct gaze (M=3.83, SE=0.0921) and female faces presented with averted gaze (M=3.78, SE=0.1009), t(49.5)=-0.991, SE=0.0543, p=0.7554. No other effects were significant, b<.01193, p>.44043.

Evaluated Competence

A positive attractiveness effect emerged for competence evaluations, b=.3183, t(220.4)= 12.758, SE=.02495, p<.0001. An effect of gaze direction emerged, b=.06033, SE=.02883, t(60.68)=2.092, p<.05, such that direct gaze faces (M=4.09, SE=0.0759) were evaluated as more competent than averted gaze faces, (M=3.97, SE=0.0766) t(61.9)=-2.092, SE=.0577, p<.05 . There was no interaction effect between gaze direction and attractiveness in regards to evaluated competence, b=.01052, t(3648)=0.750, SE=.01402, p=0.45331.

There was also face gender effect, b=-.1134, t(33.61)= -2.891, SE=.03922, p<.01, such that female faces (M=4.14, SE=0.0807) were evaluated as more competent than male faces (M=3.91, SE=0.0807), t(34)=2.891, SE=.0785, p<.01. No other effects were significant, b<.01052, p>0.45331

Evaluated Trustworthiness

A positive attractiveness effect emerged for trustworthiness evaluations, b=.340, t(218.1)=13.372, SE=.02548, p<.0001. An effect of gaze direction emerged, b=.1467,

t(88.52)=6.608, SE=.02221, p<.0001, where direct gaze faces (M=4.2, SE=0.0718) were evaluated as more trustworthy than averted gaze faces (M=3.9, SE=0.0711), t(92.5)=-6.606, SE=.0444, p<.0001. There was no interaction between gaze direction and attractiveness, b=.01604, t(1200)=1.203, SE=.01333, p=0.2291. No other effects were significant, b<.01604, p>0.0644.

Examining Evaluated Dominance:

A positive attractiveness effect emerged for evaluated dominance, b=.2072, t(219.3)=7.092, SE=.02921, p<.0001. A main effect of gaze direction emerged, b=.1194, t(83.18)=4.619, SE=.02585, p<.0001, where direct gaze (M=4.07, SE=0.0829) was evaluated as more dominant than averted gaze (M=3.83, SE=0.0905), t(83.5)=-4.618, SE=.0517, p<.0001. There was no significant interaction between gaze direction and attractiveness for evaluated dominance, b=-.02053, t(1518)=-1.367, SE =.01502, p=0.172.No other effects were significant, b<.08156 , p>.162.

Discussion

The current study tested effects of gaze direction on attractiveness halo, where attractive people are attributed with more positive traits than relatively less-attractive people. Overall, a main effect of attractiveness emerged for each evaluated trait (i.e., friendliness, dominance, trustworthiness, and competence), aligning with the hypothesized effects of the attractiveness halo. Like past literature's widely suggested idea of the prevalence of the attractiveness halo (Dion et al., 1972), the current study finds more attractive faces were perceived with higher levels of each tested positive trait.

The attractiveness effect for evaluated friendliness is supported by work showing friendliness is positively associated with perceived attractiveness as well as intelligence (Moore

et al., 2011). In Batres & Shiramizu (2022), findings suggest that the effects of the attractiveness halo increase perceived trustworthiness ratings when faces are relatively more attractive. The current study's main effect of attractiveness with evaluated competence is also supported, as it is suggested that the attractiveness halo has a positive effect on evaluated competence, where more attractive faces were perceived with higher levels of competence (Verhulst et al., 2010).

In reference to evaluated dominance however, the current study's main effect of attractiveness poses an interesting contrast to previous literature. Indeed, the attractiveness halo has emerged in the evaluation of body, but not facial, dominance (Kordsmeyer et al., 2022). This result may be due to different definitions of variables, as it can be argued that the dominance trait is either inherently positive or negative. The current study defines dominance as pertaining to leadership quality and potential or extraversion, whereas Kordsmeyer et al. (2022) defines it as close to prosocial, but not definitively positive. If a study involving the examination of the attractiveness halo were to clearly define dominance as negative — perhaps relating its definition to intimidation or power (Maner, 2017) — then results may indicate no effect for evaluated dominance. However, if a similar study were to clearly define dominance as positive, the results may show a positive relation to the attractiveness halo.

Faces were also evaluated with higher ratings when they were viewed with direct relative to averted gaze across all tested traits. Previous literature supports evaluated friendliness, as friendliness is suggested to be associated with appropriate direct eye contact (Giannantonio et al., 2019). The main effect of gaze direction and attractiveness parallels and expands upon results from previous work. In Ewing et al. (2010), participants also rated higher attractiveness levels to stimuli that maintain direct gaze like the current study. However, as discussed in the introduction, Ewing et al. (2010) did not evaluate positive trait associations, as Ewing et al. (2010) simply

examined attractiveness ratings and gaze direction. The current study thereby adds to this literature by additionally measuring positive trait associations to examine effects of the attractiveness halo alongside gaze direction. The current study finds a place in literature by extending the study of the analysis of positively associated trait attributions, as well as further understanding social perception patterns and attractiveness halo effects in relation to these traits.

Face gender was an exploratory variable in the current study. We found an interaction between face gender and gaze direction on evaluated friendliness. Male, but not female, faces with direct versus averted gaze were evaluated as friendlier. An effect for male, but not female, faces may be explained by gender stereotypes reflecting beliefs that women are broadly more warm and friendly than men (Huddy & Terkildsen, 1993).

I had predicted an interaction between attractiveness and gaze direction, expecting enhancement in attractiveness effects for direct versus averted gaze faces. This hypothesis was partially supported in that this interactive effect only emerged for friendliness evaluations (Figure 2). An open question regards why friendliness was the only affected trait. It could be that gaze direction influences approachability traits, since evaluated friendliness is likely the trait most face valid with approachability. In support, approachability selection is often determined by attributions based on facial appearances (Todorov et al., 2015). Physical attractiveness is suggested to promote friendliness, causing the perceived individual to be more likely to be welcomed, approached, and invited into social groups (Palmer & Peterson, 2020). Lastly, past research suggests the inverse effect, where averted gaze is aligned with avoidant behavior (Ozono et al., 2012). It can be alluded due to previous literature and the current study that direct gaze direction may have a heavier weight on traits that facilitate approach behaviors rather than avoid behaviors such that direct gaze faces may induce more approachability levels with

approach traits (i.e. friendliness), as averted gaze faces may induce more avoidant behavior with avoidant traits.

Future work can explore the relationship of the friendliness interaction effect by testing approachability as a trait tested in a similar way as the current study, or conduct a study where participants make decisions on approaching different stimuli. Potentially, a study can survey participants and make them view stimuli with either direct or averted gaze. The participants can be prompted questions on how likely they are to approach the stimuli, or how approachable the stimuli is with either direct or averted gaze. For further analysis, the potential study can ask how friendly the faces look, or other approachable or non-approachable traits such as warmth or welcoming.

Future work should also examine other nonverbal cues that may influence the attractiveness halo to continue to understand the weight that social cues may have on facial perception. Some situations where this is needed to be understood can include any day-to-day communication circumstances, formal or informal. For instance, workplace environments or job interviews are examples in which this may be important to evaluate in future research. Studies suggest attractiveness (Desrumaux, 2009) and cues such as smiling (Mollie et al., 2014) can influence hireability chances. With this in mind, the connection between attractiveness and other nonverbal cues like gaze direction should also be assessed to see what other factors may affect or interact with variables that can influence hireability. The way in which we communicate as individuals depends on more than mere words, as social cues such as gaze direction is vital to human communication, making this essential for future research. An example of such future research could include other body movements that signify nonverbal behavior, such as posture,

hand movements, or lip movements. Many nonverbal communicative behaviors can potentially serve as greater factors in assessing trait perception, such as facial expression.

The current study utilizes a neutral facial expression when testing the effects of gaze direction, but what would the effects result in if stimuli were smiling? Some of the current study's interaction effects did not result in significance; however, it is possible that using a smiling facial expression would grant more significant results than a neutral facial expression. Much like Jones et al. (2006), smiling is suggested to have interacting effects on attractiveness preference alongside gaze direction. When facial stimuli posed with direct gaze and were smiling, the faces were perceived as more attractive, compared to direct gaze and not smiling. Additionally, faces that were averted and smiling were perceived with significantly less attractiveness than all other circumstances (Jones et al., 2006). When referring to the current study's projection in literature, implementing smiling as a nonverbal behavior to be measured in a study to test with the attractiveness halo can be highly interesting. I predict that smiling alongside gaze direction may have a greater interaction effect on perceived attractiveness and evaluated positive traits, where smiling might further enhance evaluated traits when gaze is direct, and significantly decrease when gaze is averted, similar to Jones et al. (2006). The study could be conducted similar to the current study, with the main difference being additional stimuli with either direct or averted gaze that are also smiling.

Limitations include stimuli selection. Due to limited availability of diverse facial stimuli to execute the study properly and effectively, the facial stimuli were all required to be Caucasian (Dutch). Although other races and ethnicities of stimuli were available in few, there were not enough to be eligible for significance testing. Other databases of non-white faces do clearly exist; however, a database large enough that includes facial stimuli with neutral expressions,

direct and averted gaze, preexisting attractiveness ratings, as well as diverse ethnicities were unavailable. With this in mind, the current study is not generalizable across ethnicities other than Caucasian individuals. Due to the lack of diversity, the effects of nonverbal cues such as gaze direction on the attractiveness halo with variables such as racial discrimination and biases a study of high interest.

Racial biases and discrimination may have potentially influenced these results due to phenomena such as ingroup biases. The participant sample's demographics were majority white in ethnicity (152 white), potentially favoring other white facial stimuli within the study, thus causing potential data influences with possible increased evaluation ratings. If the current stimuli were more effectively diverse — including a variety of other races and ethnicities — then other results that highlight potential outgroup biases and prejudice may also be present. A specific hypothesis I expect is that ingroup favoritism will be present, as white participants evaluating white stimuli will enhance positive attribution effects; whereas, white participants evaluating black stimuli will minimize positive attribution effects, as well as potentially enhance negative trait attributions due to outgroup prejudice. Implementing black facial stimuli — or any other ethnicity — can effectively diversify the study, thus providing results that increase generalizability to a wider spectrum of demographics.

Further involving stimuli selection, another limitation includes the gender and attractiveness of stimuli. The female facial stimuli selected for the current study had preexisting attractiveness ratings with slightly, but significantly, higher average attractiveness ratings than the male stimuli. This could have potentially impacted the results in regard to gender effects or interactions, where it is possible that evaluations for female trait ratings may have been slightly increased due to increased base attractiveness levels. If all base attractiveness ratings for stimuli

were precisely average, then the results could potentially present more accurate depictions of effects, as well as potential gender biases or discriminations. For future research, facial stimuli base attractiveness should be equally average across all stimuli to further provide accuracy to ratings.

In closing, the current study's findings on the intricacies of gaze direction in its interactions with the attractiveness halo phenomenon suggest that gaze direction has a main effect on positive traits including dominance, trustworthiness, competence, and friendliness. As well, a significant interaction effect was found between gaze direction and perceived attractiveness for perceived friendliness, likely due to gaze direction's potential influence on approachability traits. The findings support prior literature by expanding upon broad findings on the attractiveness halo, where more attractive faces are attributed with more positive traits (Dion et al., 1972), as well as the effects that gaze direction has on attractiveness (Rhodes, 1998; Ewing et al., 2010). In addition to supporting prior research with main effects, the current study builds upon it as well; ultimately examining the interactive effects between gaze direction and perceived attractiveness when making positive trait evaluations. The study serves to be a necessary step in connecting social cues to perception, as well as cultivating further understanding of nonverbal communication and its effects on social perceptive behaviors.

References

Adams, R. B., Jr., & Kleck, R. E. (2005). Effects of Direct and Averted Gaze on the Perception of Facially Communicated Emotion. Emotion, 5(1), 3–11. https://doi.org/10.1037/1528-3542.5.1.3

Batres, C., Shiramizu, V. Examining the "attractiveness halo effect" across cultures. Curr Psychol (2022). https://doi.org/10.1007/s12144-022-03575-0

Desrumaux, P., De Bosscher, S., & Léoni, V. (2009). Effects of facial attractiveness, gender, and competence of applicants on job recruitment. Swiss Journal of Psychology, 68(1), 33–42. https://doi.org/10.1024/1421-0185.68.1.33

Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, 24(3), 285.

Ewing, L., Rhodes, G., & Pellicano, E. (2010). Have you got the look? gaze direction affects judgements of facial attractiveness. *Visual Cognition*, *18*(3), 321–330. https://doi.org/10.1080/13506280902965599

Giannantonio, C. M., Hurley-Hanson, A. E., Segrest, S. L., Perrewé, P. L., & Ferris, G. R. (2019). Effects of recruiter friendliness and job attribute information on recruitment outcomes. Personnel Review, 48(6), 1491–1506. https://doi.org/10.1108/pr-01-2018-0037

Hietanen, J., Leppanen, J., Peltola, M., Linna-Aho, K., & Ruuhiala, H. (2008). Seeing direct and averted gaze activates the approach-avoidance motivational brain systems. Neuropsychologia, 46(9), 2423-2430.

Huddy, L., & Terkildsen, N. (1993). Gender Stereotypes and the Perception of Male and Female Candidates. American Journal of Political Science, 37(1), 119–147. https://doi.org/10.2307/2111526

Jones, B. C., DeBruine, L. M., Little, A. C., Conway, C. A., & Feinberg, D. R. (2006). Integrating gaze direction and expression in preferences for attractive faces. Psychological Science, 17(7), 588–591. https://doi.org/10.1111/j.1467-9280.2006.01749.x

Kampe, K., Frith, C., Dolan, R. et al. Reward value of attractiveness and gaze. Nature 413, 589 (2001). https://doi.org/10.1038/35098149

Kordsmeyer, T. L., Freund, D., Ueshima, A., Kuroda, K., Kameda, T., & Penke, L. (2022). Kordsmeyer et al. (preprint) halo effect of faces and bodies: Cross-cultural similarities and differences between German and Japanese observers. https://doi.org/10.31234/osf.io/j23ny

Maner, J. K. (2017). Dominance and Prestige: A Tale of Two Hierarchies. Current Directions in Psychological Science, 26(6), 526–531. https://doi.org/10.1177/0963721417714323

Mollie A. Ruben, Judith A. Hall & Marianne Schmid Mast (2015) Smiling in a Job Interview: When Less Is More, The Journal of Social Psychology, 155:2, 107-126, https://doi.org/10.1080/00224545.2014.972312

Moore, F. R., Filippou, D., & Perrett, D. I. (2011). Intelligence and attractiveness in the face: Beyond the attractiveness halo effect. Journal of Evolutionary Psychology, 9(3), 205–217. https://doi.org/10.1556/jep.9.2011.3.2

Oosterhof, N. N., & Todorov, A. (2008). The functional basis of face evaluation. Proceedings of the National Academy of Sciences, 105(32), 11087–11092. https://doi.org/10.1073/pnas.0805664105

Ozono, H., Watabe, M., & Yoshikawa, S. (2012). Effects of facial expression and gaze direction on approach–avoidance behaviour. Cognition & Emotion, 26(5), 943–949. https://doi.org/10.1080/02699931.2011.641807

Palmer, C. L., & Peterson, R. D. (2020). Physical attractiveness, Halo Effects, and social joining. *Social Science Quarterly*, *102*(1), 552–566. https://doi.org/10.1111/ssqu.12892

Perrett, D., Burt, D., Penton-Voak, I., Lee, K., Rowland, D., & Edwards, R. (1999). Symmetry and human facial attractiveness. *Evolution and Human Behavior*, 20(5), 295-307.

Rhodes, G., Proffitt, F., Grady, J.M. et al. (1998). Facial symmetry and the perception of beauty. Psychonomic Bulletin & Review 5, 659–669 https://doi.org/10.3758/BF03208842

Rhodes, G. (2006). The evolutionary psychology of facial beauty. Annual Review of Psychology, 57, 199-226.

Todorov A., Olivola C. Y., Dotsch R., Mende-Siedlecki P. (2015). Social attributions from faces: Determinants, consequences, accuracy, and functional significance. Annual Review of Psychology, 66, 519–545. Crossref. PubMed.

Verhulst, B., Lodge, M. & Lavine, H. The Attractiveness Halo: Why Some Candidates are Perceived More Favorably than Others. J Nonverbal Behav 34, 111–117 (2010). https://doi.org/10.1007/s10919-009-0084-z

Appendix

Figure 1. Example of Direct and Averted Gaze Stimuli.

Figure 2. Interaction between Perceived Attractiveness and Gaze Direction on Evaluated Friendliness.

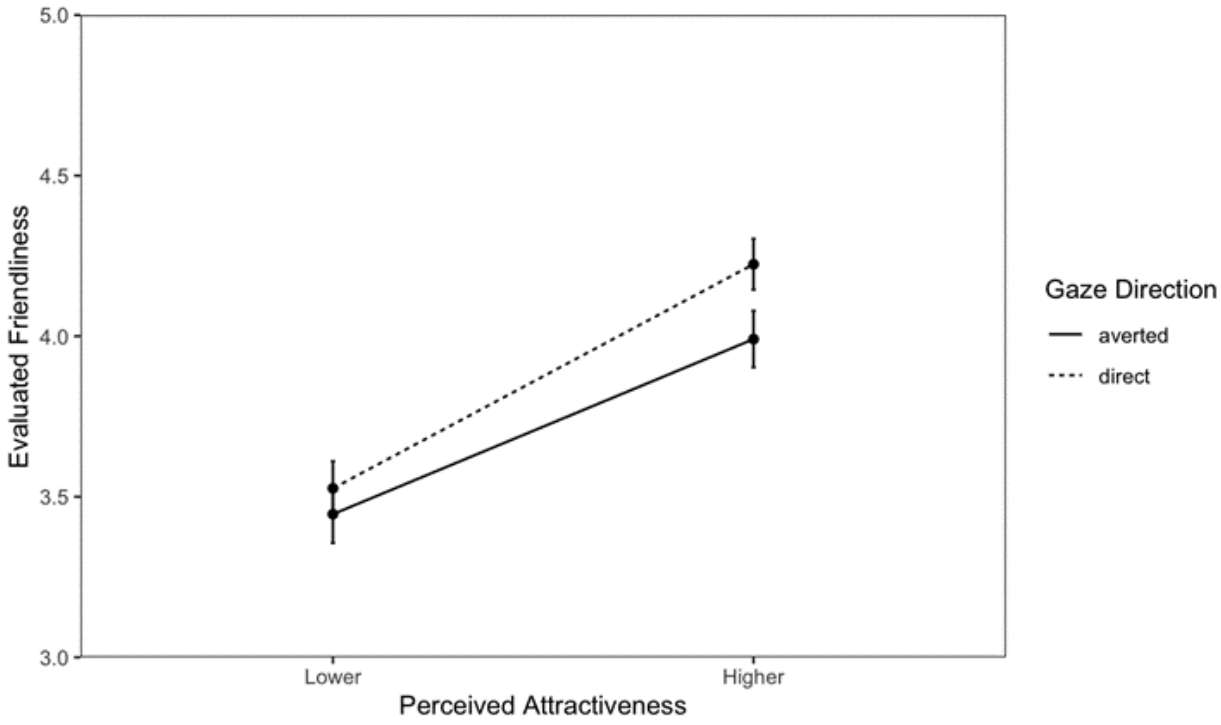

Figure 3. Interaction between Face Gender and Gaze Direction on Evaluated Friendliness.

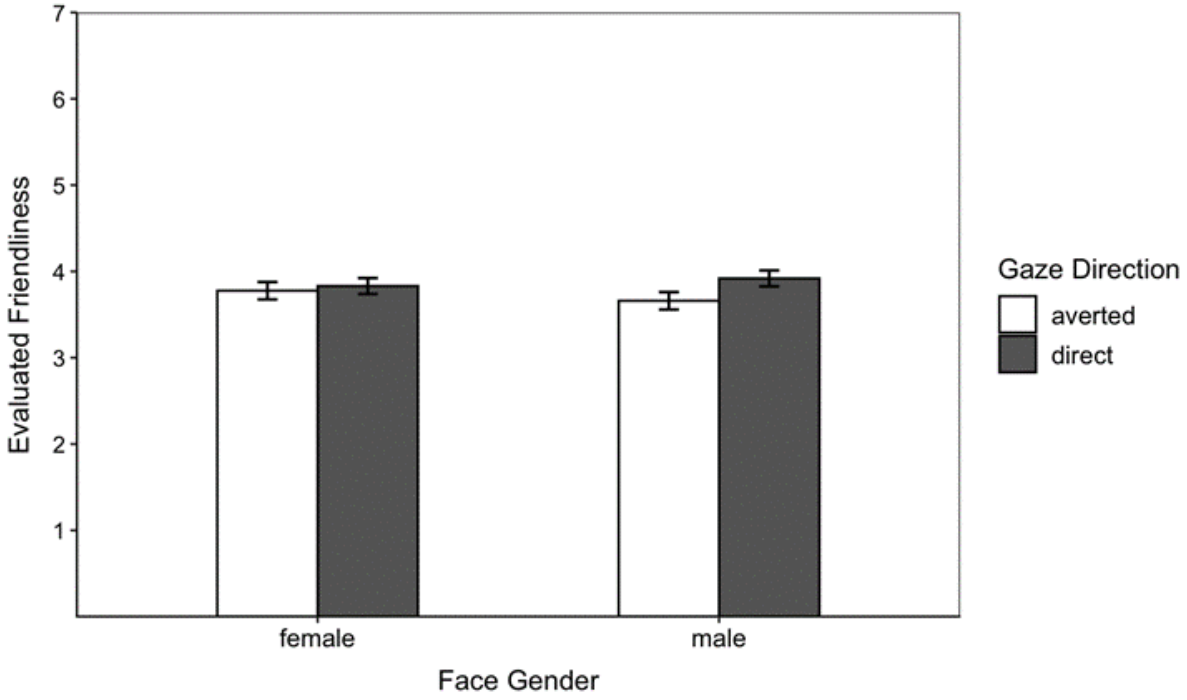

Table 1:

	Friendliness			
Predictors	*Estimates*	*std. Error*	*Statistic*	*p*
(Intercept)	3.80	0.08	48.94	**<0.001**
zAttract	0.31	0.03	12.10	**<0.001**
Gaze Direction	0.08	0.02	3.72	**<0.001**
Face Gender	-0.01	0.05	-0.14	0.888
zAttract * Gaze Direction	0.04	0.01	2.73	**0.006**
zAttract * Face Gender	0.01	0.02	0.77	0.440
Gaze Direction * Face Gender	0.05	0.02	3.00	**0.003**
zAttract * Gaze Direction * Face Gender	-0.00	0.01	-0.04	0.967
Random Effects				
σ^2	1.09			
$\tau_{00\ workerId}$	0.67			
$\tau_{00\ Friendly}$	0.09			
$\tau_{11\ workerId.zAttract}$	0.09			
$\tau_{11\ workerId.Gaze\ Direction}$	0.03			
$\tau_{11\ Friendly.Gaze\ Direction}$	0.00			
$\rho_{01\ workerId.zAttract}$	-0.11			
$\rho_{01\ workerId.Gaze\ Direction}$	-0.22			
$\rho_{01\ Friendly}$	-0.24			
ICC	0.44			
$N_{workerId}$	194			
$N_{Friendly}$	36			
Observations	6984			
Marginal R^2 / Conditional R^2	0.052 / 0.472			