

## FORMING IMPRESSIONS: EFFECTS OF FACIAL EXPRESSION AND GENDER STEREOTYPES<sup>1</sup>

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*Summary.*—The present study of 138 participants explored how facial expressions and gender stereotypes influence impressions. It was predicted that images of smiling women would be evaluated more favorably on traits reflecting warmth, and that images of non-smiling men would be evaluated more favorably on traits reflecting competence. As predicted, smiling female faces were rated as more warm; however, contrary to prediction, perceived competence of male faces was not affected by facial expression. Participants' female stereotype endorsement was a significant predictor for evaluations of female faces; those who ascribed more strongly to traditional female stereotypes reported the most positive impressions of female faces displaying a smiling expression. However, a similar effect was not found for images of men; endorsement of traditional male stereotypes did not predict participants' impressions of male faces.

People frequently form immediate impressions of new acquaintances. Not surprisingly, there are many factors that influence how people perceive others, which include aspects of nonverbal behaviors and physical attributes, such as facial appearance. Considerable research indicates that even when someone has no prior knowledge or relationship with another individual, there is still a willingness to infer personality traits from facial appearance alone (Zebrowitz, 1997; Shevlin, Walker, Davies, Banyard, & Lewis, 2003; Todorov, Mandisodza, Goren, & Hall, 2005). Moreover, as perceivers, people tend to make such judgments in a matter of milliseconds (Willis & Todorov, 2006), suggesting that inference of personality traits based on facial features is an automatic process.

One explanation for why facial expressions are important in forming impressions is that expressions can serve as a behavioral cue from which people garner information. For example, a smile can relay information about a person's emotional state and allow inferences about that individual's personality. For instance, if one meets a person who is smiling, one might spontaneously infer that the individual is friendly and a positive impression is formed. Knutson (1996) presented participants with photographs of people displaying various facial expressions (e.g., anger, happiness, sadness) and asked participants to rate the people in the photographs on several personality traits. He found that individuals displaying happy expressions were rated higher on affiliative traits (e.g., friendly, outgoing) than those displaying other facial expressions, supporting the notion that facial expression serves as a behavioral cue to infer personality. Additional studies also reported that people form positive impressions of smiling others, including academic instructors (Kierstead, D'Agostino, & Dill, 1988) and elderly people (Hummert, Garstka, & Shaner, 1997), further lending support to smiling as a behavioral cue often leading to favorable perceptions (e.g., Mehrabian, 1971; Forgas & Bower, 1987; Reis, Wilson, Monestere, Bernstein, Clark, & Seidl, *et al.*, 1990; Scharlemann, Eckel, Kacelnik, & Wilson, 2001).

Interestingly, research also indicates that there are gender differences in smiling behavior, such that women smile more than men (e.g., Halberstadt & Saitta, 1987; Briton & Hall, 1995; LaFrance & Hecht, 1999; LaFrance, Hecht, & Paluck, 2003), a difference both men and women believe to be true (Ragan, 1982). In one study, Ragan (1982) examined over 1000 yearbook photos. Among those with smiles, women were twice as likely as men to display a broad smile; however, among non-smiling faces, men were almost eight times more frequent than women. According to extant literature, the observed gender difference in

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smiling behavior might be related to gender stereotypes. Specifically, in American society women are generally stereotyped to possess communal qualities, such as warmth and friendliness (Diekmann & Eagly, 2000; Prentice & Carranza, 2002), which are affiliative traits often associated with smiling behavior. On the other hand, men are generally stereotyped as possessing agentic qualities, such as toughness and dominance (Brannon, 1976; Cota, Reid, & Dion, 1991; Spence & Buckner, 2000), traits often associated with not smiling. Hess, Adams, and Kleck (2005) found that people tended to associate females with more affiliative emotions and males with more dominance-related emotions (e.g., anger). Additionally, Hess, *et al.* found that smiling behavior was perceived as more acceptable for individuals categorized as highly affiliative than for individuals categorized as less affiliative. Their results also indicated that a smiling expression was perceived as more appropriate for women than for men in situations that were described as emotionally neutral. Further work by Hess and colleagues suggested that social roles may guide people's expectations of appropriate facial expressions (Hess, Thibault, Adams, & Kleck, 2009).

Related research on person perception indicates that social stereotypes, which include gender stereotypes, consist of traits that reflect the social dimensions of warmth and competence (e.g., Rosenkrantz, Bee, Vogel, Broverman, & Broverman, 1968; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Fiske, Xu, Cuddy, & Glick, 1999; Fiske, Cuddy, Glick, & Xu, 2002). Gender stereotypes function to describe the specific traits that men and women are believed to possess, and prescribe how women and men ought to behave (Eccles, Jacobs, & Harold, 1998; Prentice & Carranza, 2002), e.g., feminine stereotypes describing women as kind, gentle, and nurturing, send an implicit message that women should also display affiliative behaviors that reflect communal traits. Likewise, masculine stereotypes that describe men as competent, competitive, and stoic, implicitly dictate that men also should display behaviors that reflect agentic qualities. Expectations based on gender stereotypes could play an important role in differentially influencing impressions of men and women engaging in smiling behavior. Although prior studies have investigated gender differences in smiling behavior, the present study specifically measures and examines the role of gender-stereotype beliefs in forming impressions of males and females displaying either a smile or a neutral expression.

The present research investigated the influence of facial expression and gender stereotypes when forming impressions of others. Smiling is associated more strongly with women than with men (e.g., Ragan, 1982; Briton & Hall, 1995) and reflects the affiliative characteristic of warmth central to the female gender stereotype (e.g., Rosenkrantz, *et al.*, 1968; Broverman, *et al.*, 1972; Knutson, 1996; Fiske, *et al.*, 1999; Hess, *et al.*, 2005), therefore:

*Hypothesis 1.* Faces of smiling women, compared to faces of smiling men, will be perceived more positively on traits related to warmth.

Additionally, because not smiling is associated more strongly with men, and men are associated with agentic qualities (e.g., Rosenkrantz, *et al.*, 1968; Broverman, *et al.*, 1972; Brannon, 1976; Cota, *et al.*, 1991):

*Hypothesis 2.* Non-smiling male faces will receive the highest ratings of competence.

If people rely on gender stereotypes when forming impressions of people, then individuals who endorse gender stereotypes to a greater extent should be more likely to perceive gender-consistent behavior (smiling females; non-smiling males) in a positive light than those who ascribe less strongly to gender stereotypes.

*Hypothesis 3.* People who ascribe more strongly to traditional gender stereotypes will be more likely to rate smiling women highest on warmth-related traits, and rate non-smiling men highest on competence-related traits.

## METHOD

To investigate these hypotheses, an impression formation task was conducted. Participants were presented with photographs of smiling or non-smiling male and female faces and asked to rate the photographed individuals on a variety of personality traits.

### *Participants*

Undergraduate students ( $N = 138$ ; 103 women, 35 men) from a small university in the Southwestern U.S. voluntarily participated in exchange for course credit. Participants reported their age by selecting the relevant age category: 18–23 yr. (87%), 24–29 yr. (8%), 30–40 yr. (4.3%), over 40 yr. (0.7%). The racial/ethnic composition of the sample (54% White, 30% Hispanic, 8% African American, and 8% other) was comparable to the student population at large at the university (55.1% White, 31% Hispanic, 9.3% African American, and 4.6% other).

## Procedure

After signing an informed consent, participants were asked to fill out a questionnaire packet that included several filler questionnaires (e.g., personality measure, occupation preference, relationship measure, number and type of online interaction experiences) and the critical questionnaire that assessed gender stereotype endorsement placed within the middle of the questionnaire packet. Participants were asked to read 10 statements about women and 10 statements about men that tapped into stereotypic and counter-stereotypic information about women (e.g., “Women are nurturing”, “Women are dominant”) and men (e.g., “Men are aggressive”, “Men are gentle”). The presentation of the two questionnaires was counterbalanced between participants so that some participants received the female stereotype-endorsement questionnaire first, and others received the male stereotype-endorsement questionnaire first. Participants were asked to indicate the extent to which they personally believed each of the statements to be true on a 7-point scale with anchors 1: Never, or almost never and 7: Always, or almost always, and averaged so that larger numbers reflected greater stereotype endorsement.

Participants then completed an impression task on individual computers where they rated faces that were presented via MediaLab (Jarvis, 2008). Color photo stimuli were selected from a database of individual faces photographed against a neutral background, developed by Minear and Park (2004) with images categorized according to facial expression and age. Photo stimuli were chosen to reflect diverse young and older adult Euro-American and African-American faces. Each participant rated a total of 80 faces (40 female, 40 male), and were randomly assigned to view either photographs with smiling expressions or non-smiling (i.e., neutral) expressions (see Fig. 1). Exposing participants to faces displaying a consistent facial expression was expected to avoid demand characteristics or guessing of the hypothesis (Orne, 1962).

The traits used to assess impressions of warmth and competence were selected from a pilot study. A separate sample of 153 participants rated a subset of the photographed faces (four female, four male) on 14 traits: *friendly*, *good-natured*, *likeable*, *approachable*, *polite*, *open-minded*, *imaginative*, *honest*, *aggressive*, *intelligent*, *sophisticated*, *competent*, *ambitious*, and *attractive*. Ratings were measured on a 7-point scale with anchors 1: Not at all and 7: Very much; higher numbers indicated greater positivity (see Table 1 for descriptive statistics). Skewness and kurtosis statistics ranged between 0 and  $\pm 1$ , indicating normally distributed data.

To assess underlying social dimensions reflected by the traits, an exploratory factor analysis was conducted. Before extracting components, further screening was conducted on the data. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.92, and the Bartlett’s test of sphericity was significant ( $p < .001$ ). Orthogonal factors were explored using a principal component analysis with Varimax rotation, which revealed two factors, termed as Warmth and Competence (Table 1). Total variance explained by the two extracted factors was 63.59%. The three traits with the highest loadings on each dimension were selected to measure the dimensions of perceived warmth (*friendly*, *good-natured*, *likeable*) and competence (*sophisticated*, *intelligent*, *competent*) in the present study.

During the impression formation task, participants were asked to indicate the extent to which each of six traits described the person in the photograph. Each time a face was presented on the computer, the image stayed on the screen for 5 sec. after which time a 9-point bipolar trait rating scale (e.g., 1 = *unfriendly*, 9 = *friendly*) appeared next to the image. Both image and rating scale remained until the participant rated the face. Once the participant responded with a rating, the next face was presented on a new screen. Each face was rated on the same six traits that were selected from the pretest to reflect the social dimension of warmth (*likeable*, *friendly*, *good-natured*), and the social dimension of competence (*competent*, *intelligent*, *sophisticated*). Presentation of the faces and the traits were randomized using a randomized complete block design, i.e., the order of each block (face) was randomized, and within each block the order in which the six

traits were presented was also randomized. After completing the experiment, participants were debriefed and thanked for their time. On average, participants required 45 minutes to complete the entire session.

## RESULTS

### *Trait Ratings*

Trait ratings reflecting the social dimensions of warmth and competence were averaged to create two composite variables; *perceived warmth*, and *perceived competence*. Half the participants ( $n=69$ ) viewed and responded to the smiling faces, and another 69 participants viewed and responded to the faces with a neutral expression.

*Perceived warmth.*—To assess the perceived warmth of male and female faces, trait ratings were submitted to  $2 \times 2$  analyses of variance (ANOVA). Facial expression served as a between-subjects factor (smiling, non-smiling), and sex of the facial image served as a within-subjects factor (male, female). Results revealed a main effect for facial expression such that smiling faces were rated higher on warmth than faces that were not smiling (smiling  $M=7.15$ ,  $SD=0.87$  vs non-smiling  $M=6.65$ ,  $SD=0.79$ ) ( $F_{1, 136}=53.57$ ,  $p<.001$ ,  $\eta^2=0.28$ ), replicating a well-known effect. This effect, however, was moderated by the sex of the face ( $F_{1, 136}=19.31$ ,  $p<.001$ ,  $\eta^2=0.12$ ); smiling female faces were judged to be warmer ( $M=7.34$ ,  $SD=0.83$ ) than smiling male faces ( $M=6.98$ ,  $SD=0.92$ ) ( $t_{68}=6.48$ ,  $p<.001$ ,  $d=0.41$ ), supporting Hypothesis 1, that smiling women would be rated higher on perceived warmth than smiling men.

Additional analyses compared responses as a function of facial expression separately for female faces and for male faces. Results revealed the warmth ratings of smiling female faces were significantly higher than that of non-smiling female faces (smiling  $M=7.34$ ,  $SD=0.83$  vs non-smiling  $M=6.14$ ,  $SD=0.81$ ) ( $t_{136}=8.42$ ,  $p<.001$ ,  $d=1.17$ ). Although a similar effect occurred for male faces (smiling  $M=6.98$ ,  $SD=0.92$  vs non-smiling  $M=6.17$ ,  $SD=0.76$ ) ( $t_{136}=5.63$ ,  $p<.001$ ,  $d=0.81$ ), the effect was considerably stronger for judgments of female faces.

*Perceived competence.*—To assess the perceived competence of male and female faces, trait ratings were submitted to  $2 \times 2$  ANOVA. Facial expression and sex of the facial image served as between-subjects factors as before. Results revealed a weak main effect for facial expression, such that smiling faces were rated as more competent ( $M=6.74$ ,  $SD=0.80$ ) than faces that were not smiling ( $M=6.41$ ,  $SD=0.89$ ) ( $F_{1, 136}=6.10$ ,  $p=.02$ ,  $\eta^2=0.04$ ). This effect was qualified by sex of the facial image ( $F_{1, 136}=3.66$ ,  $p=.06$ ,  $\eta^2=0.03$ ); smiling female faces were rated as more competent ( $M=6.95$ ,  $SD=0.86$ ) than smiling male faces ( $M=6.54$ ,  $SD=0.98$ ) ( $t_{68}=6.48$ ,  $p<.001$ ,  $d=0.41$ ).

Additional analyses compared responses as a function of facial expression for female faces and then for male faces. Results revealed the rated competence of smiling female faces was significantly greater than for non-smiling females (smiling  $M=6.95$ ,  $SD=0.86$  vs non-smiling  $M=6.53$ ,  $SD=0.70$ ) ( $t_{136}=3.12$ ,  $p=.002$ ,  $d=0.81$ ). However, contrary to Hypothesis 2, facial expression did not have a significant effect on the competence ratings of male faces (smiling  $M=6.54$ ,  $SD=0.98$  vs non-smiling  $M=6.28$ ,  $SD=0.78$ ) ( $t_{136}=1.78$ ,  $p=.09$ ,  $d=0.15$ ).

### *Stereotype Endorsement*

To investigate whether endorsement of gender stereotypes predicted impressions ratings, cross-product regression analyses were conducted. Scores were centered for each variable (i.e.,  $M=0$ ). High stereotype endorsement was defined as scores at least one standard deviation above the mean; low stereotype endorsement was defined as scores one standard deviation below the mean or less. Separate analyses were performed for warmth and competence ratings in response to male and female faces. Ratings of female faces' warmth (followed by ratings of female faces' competence) were regressed onto the predictors of female stereotype endorsement (centered continuous variable), and facial expression (dummy coded).



Parallel analyses were performed on the ratings of male faces' warmth and competence using male stereotype endorsement and facial expression as predictors.<sup>2</sup>

*Perceived warmth and competence of female faces.*—Results revealed a significant interaction between female stereotype endorsement and facial expression ( $\beta = 0.27$ ,  $t = 2.50$ ,  $p = .01$ ,  $F_{3, 134} = 29.85$ ,  $p < .001$ ,  $R^2 = .63$ ). Participants who endorsed stronger female gender stereotype beliefs were more likely to give smiling women higher ratings ( $\hat{Y} = 7.73$ ) than participants who endorsed female stereotypes less strongly ( $\hat{Y} = 6.99$ ); however, ratings of female faces displaying a neutral expression were similar for those who strongly endorsed female stereotypes ( $\hat{Y} = 6.16$ ) and those whose endorsement was weaker ( $\hat{Y} = 6.11$ ).

A similar pattern emerged for judgments of competence in response to female faces ( $\beta = 0.22$ ,  $t = 2.13$ ,  $p < .04$ ,  $F_{3, 134} = 6.17$ ,  $p = .001$ ,  $R^2 = .35$ ). Participants who endorsed gender stereotype beliefs strongly were more likely to rate smiling women as competent ( $\hat{Y} = 7.27$ ) than those whose stereotype endorsement was weaker ( $\hat{Y} = 6.70$ ); however, ratings of female faces displaying a non-smiling expression did not differ between participants who strongly endorsed female stereotypes ( $\hat{Y} = 6.54$ ) and those whose endorsement was weaker ( $\hat{Y} = 6.53$ ).

*Perceived warmth and competence of male faces.*—To investigate the predictive role of male gender stereotypes and facial expression when forming impressions of men, cross-product regression analyses were conducted; however, no significant effects emerged for men's perceived warmth or men's perceived competence, suggesting that male gender stereotype beliefs did not play a predictive role in impressions of male faces.

## DISCUSSION

The present study investigated the role of gender stereotypes in perceptions of smiling male and female faces. The first hypothesis was supported: smiling women were rated more favorably on traits related to warmth than were smiling men. Although male faces were also rated as warmer when smiling than when not, the effect was considerably stronger for smiling female faces, which were rated highest on perceived warmth. This finding is consistent with prior research suggesting there are different norms and expectations for males and females, including the stereotype that implies women, more than men, should display affiliative behaviors (e.g., Fiske, *et al.*, 1999; Hess, *et al.*, 2005). Smiling is a behavior that reflects such traits.

Hypothesis 2, which predicted that men would be rated as more competent when they were not smiling, was not supported. Male faces were perceived to be similar in competence regardless of facial expression, suggesting that perhaps facial expression is not a primary behavioral cue people use when evaluating men's competence. A further study might investigate the effect of contextual cues, e.g., perceivers who ascribe to traditional gender norms might expect men in high status or leadership positions that are associated with competence (e.g., CEOs, managerial positions) to engage in more stoic, non-emotional displays of behavior, whereas it may be deemed more acceptable for men in low status positions (e.g., customer service, retail clerks) to engage in smiling behavior. Although some research has indicated that social status differentially affects the smiling behavior of men and women (Henley, 1977), other studies have found that status is not a good predictor of gender differences in smiling behavior (e.g., Dovidio, Brown, Heltman, Ellyson, & Keating, 1988; Cashdan, 1998; Hall & Friedman 1999; Hall, Carter, Jimenez, Frost, & LeBeau, 2002; Hall, Carter, & Horgan, 2001). However, it would be worthwhile to assess how perceptions of competence are related to status positions, and to investigate whether the perceivers' endorsement of traditional male stereotypes would influence ratings of smiling and non-smiling men in high and low status positions as associated with competence.

The finding that female faces, overall, were evaluated higher on the dimension of competence than the male faces appears not to be consistent with the notion that men in American society are thought to possess more agentic traits, including competence. However, the finding that female faces were evaluated, overall, as more favorable than male faces is consistent with the "women are wonderful effect" (Eagly & Mladinic,

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<sup>2</sup>There were no significant differences between male and female participants' endorsement of female stereotypes (men:  $M = 4.85$ , women:  $M = 4.82$ ;  $t_{136} = .31$ ,  $p = .78$ ) or male stereotypes (men:  $M = 4.92$ , women:  $M = 4.80$ ;  $t_{136} = 1.03$ ,  $p = .31$ ); therefore, participants' gender was omitted as a separate variable from further analyses.

1994). This effect posits that, in general, women are perceived favorably and that people tend to attribute positive traits more strongly to women than to men. Several empirical studies have supported this hypothesis (Eagly, Mladinic, & Otto, 1991), e.g., Rudman and Goodwin (2004) found that both men and women were faster to relate positive words with the social category of females compared to the social category of males. As such, this effect could explain why female faces in the present study were rated, overall, more favorably than male faces.

Female stereotype endorsement predicted more positive impressions of smiling women, suggesting that smiling women are engaging in expected stereotype-consistent behavior, e.g., that women are (and should be) warm and nurturing (Fiske, *et al.*, 1999). Other social groups, such as the elderly, are also stereotyped to be high in warmth (Fiske, *et al.*, 1999). Further studies might investigate whether members of such groups would be rated more positively when displaying facial expressions consistent with social stereotypes. Female stereotype endorsement also predicted positive impressions of smiling female faces on the dimension of competence. Thus, for female faces, smiling was a significant predictor for ratings of both warmth and competence, providing more evidence that the “women are wonderful” effect is robust.

Findings from this research are important in expanding the general knowledge of how nonverbal behaviors affect impressions of others: facial expressions are used differently as cues when evaluating men’s and women’s traits. These results are supported by research on spontaneous trait inference by Carlston and Skowronski (1994), who found that when participants were presented with photographs of individuals paired with behavioral information that implied certain personality traits, participants spontaneously ascribed the implied traits to the photographed individuals in a later task. Thus, behavioral information can lead to spontaneous inferences of the personality traits. It is feasible that perceivers in the present research used facial expression as behavioral information and spontaneously inferred warmth and/or competence of the photographed individuals.

The present research also provided evidence that female stereotypes play a predictive role when forming impressions of smiling or non-smiling women’s faces, which does not occur for male faces. Perceptions of men were relatively unaffected by perceivers’ male gender stereotype beliefs. One possible reason might be how men and women are judged in American society. Women, compared to men, tend to be evaluated more on appearance (e.g., Rosenkrantz, *et al.*, 1968; Mathes & Kahn, 1975; Adams, 1977; Fredrickson & Roberts, 1997) beginning relatively early in life (Smith, 1985), and persisting into late adulthood (Wilcox, 1997), so people may be more experienced at judging the personality characteristics of females than males based on appearance. Another possibility is that women in American society may not be afforded the same amount of flexibility as men in displaying facial expressions considered inconsistent with their gender stereotype. Traits associated with masculine stereotypes may still be valued more than traits associated with feminine stereotypes, and both men and women could incorporate these gender stereotypes into their self-concepts (Rosenkrantz, *et al.*, 1968). Because men and women are evaluated differently based on more and less valued, gender stereotype traits, women may decide to engage in prescriptive feminine behaviors (less valued), or to engage in behaviors reflective of the more desirable positive traits associated with the male stereotype, thereby risking their perceived femininity (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970). Also consistent with this idea is a more recent study by Rudman and Glick (1999, 2001), who reported that it is not uncommon for women to face social backlash when they engage in behavior incongruent with feminine stereotypes. Certainly, further research is needed to identify why gender stereotype beliefs differentially predicted trait ratings of male and female faces.

Several limitations were associated with this study. One limitation concerns the number of facial expressions compared, only smiling and neutral expressions. Several researchers have suggested that within societies there exist “emotion cultures” that include and incorporate a society’s beliefs regarding gender and emotion (Hochschild, 1979; Thoits, 1989; Smith-Lovin, 1995; Shields, 2002). American culture has long incorporated a stereotype that women experience and display sadness more frequently than do men (Simon & Nath, 2004), and that men experience and display anger more frequently than do women (Hess, *et al.*, 2005; Hess, Adams, Grammer, & Kleck, 2009). It would be useful to include and compare a variety of facial expressions to assess whether gender stereotypes influence impressions of men and women engaging in stereotype consistent and inconsistent facial expressions. Another limitation of the present research is the use of static photographed faces. It is unclear whether the same effects would hold for dynamic impressions during actual face-to-face interactions. The strength of perceivers’ stereotypical gender beliefs might differentially affect impressions of men and women who displayed facial expressions during social

interactions either consistent or inconsistent with stereotypes. Such findings might have practical implications, especially for women being judged in evaluative contexts, such as job interviews or professional presentations. Another potential limitation is that although the facial stimuli were chosen from a face database that categorized the expressions as smiling or neutral, a manipulation check was not conducted to assess whether the expressions were indeed perceived to be displaying a smiling or neutral expression. It is conceivable that participants might have perceived that some of the smiling faces were actually displaying neutral expressions, or that some of the neutral faces were actually displaying smiling expressions.

In conclusion, the present research adds to existing knowledge of how people form impressions of men and women. Not only are facial expressions used as cues when evaluating others' personalities, gender stereotypes and social expectations also play a role. The findings suggest that women may be perceived more favorably when displaying a smile.

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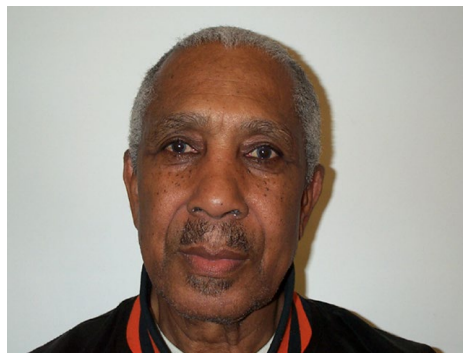
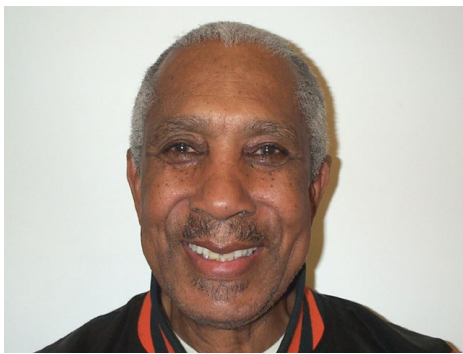
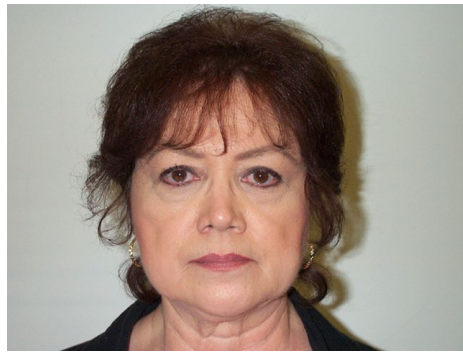
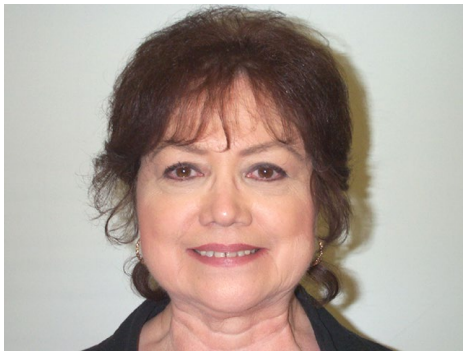


Fig. 1. Example photo stimulus: some participants viewed the faces displaying a smiling expression; others viewed the faces displaying a neutral expression.

TABLE 1

SUMMARY OF EXPLORATORY FACTOR ANALYSIS RESULTS FOR TRAITS USING PRINCIPLE COMPONENTS ANALYSIS AND VARIMAX ROTATION WITH KAISER NORMALIZATION ( $N=153$ )

Item	Pretest Ratings		Factor Loadings	
	<i>M</i>	<i>SD</i>	Warmth	Competence
<b>Friendly</b>	6.74	1.05	<b>.90</b>	.18
<b>Good Natured</b>	6.48	1.16	<b>.87</b>	.19
<b>Likeable</b>	6.87	0.93	<b>.84</b>	.31
Polite	6.53	1.07	.83	.26
Approachable	6.46	1.08	.82	.31
Honest	6.64	0.91	.62	.50
Open Minded	5.92	0.91	.60	.40
Imaginative	5.67	1.04	.58	.47
<b>Sophisticated</b>	5.82	1.05	.29	<b>.75</b>
<b>Intelligent</b>	6.50	0.95	.33	<b>.74</b>
<b>Competent</b>	6.29	1.04	.47	<b>.66</b>
Ambitious	6.67	0.99	.36	.65
Attractive	5.06	1.08	.13	.57
Aggressive	5.34	1.02	-.41	.47
Eigenvalues			7.35	1.52
% of variance			52.49	10.87

*Note.*—The top three factor loadings for Warmth and Competence (respectively) appear in boldface.