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The Power of a Smile to Move You: Complementary Submissiveness in Women's Posture as a Function of Gender Salience and Facial Expression

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Abstract

Extending evidence that nonverbal complementary behavior can occur in dyads to the intergroup domain, the authors predicted that women assume a relatively submissive (narrow) posture when confronted with a male instructor adopting a dominant (broad) posture, but only when he smiles (affiliation motive) and when gender is salient. Male affiliation (smiling vs. not smiling) and gender salience were manipulated in Study 1 by focusing on sex differences (vs. individual differences) in presentation style, strengthened by the instructor making a sexist remark. As predicted, women adopted a more submissive posture when gender was salient and the male instructor smiled. In Study 2, male posture was manipulated (dominant vs. submissive) to examine postural complementarity in women. Study 3 replicated the postural effect, especially when the sexist remark is present. This effect was mediated by the instructor's perceived warmth. Implications for gender, benevolent sexism, and intergroup power relations are discussed.

Keywords

complementarity, nonverbal behavior, power, dominance, sexism

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For social psychologists interested in gender, patronizing and paternalistic forms of discrimination have become a key focus of research in recent years. There are good reasons for this. Forms of prejudice and discrimination that are subtle make them more difficult to recognize and resist (Jackman, 1994), and these forms can be expressed more easily. An important aspect of this process is therefore whether the target actually perceives other's patronizing behavior as discriminatory or, on the contrary, whether they consider it as friendly rather than hostile (Barreto & Ellemers, 2005; Kilianski & Rudman, 1998), undermining their ability to challenge it (Ellemers, 2001; Wright, 2001). In the present research, we go one step further and assess whether under certain conditions the nonverbal behavior of women themselves might actually complement male dominance (becoming more submissive) that is presented in a friendly way, disguised with a smile.

A growing literature is devoted to study the effects of patronizing or paternalistic discrimination on the target, and specifically how such discrimination affects target's interpretation of the situation, their self-esteem, their mood, and their subsequent performance (Major & Vick, 2005; Vescio, Gervais, Snyder, & Hoover, 2005). Such discrimination, especially when it takes ambivalent or evaluatively mixed

forms, is not always recognized as such (Barreto & Ellemers, 2005; Kaiser & Major, 2004; Kobrynowicz & Branscombe, 1997). Barreto and Ellemers (2005) propose that attributional ambiguity can be partially responsible for this lack of recognition of patronizing discrimination because it differs from the general prototype of discrimination as an overtly hostile act.

This is consistent with the evidence on modern forms of prejudice such as ambivalent sexism indicating that these beliefs can no longer be conceptualized as a simple one-dimensional ideology, or affective dimension based on overt hostility, but can also have a subjectively affectionate or benevolent component (Glick & Fiske, 1996, 2001). The positive elements in ambivalent sexism and patronizing

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behavior arguably form the sugar coating making the bitter pill of sexism more palatable (or the “velvet glove” on the iron fist, in Jackman’s, 1994, words). Vescio et al. (2005) define patronizing behavior as a form of paternalist sexism involving both a positive side (praise) and a negative side (devalued competence). Evidence confirms that paternalistic/benevolent discrimination, especially in the context of close gender relations, may be more accepted by targets because it evokes some positive emotions (Moya, Glick, Expósito, de Lemus, & Hart, 2007). Thus, in line with ambivalent sexism theory (Glick & Fiske, 1996), benevolent sexism may promote gender inequality by increasing women’s tolerance for acts of discrimination where hostile sexism would be likely to elicit recognition and resistance. Moreover, because benevolent sexism encourages women to negotiate a sexist system individually and interpersonally, they are unlikely to challenge the system as a whole (Glick & Fiske, 2001).

A central question addressed in the present research is how women react to male dominant behavior, even when accompanied by explicit prejudice, when it is shown (literally) with a positive face, giving grounds for affiliation motives and ambivalence. However, we are not primarily concerned with the overt and verbal reactions toward sexism among its targets but rather with the nonverbal reactions in their own behavior, which may be less easy to monitor and control, but which ironically may contribute to gender power relations.

Nonverbal Behavior and Relational Goals

The literature on the unconscious effects on behavior of primed constructs has shown much evidence for assimilation effects conforming to social stereotypes (e.g., Bargh, Chen, & Burrows, 1996; Dijksterhuis & van Knippenberg, 1998) as well as contrast effects (e.g., Dijksterhuis et al., 1998; Dijksterhuis, Spears, & Lepinasse, 2001; Schubert & Häfner, 2003; Spears, Gordijn, Dijksterhuis, & Stapel, 2004). Motivational factors such as relational goals or attitudes play a key role in determining the direction of the behavioral shift (e.g., assimilation or contrast) in actual or expected social interactions (Cesario, Plaks, & Higgins, 2006). For example, there is evidence for affiliation motives guiding individuals to adjust or “tune” their beliefs, attitudes, and behaviors to those held by another social actor with whom they would like to get along (Sinclair, Huntsinger, Skorinko, & Hardin, 2005). Conversely, we are more likely to contrast our behavior from those we categorize as different or “outgroup” (Schubert & Häfner, 2003; Spears et al., 2004).

Parallel to this literature, Tiedens and Fragale (2003) have shown that nonverbal complementary behavior can occur in an interpersonal interaction as a way of facilitating bonds between people in a cooperative setting. According to interpersonal circumplex theories (Carson, 1969; Leary, 1957; Wiggins, 1979), interpersonal behavior can be described according to two basic dimensions: affiliation

(agreeableness—quarrelsomeness) and control (dominance—submissiveness). Complementary responses in interactions imply behaving in a similar way along the affiliation dimension (assimilation; that is, being friendly to those who are friendly to us) but, importantly, behaving differently on the control dimension (contrast: for example, being relatively more submissive to others who are dominant), to create or maintain a comfortable relationship. This is what we refer to as the complementarity hypothesis.

According to this approach, assimilation and contrast responses are not exclusive in terms of their causal mechanism or associated goals. Although complementary behavior includes contrasting from the other at one level, a different motive underlies this than the “distancing” contrast effects proposed by previous literature based on a social comparison process at the interpersonal level (Dijksterhuis et al., 1998) or at the intergroup level (Cesario et al., 2006; Schubert & Häfner, 2003; Spears et al., 2004). In the complementarity hypothesis, the relative tendency to contrast on the control dimension is driven by an interpersonal motivation to complement to develop or maintain cooperative interpersonal relations rather than to distance oneself from the other. This rationale was evaluated by Tiedens and Fragale (2003) in studies conducted with same-gender dyads performing a cooperative task. Consistent with predictions, they found evidence of postural complementary responses in dominant and submissive nonverbal behavior and funnel debriefing confirmed that participants were not aware of their behavior. It is important to note that the complementarity effect depends on there being an affiliation motive and some basis for cooperation, to maintain harmony in interpersonal interaction. Tiedens and Fragale held the affiliation motive constant across conditions (i.e., it was not manipulated). In the present research, we aim to provide further evidence of complementary behavior when affiliation is made salient by the use of smiles (vs. no smiling), and when posture and smiling behavior are manipulated orthogonally.

Tiedens and Fragale (2003) based their research in power-balanced interpersonal interactions. However, dominance and submissiveness are power-based constructs that can also be considered from a more group-related perspective. Indeed, Tiedens and Fragale argued that complementarity might be stronger when it coincides with formal roles or positions. We argue that complementarity is more likely to occur under intergroup conditions that provide grounds for power-based behaviors to appear, such as cross-gender interactions.

Dominance Stereotypes and Power

Much research in social psychology addresses power as operating in the intergroup arena (e.g., Ng, 1982; Sachdev & Bourhis, 1985; Tajfel & Turner, 1979). Moreover, the power and status differentials that characterize many intergroup situations can also impact on what might seem to be more interpersonal interactions (Schmidt Mast, 2010). In the case

of gender, men have more status than women as a result of their social group membership (Ridgeway, 2001), they are more likely to hold powerful positions in hierarchies (Eagly & Karau, 1991), they more often endorse dominant ideologies and personality (Glick & Fiske, 2001; Sidanius & Pratto, 1999), and they are perceived as more dominant, whereas women are perceived as more submissive. In our studies, male dominance will be consistently salient in all these facets of power (Schmid Mast, 2010): that is, a male confederate (high status) will hold a high-power position (instructor) over female participants, and will express his personality dominance (in some cases) both verbally (making an explicit sexist remark) and nonverbally (holding a dominant posture). The effect of the presence of an affiliative motive (i.e., smiling) on participants' reactions to such male dominance is studied, as a test of the complementarity hypothesis.

The study of complementarity effects in behavior provides us a particularly interesting framework to analyze the influences of power and affiliation together using gender. What happens when power, as a group-based phenomenon, is combined with a motivation to create a friendly and comfortable interaction typical of interpersonal contexts? We argue that complementary behavior will be most likely to occur when a salient intergroup context makes associated power relations accessible, and when this context is cooperative, rather than antagonistic. We argue that the presence of an affiliative motive (e.g., a smile) will increase the probability of complementing dominant behavior in an intergroup setting (i.e., high gender salience) with submissiveness. That is, considering gender relations as implicating power and status differences, when gender is salient, it should lead to more complementary behavior in a cooperative context. In such an intergroup setting, friendliness may be particularly hard to resist for women without reciprocating, because being kind and friendly is consistent with the societal norms in general but more strongly with female stereotypes (Prentice & Carranza, 2002). Returning to our former question, when a dominant but smiling man is interacting with a woman, we predict that she may complement him on the control dimension (i.e., behaving relatively more submissively in response to his dominance behavior). Moreover, this may even occur when the man is being sexist, because his friendly behavior may disarm any perceived antagonism by maintaining the affiliation motive, while the sexism reinforces the salience of the intergroup power differential.

Overview of the Studies

In our studies, we focused on an interaction between a man in a high-power position—instructor—the confederate) and a woman (the participant). In Study 1, we manipulated the salience of the intergroup context by focusing on gender (high gender salience) or on individual differences (low gender salience), and we orthogonally manipulated the affiliation style of the male (confederate smiling vs. nonsmiling). In the

high gender salience condition, we also introduced a sexist comment, to provide a strong initial manipulation of gender salience, and a strong test of whether such hostile behavior might limit or undermine any complementarity effect. Thus, we expect an interaction between gender salience and smile factors, finding a complementarity effect in participants' behavior for the high gender salience condition when the confederate is smiling (i.e., participants should not assimilate to his dominant posture and/or will narrow their body posture showing more submissiveness) compared with when he is not smiling. In the low gender salience condition, we do not predict a gender-based complementarity effect because gender relations (and therefore group-based differences in power and dominance) should not be salient. Note that our low gender salience condition is not equivalent to Tiedens and Fragale's (2003) power-balanced interpersonal setting (i.e., same-sex dyads). Even though gender is not made salient explicitly, it is still a power-unbalanced setting (i.e., the confederate holds a power position—instructor—over the participants). It is somewhat unclear what to predict in this situation; when the power position (i.e., instructor) is the only salient dimension, the predicted complementarity effect should be weakened and may even be reversed; the dominance of the instructor may even be resisted if an established status hierarchy is not salient (i.e., low gender salience) and where he is not categorized as from the ingroup (i.e., not a student like them, but an instructor). Therefore, we do not expect complementarity in this condition, but if anything, some resistance to the displayed dominant behavior. We also measured smiling and frowning behavior to check for more general mimicry effects.

In Study 2, we manipulated posture (i.e., control dimension) and smiles (i.e., affiliation dimension) orthogonally to examine whether the behavioral change in participants is due to postural complementarity as proposed by Tiedens and Fragale (2003). We expect to find a significant interaction of both factors such that participants will only narrow their posture in response to male dominance (vs. submissiveness) when it is coupled with a smile.

Although we expect the presence of sexism, like the smile manipulation, to impact on the *evaluation* of the confederate (e.g., reduce liking, and affiliation toward the confederate), we expect that the subtle power of the smile is such that in the sexist/high gender salience condition, the smiling confederate should be perceived as less patronizing and sexist, and more likable and affiliative compared with the high gender salience condition without smiling. It could thus be argued that the friendly attitude of the confederate undermines the credibility of his sexist behavior (which could be interpreted as ironic or humorous). This is also partly the point: We predict that sexist behavior (underlining gender differences in power) is able to affect the participant's behavior, precisely *because* it is tempered by the smile. In sum, the main point of including the sexist comment in the first two studies is to ensure a strong gender salience manipulation while providing a conservative test of our complementarity prediction (the sexism could

lead women to resist the confederate). However, the potential confound of strengthening gender salience by means of sexism is addressed in Study 3, where we separate out the effects of sexism from a purer manipulation of gender salience, in combination with the affiliation motive.

Study 1

Method

Participants and Design. Participants were 77 female psychology undergraduate students at a U.K. university (74 White, 3 Asian), who received course credit or payment (£3), assigned to a 2 (gender salience: high vs. low) $\times$ 2 (smile: smiling vs. nonsmiling) between-subjects factorial design.¹

Apparatus and Setting. Two cameras videotaped each participant seated 1.80 m away from the computer screen with an empty chair on their left. The first camera recorded the participant above the knees, while the second camera focused on participants' faces.

Materials and Procedure. In the lab, participants signed the consent form. Then, a female experimenter asked them to watch a video explaining the rest of the study and left the room. The instructor on the video was a confederate male student who looked quite manly (had a beard, was wearing thick boots and jeans, and was quite muscular). He had been videotaped four times, one for each experimental condition.

In the low gender salience condition, the instructor said,

We are conducting a study on communication styles. For that purpose, we are going to examine individual variations in telling a story and how these differences relate to students' level of comprehension. We would also like to know whether people with different personalities have differences in communication style. I have been assigned to teach you.

After this manipulation, he explained that he was going to tell them a story, and they would have to retell it themselves later on. He encouraged them to concentrate and cooperate with him to learn how to do it (repeated in all conditions).

In the high gender salience condition, the last two sentences changed into "We would also like to know whether men and women have differences in communication style. I have been assigned to teach the women." To make the gender-based intergroup manipulation more salient, at the end of the video clip, the confederate made a sexist comment: "Let's see if the women can learn a little something from the men."

Once the video clip ended, the experimenter entered the room to change to the next clip where the confederate told the story. To prevent participants knowing the story already, we used a Slavic legend.

The confederate's affiliation style was manipulated by altering the way that he spoke (during instructions and the story), either by smiling regularly (smiling condition) or not (not smiling condition). Constant across conditions, the confederate performed some face-rubbing as a neutral behavior that participants could also mimic. In all conditions, the confederate adopted a consistently expansive posture, following Tiedens and Fragale's (2003) expansion manipulation (the confederate draped his left arm over the back of an empty chair, and crossed his leg with the right ankle rested on the left thigh and the right knee protruded out to the right beyond the edge of the chair). The confederate was videotaped in the same lab and chairs as the participants.

After retelling the story, participants were asked to answer some questions presented via computer. They rated the instructor on perceived dominance (six items, for example, self-assured; $\alpha = .78$) and perceived affiliation (six items, for example, well-mannered; $\alpha = .89$) based on Wiggins' Interpersonal Adjective Scale (IAS) taxonomy of interpersonal traits (1979), on 7-point scales (*not at all* to *very*). Following Tiedens and Fragale (2003), they rated how much they liked the instructor, how popular they thought he was, and "to what extent do you think you would get along with him?" (Stel, 2005; $\alpha = .84$). Two items gauged whether the instructor was perceived as patronizing and sexist. At the end, participants were presented with a funnel debriefing questionnaire (Chartrand & Bargh, 1999; Tiedens & Fragale, 2003) then debriefed and dismissed.

Nonverbal behavior coding. The videotapes were coded to measure variations in the posture of the participants, the frequency and latency of face-rubbing, and the frequency of smiling and frowning behaviors. Following Tiedens and Fragale (2003), the coders measured the (lateral) space that participants occupied by measuring the lateral extremities of the top part of the body (i.e., the farthest out points of the body, such as hands, arms, or elbows depending on the posture that was held by the participant at each moment) in centimeters on the screen. For the sake of simplicity, we refer to this measure as "arm posture." Coders took the first arm posture measure before the participants started watching the first video (baseline posture). Posture was measured four times (every 30 s) during the first video when the confederate is giving them the instructions, and before and once during the gender salience manipulation. During the second video playing (when the confederate is telling the story), posture was measured three times: at the beginning of the phase, at the end of it, and a third measure for the most expansive posture in the time between. Coders were blind to the manipulations and the measurement moments were the same across conditions.

The frequency of smiling, frowning, and face-rubbing behaviors was coded during two time periods, before and after the manipulation.

Intercoder reliabilities. One person coded all participants and then another coder coded 24 of the participants to check

Table 1. Means and Standard Deviations of Participants' Impressions of the Confederate (Left Panel) and Partial Correlations Between Them (Right Panel) in Study 1

	Low gender salience		High gender salience		Partial correlations ^a			
	Smile	No smile	Smile	No smile	1.	2.	3.	4.
1. Affiliation								
<i>M</i>	5.84	5.77	5.48	4.46	—	.10	-.40***	.43***
<i>SD</i>	0.81	0.66	1.10	1.14				
2. Control/dominance								
<i>M</i>	5.63	5.53	5.23	6.09		—	.27*	.23*
<i>SD</i>	0.84	0.69	1.06	0.54				
3. Sexist								
<i>M</i>	2.89	2.66	3.14	4.81			—	-.32**
<i>SD</i>	1.03	1.07	1.41	1.34				
4. Liking								
<i>M</i>	4.82	4.67	4.63	3.97				—
<i>SD</i>	0.91	0.66	1.09	1.04				

^aControlling for smile and gender salience.

* $p < .05$. ** $p < .01$. *** $p < .001$.

whether the measure was reliable. The two coders' ratings were highly correlated for all the nonverbal measures: face-rubbing ($r = .70$), posture width ($r = .65$), frowning ($r = .63$), and smiling ($r = .94$). Therefore, the original coder's ratings on these measures were used in the analyses.

Results

Manipulation Checks and Impressions of the Confederate

A 2 (smile: smiling vs. not smiling) $\times$ 2 (gender salience: low vs. high) ANOVA on perceived affiliation revealed the predicted main effect of smile, $F(1, 73) = 6.29$, $p = .01$, $\eta^2 = .08$: The confederate was seen as more affiliative in the smiling condition than in the not smiling condition. There was also a main effect of gender salience, $F(1, 73) = 14.77$, $p < .001$, $\eta^2 = .17$: The confederate was seen as more affiliative in the low (vs. high) gender salience context. These results were qualified by a significant interaction, $F(1, 73) = 4.78$, $p < .04$, $\eta^2 = .06$. Simple effects showed that in the high gender salience condition, the confederate was perceived as more affiliative when he was smiling (vs. not smiling), $F(1, 73) = 11.12$, $p < .001$, $\eta^2 = .13$, whereas there was no influence of smiling in the low gender salience condition, $F(1, 73) < 1$, ns . All means and standard deviations, as well as partial correlations for all the measures related to impressions of the confederate, are provided in Table 1.

To check whether the confederate was perceived as dominant, we examined the mean ratings of perceived control (dominance) of the confederate. Results confirmed that he was perceived as dominant in all conditions (all the means > 5 , on a 7-point scale; see Table 1). A 2 $\times$ 2 ANOVA showed a main effect of smile, $F(1, 73) = 4.36$, $p = .04$, $\eta^2 = .06$: The

confederate was perceived as more dominant in the nonsmiling condition. This main effect was qualified by a significant two-way interaction, $F(1, 73) = 6.86$, $p = .01$, $\eta^2 = .09$. He is perceived as more dominant in the high gender salience condition when he is not smiling than when he is, $F(1, 73) = 11.20$, $p = .001$, $\eta^2 = .13$, whereas there was no difference in the low gender salience condition, $F < 1$, ns .

To check whether the confederate was perceived as more or less sexist and patronizing across conditions, a combined score of participants ratings on these two measures ($\alpha = .67$) was subjected to a 2 $\times$ 2 ANOVA. There was a main effect of gender salience, $F(1, 73) = 18.36$, $p < .001$, $\eta^2 = .20$, confirming that the confederate was perceived as more sexist and patronizing in the high gender salience context. In addition, there was a main effect of smile, $F(1, 73) = 6.58$, $p = .012$, $\eta^2 = .08$: He was perceived as more sexist when he was not smiling, qualified by a significant interaction, $F(1, 73) = 11.64$, $p < .001$, $\eta^2 = .14$, indicating that the confederate in the high gender salience context was perceived as more sexist when he was not smiling (vs. smiling), $F(1, 73) = 18.04$, $p < .001$, $\eta^2 = .29$, with no differences in the low gender salience context, $F < 1$, ns .

Finally, there was a significant main effect of gender salience on the liking ratings, $F(1, 73) = 4.34$, $p = .04$, $\eta^2 = .06$: The confederate was more liked in the low (vs. high) gender salience condition. A main effect of smile, $F(1, 73) = 3.65$, $p = .06$, $\eta^2 = .05$, showed a tendency for participants to like the smiling confederate more than the nonsmiling one.

Nonverbal Behavior. To analyze the effects of our independent variables on face-rubbing, smiling, frowning, and body posture, we performed four mixed-type ANOVAs with time period as a repeated measure (Time 1: before the manipulation; Time 2: after the manipulation) and smile (smiling vs. not smiling)

Table 2. Means and Standard Deviation of Face-Rubbing, Smiling and Frowning (Frequency), and Postural Width (Centimeters on Screen) Across Time (Study 1)

	Low gender salience				High gender salience			
	Smile		No smile		Smile		No smile	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Face-rubbing								
<i>M</i>	0.58	0.32	1.05	0.26	0.67	0.50	0.67	0.24
<i>SD</i>	1.01	0.58	1.75	0.56	0.77	0.86	1.11	0.44
Smiling								
<i>M</i>	0.42	0.53	0.68	0.37	0.28	0.78	0.52	0.57
<i>SD</i>	0.51	0.61	0.89	0.50	0.75	1.11	0.68	0.60
Frowning								
<i>M</i>	0.21	0.05	0.16	0.21	0.22	0.22	0.10	0.38
<i>SD</i>	0.54	0.23	0.38	0.42	0.43	0.55	0.30	0.59
Arm posture								
<i>M</i>	6.73	6.94	6.74	6.52	6.98	6.63	6.59	6.56
<i>SD</i>	1.05	1.28	1.27	1.24	1.19	1.05	1.10	1.16

and gender salience (high vs. low) as between-participants factors. Mean scores on all these nonverbal measures are presented on Table 2.

The analysis of frequency of face-rubbing showed a general decrease of the behavior over time, $F(1, 73) = 8.61$, $p < .005$, $\eta^2 = .10$. This effect was neither affected by gender salience nor by the smile of the confederate (both F s < 2 , *ns*). The ANOVA on smiling frequency showed a marginal interaction of Time $\times$ Smile, $F(1, 73) = 3.75$, $p = .06$, $\eta^2 = .05$, indicating a tendency to increase smiling when the confederate is smiling, and to reduce it when he is not. The results of the analysis for frowning behavior showed a similar interaction, $F(1, 73) = 6.27$, $p < .02$, $\eta^2 = .08$, indicating a decrease in the frequency of frowning when the confederate was smiling, and an increase in frowning over time when the confederate was not smiling. Furthermore, changes in frowning frequency were also moderated by gender salience, $F(1, 73) = 3.89$, $p = .05$, $\eta^2 = .05$, indicating an increase in frowning over time in the high gender salience condition, $F(1, 73) = 4.20$, $p = .04$, $\eta^2 = .05$.

An average score of the four measures of the participants' arm posture before the manipulation was calculated (Time 1), and another score was created averaging the three arms posture measures taken after the manipulation (Time 2). We included a measure of the baseline posture (before the participants started to listen to the instructions) as a covariate in the mixed ANOVA analysis of participants' postural changes over time to control for individual differences in posture or body size. Such differences might influence this measure (postural change); hence, an ANCOVA solution is adopted (Tabachnick & Fidell, 2007). The results of this analysis showed a significant interaction of Smile $\times$ Gender salience $\times$ Time, $F(1, 72) = 5.25$, $p < .03$, $\eta^2 = .07$.

This indicated that the complementarity effect was only evident in the high gender salience context when there was a smiling confederate, such that the initial posture significantly narrowed after the manipulation, $F(1, 72) = 3.92$, $p = .05$, $\eta^2 = .05$.

Discussion

In a cross-gender interaction with a male confederate, when gender relations are salient and the context is cooperative (the confederate is smiling, promoting an affiliation motive), female participants complemented the confederate's dominant posture by narrowing theirs compared with a setting where the confederate is not smiling. When gender is salient and the situation is more antagonistic (i.e., he is more serious as well as making a sexist remark), they maintain their posture (consistent with resisting the instructors' dominance). This result provides initial evidence for our prediction of complementary nonverbal behavior on the dominance dimension, when the intergroup gender dimension is salient and when an affiliation motive is present. This effect also contrasts with the pattern found on other nonverbal behavior measures such as smiling and frowning, which produced mimicry (assimilation) effects.

However, a number of questions remain. So far, we have provided evidence of changes in participants' posture based on the manipulation of group salience and smiling (i.e., affiliative motive present). Yet, to argue that this behavior implies postural complementarity as stated by Tiedens and Fragale (2003), ideally we need to test whether such changes in posture are responsive to dominant versus submissive behaviors. That is, we need to manipulate posture (i.e., control

dimension) and smiles (i.e., affiliation dimension) orthogonally. This is the purpose of Study 2.

Study 2

To provide further evidence that the participants' changes in body posture found in Study 1 were indeed a postural complementarity effect, in our second study the confederate's posture and smiling behaviors were manipulated orthogonally in an intergroup setting (where gender is highly salient and includes a sexist remark). Therefore, we used a 2 (posture: dominant vs. submissive) $\times$ 2 (affiliation style: smiling vs. nonsmiling) between-subjects factorial design. We predict an interaction effect on participants' postural change across time such that participants become more submissive (reduce their body posture) when the confederate holds a dominant posture coupled with a smile (vs. not smiling), but not when the confederate holds a submissive posture. In this condition (submissive smiling confederate), the complementarity argument is counteracting the gender dominance and the position of power (of the instructor); hence, it is unlikely to get complementarity (i.e., more dominant behavior of the female participants). We also included some extra measures of the confederate (as being seen as politically incorrect, joking, serious) to clarify the perceptions of the target when sexism is coupled with a smile.

Method

Participants and Design. Participants were 90 female psychology undergraduate students at a U.K. university (86 White, 4 Asian) who received course credit and were assigned to a 2 (posture: dominant vs. submissive) $\times$ 2 (smile: smiling vs. nonsmiling) between-subjects factorial design in which gender was always salient.²

Materials and Procedure. The apparatus and setting used were identical to the one used in Study 1. In this case, participants' whole body posture from the feet was videotaped.

A new confederate was videotaped giving the same instructions as in the high gender salience condition of Study 1 (strengthened by a sexist remark). However, in this case, the confederate posture was manipulated across conditions. That is, in one condition, he held a dominant posture (as described in Study 1), whereas in the second condition, he held a submissive posture (i.e., knees together, hands on his knees, and body slightly moved to the front) as described by Tiedens and Fragale (2003). Smiling versus not smiling was manipulated in the same way as in Study 1. In this case, the confederate did not perform any face-rubbing as a baseline behavior (he held his hands and arms in the same posture throughout the instructions).

A limitation of Study 1 was that most participants adopted a quite *narrow* posture from the beginning of the experiment, so there was not much scope for more submissive

behavior. The female experimenter therefore adopted a wider, relaxed baseline posture in Study 2 while giving the initial instructions before playing the first video of the confederate, expecting some mimicry for the participants' baseline posture.

After watching the videos and telling the story in their own words, participants were asked to answer some questions presented via computer. These included the liking scale ($\alpha = .90$) already used in Study 1 and some questions about impressions of the instructor ("In your opinion, to what extent is the instructor in the video . . . politically incorrect, joking, patronizing, serious, sexist, and confident"), followed by the perceived affiliation ($\alpha = .90$) and dominance ($\alpha = .72$) measures from Wiggins' IAS subscales and the funnel debriefing questionnaire previously used. At the end, participants were debriefed and dismissed.

The nonverbal behavior (posture, smiling and frowning) coding was done as in Study 1; however, in this case, two postural measures (top part of the body—arms and bottom part of the body—legs) were made independently in each time-point to have a richer measure of nonverbal behavior.

Results

Manipulation Checks

A 2 (smile: smiling vs. not smiling) $\times$ 2 (dominance: dominant vs. submissive) ANOVA on perceived affiliation revealed the predicted main effect of smile, $F(1, 86) = 22.54$, $p < .001$, $\eta^2 = .21$: The confederate was seen as more affiliative in the smiling condition (vs. not smiling). We also found a main effect of posture on perceived control (dominance), $F(1, 86) = 3.46$, $p = .06$, $\eta^2 = .04$: The confederate was seen as more dominant in the dominant condition (vs. submissive); and a main effect of smile on perceived control (dominance), $F(1, 86) = 4.09$, $p < .05$, $\eta^2 = .04$: The confederate was seen as more dominant in the not smiling condition (vs. smiling). All means and standard deviations are reported in Table 3.

Impressions of the Confederates

There was a significant main effect of smile on how likable participants thought the confederate was, $F(1, 86) = 7.11$, $p < .01$, $\eta^2 = .08$: Participants liked the smiling confederate (vs. not smiling) more, independently of the posture he held.

After conducting a factor analysis, the items rating the confederate as being sexist, patronizing, and politically incorrect, which all loaded in the same factor accounting for 37% of the variance, these were combined into a single score ($\alpha = .85$). The 2 $\times$ 2 ANOVA revealed a main effect of smile, $F(1, 86) = 7.13$, $p < .01$, $\eta^2 = .08$: The instructor was perceived as more sexist when he was not smiling (vs. smiling). The items measuring whether he was perceived as joking and serious

Table 3. Means and Standard Deviations of Participants' Impressions of the Confederate (Left Panel) and Partial Correlations Between Them (Right Panel) in Study 2

	Dominant		Submissive		Partial correlations ^a					
	Smile	No smile	Smile	No smile	1.	2.	3.	4.	5.	6.
1. Affiliation										
M	5.79	4.31	5.53	4.70	—	-.09	-.71***	.68***	.07	-.02
SD	1.08	1.28	1.04	1.17						
2. Control/dominance										
M	5.78	5.99	5.38	5.80		—	.28**	-.00	-.23*	.67***
SD	0.54	0.56	0.89	0.87						
3. Sexist										
M	3.11	4.42	3.75	4.06			—	-.46***	.05	.17
SD	1.65	1.40	1.41	1.25						
4. Liking										
M	5.27	4.39	5.06	4.62				—	.11	.19
SD	1.00	1.36	0.88	1.35						
5. Joking										
M	4.14	3.21	4.41	3.09					—	-.06
SD	1.04	1.19	1.09	1.29						
6. Confident										
M	6.52	6.21	5.74	5.86						—
SD	0.68	0.83	0.75	1.17						

^aControlling for smile and dominance.* $p < .05$. ** $p < .01$. *** $p < .001$.

(reversed) formed a second factor that accounted for 23% of the variance and were combined in a single score ($\alpha = .68$). The ANOVA revealed a main effect of smile, $F(1, 86) = 21.34$, $p < .001$, $\eta^2 = .20$: The instructor was perceived as more joking when he was smiling (vs. not smiling). The item “confident” loaded on a third factor that accounted for 14% of the variance. The ANOVA revealed a main effect of dominance, $F(1, 86) = 9.29$, $p < .003$, $\eta^2 = .10$, indicating that the instructor was perceived as less confident when he had a submissive posture. All means, as well as partial correlations for all the measures related to impressions of the confederate, are reported in Table 3.

Nonverbal Behavior. We performed four mixed-type ANOVAs with time period as a repeated measure (Time 1: before the manipulation; Time 2: after the manipulation) and smile (smiling vs. not smiling) and dominance (dominant vs. submissive) as between factors on smiling, frowning, and body posture (see means in Table 4).

The analysis of smiling frequency showed a significant effect of Time $\times$ Dominance, $F(1, 85) = 5.26$, $p < .03$, $\eta^2 = .06$, indicating that participants smiled more over time to a dominant confederate, $F(1, 85) = 6.71$, $p = .01$, $\eta^2 = .07$, but not to a submissive one, $F < 1$, ns . This effect was not moderated by whether the confederate was smiling himself or not, $F < 1$, ns , indicating that there was no assimilation in this

case. There were no effects of the manipulations over time in the frowning frequency, all F s < 2.8 , ns .

As in Study 1, we included a measure of the baseline posture as a covariate in the mixed ANOVA analysis of participants' postural changes over time. The analyses of arm posture over time did not show any significant result, all F s < 1 , ns . However, the analyses of the leg posture over time showed a significant interaction of Smile $\times$ Dominance $\times$ Time, $F(1, 84) = 6.43$, $p < .02$, $\eta^2 = .07$. Further analysis of this interaction showed a significant mimicry effect when the confederate held a submissive posture and was not smiling, $F(1, 84) = 4.82$, $p < .04$, $\eta^2 = .05$: Participants narrowed their posture over time. A significant complementarity effect (narrowing) occurred when the confederate was dominant and smiling, $F(1, 84) = 4.46$, $p < .04$, $\eta^2 = .05$, replicating the main finding of Study 1.

Discussion

The results of the second study provide further evidence of postural complementarity as defined by Tiedens and Fragale (2003). That is, participants' posture narrows under the joint impact of male postural dominance and smiling behavior. Interestingly, in this study, the complementarity effects were found on the changes in the leg posture over time but not for the arms. The fact that the confederate here was holding his

Table 4. Means and Standard Deviation of Face-Rubbing, Smiling, and Frowning (Frequency) Across Time (Study 2)

	Dominant				Submissive			
	Smile		No smile		Smile		No smile	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Smiling								
<i>M</i>	0.10	0.29	0.17	0.35	0.17	0.13	0.09	0.05
<i>SD</i>	0.30	0.46	0.39	0.57	0.39	0.34	0.43	0.21
Frowning								
<i>M</i>	0.14	0.24	0.22	0.30	0.22	0.13	0.05	0.00
<i>SD</i>	0.48	0.44	0.60	0.56	0.52	0.34	0.21	0.00
Arm posture								
<i>M</i>	7.07	7.03	6.92	7.08	7.03	7.09	7.18	7.15
<i>SD</i>	0.74	0.76	0.56	0.80	0.77	1.02	0.96	0.67
Leg posture								
<i>M</i>	2.82	2.66	2.95	2.94	3.72	3.77	3.19	3.01
<i>SD</i>	1.43	1.29	1.18	1.28	1.51	1.47	1.42	1.26

arms in a fixed posture all the time (he was not doing any face-rubbing as in Study 1) might have shifted the relative attention focus to the bottom part of the body in this study. In Study 1, the confederate's face-rubbing behavior (which participants mimicked) involved movement of the arms across time, potentially drawing attention to the upper part of his body. The second study also shows an effect of dominance on women's smiling behavior. This result suggests that women smile more in response to a stereotypical gender interaction with a dominant man. This is consistent with the literature that shows that smiling is a sign of subordination (Henley & LaFrance, 1984) and is particularly shown by women in low-power positions (Hall, Coats, & Smith LeBeau, 2005).

Our first two studies included a sexist remark to increase gender salience and as a strong test for our complementarity hypothesis (i.e., sexism could have led to more resistance rather than complementarity). However, this represents an impure manipulation of the salience of intergroup context. It could also be that the smiling condition changes how the sexism is perceived, such that it is interpreted as humorous and ironic, and thus perhaps less sexist (Ford & Ferguson, 2004). Indeed at the explicit level, our results confirm that the sexist and smiling confederate is more liked, perceived as less dominant, and less sexist than when he is sexist but not smiling (although consistent with our argument, this produced more submissive behavior). It is therefore necessary to conduct further research in which we disambiguate any effects of perceived sexism from gender salience more generally. Second, evidence for the mediating process driving the complementarity effect based on the affiliation motive would help to strengthen the case for our interpretation of the intergroup complementarity effect. These are the two main aims of Study 3.

Study 3

In the present study, we focused again on the high gender salience baseline in all conditions, and manipulated whether the sexist remark was present or not, crossed with the same smiling manipulation as before. We predict that we should find the relative complementarity effect both with and without the sexist remark in the smiling conditions (affiliation motive) but not in the nonsmiling conditions. We do not make any strong prediction about whether the sexist comment moderates this complementarity effect; it could enhance gender salience (and thus complementarity) as originally proposed, but it might also evoke resistance by reducing liking and compromising affiliation (reducing complementarity).

We also investigate the process driving the effect of the smiling on behavior under intergroup conditions. According to the circumplex theories (Carson, 1969; Leary, 1957; Wiggins, 1979), the complementarity effect depends on there being an affiliation motive in which people try to maintain harmony in interpersonal interaction. In Studies 1 and 2, no evidence of mediation was found with the variables examined (liking, affiliation). This might be due to the fact that neither of these measures clearly referred to the perceived interaction intentions of the confederate (e.g., "Is he a friend or foe?"). Based on stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002), a measure of perceived warmth is included to test for possible mediating effects on the behavior.

Method

Participants and Design. Participants were 95 White female psychology undergraduate students at a U.K. university who

Table 5. Means and Standard Deviations of Impressions of the Confederate (Left Panel) and Partial Correlations Between Them (Right Panel) in Study 3

	Sexist		Nonsexist		Partial correlations ^a						
	Smile	No smile	Smile	No smile	1.	2.	3.	4.	5.	6.	7.
1. Affiliation											
M	5.54	4.45	5.76	5.17	—	.04	-.56***	.67***	.50***	-.17	.65***
SD	0.90	1.32	0.87	1.17							
2. Control/dominance											
M	5.72	5.76	5.77	6.17		—	.16	.11	.29**	.26*	.11
SD	0.88	0.71	0.58	0.66							
3. Sexist											
M	3.65	4.08	2.81	3.25			—	-.48***	-.18	.45***	-.42***
SD	1.39	1.22	0.98	1.06							
4. Warm											
M	5.17	3.50	5.12	3.75				—	.46***	-.09	.67***
SD	1.07	1.44	1.01	1.62							
5. Competent											
M	5.74	5.00	5.48	5.62					—	.00	.41***
SD	0.69	1.07	0.77	1.13							
6. Joking											
M	3.65	3.76	3.13	3.37						—	-.04
SD	0.91	0.77	0.77	0.64							
7. Liking											
M	4.62	4.08	4.79	4.37							—
SD	0.74	1.15	1.02	1.40							

^aControlling for smile and sexism.* $p < .05$. ** $p < .01$. *** $p < .001$.

received either course credit or payment (£3) and were assigned to a 2 (sexist remark: present vs. absent) $\times$ 2 (smile: smiling vs. nonsmiling) between-subjects factorial design in which the intergroup context was always salient.³

Materials and Procedure. The apparatus and setting used were identical to the ones used in previous studies.

As in Study 2, the female experimenter adopted a broad, relaxed baseline posture while giving the instructions. The instructions the videotaped confederate gave were modified to include the manipulation of sexist remark present or absent. The stimulus materials from Study 1 were used for this purpose, editing out the sexist remark in the nonsexist condition. Therefore, as in Study 1, the confederate held a dominant posture constant across conditions and performed face-rubbing as a gender-neutral behavior.

The nonverbal behavior coding was done as before to measure variations in the posture of the participants, the frequency and latency of face-rubbing, and the frequency of smiling and frowning behaviors.

After watching the videos and retelling the story, participants were asked to answer some questions about the confederate presented via computer: liking (three items, $\alpha = .85$); perceived sexism (three items, $\alpha = .76$); whether he was

joking, not serious, or ironic ($\alpha = .61$), competent, and warm; and finally the perceived affiliation ($\alpha = .87$) and dominance ($\alpha = .79$) measures from Wiggins' IAS.

Results

Manipulation Checks

To check the smiling manipulation, the average affiliation score was subjected to a 2 (smile: smiling vs. not smiling) $\times$ 2 (sexist remark: present vs. absent) ANOVA. This showed the predicted main effect of smile, $F(1, 91) = 14.44$, $p < .001$, $\eta^2 = .14$: The confederate was perceived as more affiliative in the smiling condition. A main effect of sexism, $F(1, 91) = 4.38$, $p < .04$, $\eta^2 = .05$, indicated that the confederate was seen as less affiliative when he made a sexist remark.

The results showed no differences in the perception of dominance of the confederate between conditions, all F s < 2.5 , ns (all the means > 6 , on a 7-point scale). All means are reported in Table 5.

A combined score of ratings of the confederate as sexist, patronizing, and politically incorrect ($\alpha = .76$) confirmed a main effect of sexism, $F(1, 91) = 12.11$, $p = .001$, $\eta^2 = .12$, and also a marginal effect of smile, $F(1, 91) = 3.26$, $p = .07$,

Table 6. Means and Standard Deviation of Face-Rubbing, Smiling, and Frowning (Frequency) Across Time (Study 3)

	Sexist				Nonsexist			
	Smile		No smile		Smile		No smile	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Face-rubbing								
<i>M</i>	0.78	0.83	0.55	0.41	0.77	0.42	0.71	0.50
<i>SD</i>	1.04	1.27	1.01	0.80	1.42	0.70	1.08	0.83
Smiling								
<i>M</i>	0.20	0.35	0.27	0.64	0.21	0.69	0.24	0.57
<i>SD</i>	0.52	1.07	0.46	0.95	0.29	1.41	0.42	1.31
Frowning								
<i>M</i>	0.15	0.09	0.20	1.00	0.11	0.08	0.21	0.25
<i>SD</i>	0.32	0.42	0.43	1.57	0.29	0.27	0.53	0.61
Arm posture								
<i>M</i>	5.31	5.21	5.17	5.39	5.24	5.21	5.19	5.22
<i>SD</i>	0.96	0.91	0.76	0.79	0.95	1.00	0.82	0.85
Leg posture								
<i>M</i>	3.85	3.77	3.75	3.82	3.75	3.88	3.56	3.69
<i>SD</i>	1.14	0.94	1.43	1.34	0.90	0.90	0.79	0.80

$\eta^2 = .04$. The confederate was perceived as more sexist when he made an explicit sexist remark and when not smiling (see Table 5).

Impressions of the Confederate

When participants were asked about the extent to which the confederate was warm, results showed a main effect of smile, $F(1, 90) = 31.75, p < .001, \eta^2 = .26$, confirming that the smiling confederate was perceived as warmer. The ANOVA on the liking also showed the expected main effect of smile, $F(1, 91) = 4.54, p < .04, \eta^2 = .05$: The smiling confederate was more liked. No differences were found for the sexism factor, $F < 1.1, ns$. Furthermore, the ANOVA on participants' evaluations of his competence showed a significant interaction of Sexism $\times$ Smile, $F(1, 90) = 5.27, p = .02, \eta^2 = .06$, indicating that the confederate is perceived as more competent when he is sexist and smiling (vs. not smiling), $F(1, 90) = 7.06, p < .01, \eta^2 = .07$.

A main effect of sexism, $F(1, 91) = 8.03, p < .01, \eta^2 = .08$, indicated that the confederate was seen as more ironic/joking when he made an explicit sexist comment than when he did not. Importantly, however, this effect was not qualified by an interaction with smile, $F < 1.96, ns$. All means, as well as partial correlations for all the measures related to impressions of the confederate, are reported in Table 5.

Nonverbal Behavior

We performed four ANOVAs with time as a repeated measure (Time 1: before the manipulation; Time 2: after the

manipulation) and smile and sexism as between-participants factors on the smiling, frowning, face-rubbing, and posture change of the participants (see Table 6). Smiling frequency showed a main effect of time-point, $F(1, 90) = 8.28, p = .005, \eta^2 = .08$, indicating a tendency to increase smiling across time. Frowning showed a main effect of time-point, $F(1, 90) = 5.53, p = .02, \eta^2 = .06$, indicating a tendency to increase frowning across time, as well as a main effect of smile, $F(1, 91) = 7.47, p = .008, \eta^2 = .08$, indicating less frowning in the smiling condition. This effect was qualified by a three-way interaction of Smile $\times$ Sexism $\times$ Time, $F(1, 91) = 6.26, p = .01, \eta^2 = .06$. The analysis of this interaction indicated that participants frowned more across time in the sexist not smiling condition, $F(1, 91) = 24.17, p < .001, \eta^2 = .21$, whereas this effect disappears completely, $F < 1, ns$, when the confederate is sexist and smiling, or when the confederate is not sexist independently of whether he smiles, both $Fs < 1, ns$. The analysis of frequency of face-rubbing across time showed no reliable effects, all $Fs < 1.6, ns$.

As in Studies 1 and 2, we included a measure of the baseline posture as a covariate in the mixed ANOVA analysis of participants' postural changes over time. The analyses of the changes in arm posture over time showed a significant interaction of Smile $\times$ Time, $F(1, 90) = 6.46, p = .01, \eta^2 = .07$. That is, the confederate's smile influenced participants' posture. The analysis of this interaction showed that the change over time was only significant in the nonsmiling condition, $F(1, 90) = 5.35, p = .02, \eta^2 = .06$, in which participants expanded their posture over time, assimilating to the confederate's dominant posture. In the smiling condition, the change over time, although in the

Figure 1. Simple mediation model of perceived warmth of the confederate, on the effect of smile on the change in posture over time

direction of complementary narrowing, was not significant, $F < 1.6$, ns . There was a marginally significant interaction of smile, time, and sexism, $F(1, 90) = 3.00$, $p = .09$, $\eta^2 = .03$, suggesting that the moderating effect of smile occurred in the intergroup setting especially when sexism was explicit, $F(1, 42) = 5.69$, $p = .02$, $\eta^2 = .12$. There were no effects of the manipulation in leg posture over time, all F s < 1.7 , ns . All means are reported in Table 6.

Warmth As a Mediator of the Impact of Smile on Nonverbal Behavior

We tested a simple mediation model analyzing the mediating effect of perceived warmth of the confederate on the effect of smile on the changes in nonverbal behavior as shown on Figure 1. An index subtracting Time 1 from Time 2 was calculated to analyze participants' changes in posture over time (with a baseline of 0), where negative scores indicate a narrower posture and positive scores indicate broader posture over time. The smile manipulation significantly predicts participants' ratings in warmth, $\beta = .51$, $t = 5.66$, $p < .001$, and the change in their posture across time, $\beta = -.22$, $t = -2.13$, $p < .05$. Warmth also negatively predicts posture, $\beta = -.28$, $t = -2.76$, $p < .01$. The direct effect was significantly reduced when smile and warmth (the mediator) were entered in the regression equation together as predictors, $\beta = -.09$, $t = -0.74$, ns , using the (conservative) Sobel test, $z = -2.47$, $p = .01$. Bootstrapping procedure (with 5,000 resamples) indicated that the indirect effect of smile on arm posture change through warmth was -7.96 with a standard error of 14.60 , and 95% confidence interval = $[-18.08, -0.17]$ (Preacher & Hayes, 2008).

Discussion

The results of Study 3 support once again our argument that the salience of the intergroup dimension associated with power (in this case gender), in combination with smiling (producing the affiliation motive), influences women's nonverbal behavior. As in Study 1, the moderating effect of smiles was found on the changes in arm posture over time (not legs). This is consistent with the idea that when the confederate is performing some behavior with his hands (face-rubbing), the attention is directed to the upper part of the

body. In this case, we found that women confronted with a dominant male instructor assumed a relatively more expansive posture when gender was salient and when the confederate was not smiling. That is, their posture assimilates to the confederate's (becoming more assertive) when he is not smiling but not when he smiles. In other words, it seems like smiling promotes complementarity to the extent that it disables resistance (i.e., assimilation to a dominant posture) in an intergroup setting.

Compared with the previous studies, we observe that the complementarity effect is mainly driven in this case by a lack of resistance when the confederate smiles (and more dominance when he does not) and not by becoming more submissive. The key point is that the interaction shows that the assertive posture of participants is *relatively* reduced in the smiling intergroup conditions. That women become more assertive when smiling does not undermine this, is supported by the fact that participants show more frowning over time, when the confederate is not smiling (especially when sexist), which could also be seen as implicit disapproval of his behavior.

Our results suggest that the nonverbal behavior effect was not reduced by the presence of the sexist remark. However, if anything, the complementary contrast effect was even *stronger* in the presence of a sexist remark (as supported by a marginal interaction). This is consistent with our rationale that this remark renders the gender context even more salient along with power differences associated with this intergroup context necessary to complementarity.

The confederate was seen as more ironic when he made the sexist remark. Importantly, however, this was not influenced by his smile; therefore, the smile did not undermine the sexism. The smiling confederate was seen as warmer and was more liked than the nonsmiling one, independently of the sexist comment. Moreover, the smiling sexist confederate was seen as more competent than the nonsmiling one. These findings tend to rule out some question marks in interpreting the result of Studies 1 and 2, and specifically that the smiling manipulation undermined the perception of sexism.

The second main goal of this study was to gather some additional mediational evidence for the process proposed to underlie the intergroup complementarity effect. As predicted, and consistent with the proposed affiliation motive mechanism, we found that the main effect of smiling on complementary behavior in this intergroup setting was reliably mediated by the perceived warmth of the instructor.

General Discussion

In three studies, we provide evidence of a (relative) complementarity effect in nonverbal behavior, when the intergroup dimension is salient, and when an affiliation motive is present. Women adopted a relatively submissive (Studies 1 and 2) or less dominant (Study 3) posture when confronted with a smiling male instructor, when the gender dimension was salient, even (and especially) when the man was perceived

as sexist. We found no evidence that women were aware of their behavior from the funnel debriefing. Indeed, such complementary behavior is unlikely to be seen as desirable and might well be contested if participants become conscious of it. As such, we think this research provides initial evidence for a mechanism in which gender power relations may be unconsciously reinforced and reproduced.

There is already much emerging evidence for the negative influences of patronizing behavior on women (Major & Vick, 2005; Moya et al., 2007; Vescio et al., 2005), supporting Ambivalent Sexism Theory (Glick & Fiske, 1996, 2001). According to this approach, power differences between men and women create intergroup antipathy and exacerbate hostile ideologies of male superiority on competence-related traits (hostile sexism). However, power differences can coexist with intimate interdependence between men and women, fostering ostensibly benevolent ideologies depicting women as warm (but compliant). In our studies, hostility is reflected in the sexist remark, whereas benevolence is reflected in the smile. As Study 3 makes clear, the high gender salience-smiling condition contains elements of ambivalent sexism as the complementary behavior does not seem to depend on the presence of overt sexism (although if anything it seems to be strengthened by it). Thus, it seems that overt sexism can affect behavior in a way that actually promotes women's submissiveness or lack of resistance when the bitter pill of sexism is given the sugar coating of a smile (sexism with a smile).

We go one step further in the analysis of subtle forms of sexism by showing that the benevolence of friendliness not only affects the perception of men but also feeds back (unconsciously) into the nonverbal behavior of women. In line with the results of Tiedens and Fragale (2003), our findings show evidence of complementary nonverbal behavior while women are not aware of it. The difference here is that we make explicit the intergroup dimension to power and complementarity. However, the complementarity effect also relies on the interpersonal domain as the effect of the affiliation motive (smile) suggests. This result adds to previous literature on postural complementarity as it provides evidence for the influence of affiliation (experimentally manipulated) together with postural dominance (manipulated in Study 2) on women's nonverbal behavior.

Theoretical and Societal Implications

Complementary behavior in gender relations might enhance the perpetuation and justification of traditional gender roles and inequalities (Glick & Fiske, 2001; Jost & Banaji, 1994; Sidanius & Pratto, 1999; Tajfel & Turner, 1979). The study of nonconscious effects of power differences is particularly important because what you cannot detect you cannot resist. Women's complementary behavior may maintain the cycle of sexism and dominance, even without the victim's awareness. Although we did not examine here how the woman's

complementary behavior might lead to an increase in subsequent male dominant behavior, it is easy to see how such behavior might reinforce the power differential.

This result is reminiscent of Sinclair et al.'s (2005) findings that women with a high affiliative motivation interacting with men with stereotype-consistent views were seen and evaluated themselves more stereotypically, whereas participants with a low affiliative motivation distanced themselves from these stereotypical evaluations and behaviors. Although there is a common conclusion that can be drawn from both Sinclair's and our research (i.e., affiliation can lead to behaviors that reinforce the status quo), her studies posit assimilation as the process that leads to stereotype-consistent images, whereas our studies show that complementarity can also serve this function.

Our findings can be interpreted as providing some qualified support for system justification ideas (Jost & Banaji, 1994). However, the negative implications of the participants' behavior only appear on an indirect behavioral measure and under certain conditions. Moreover, in Study 3, the pattern indicates more resistance in an intergroup setting when the confederate is sexist and not smiling (see de Lemus, Spears, Bukowski, Moya, & Lupiáñez, in press). Depending on how we interpret our findings, we can conclude with an optimistic or pessimistic message. If women sustain the cycle of sexism unconsciously through their behavior, this makes achieving gender equality harder than we might have thought. However, this implies that raising consciousness is literally as well as metaphorically the way forward.

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Notes

1. Five participants who incorrectly reported the (interpersonal vs. intergroup) basis of the study were excluded from the analyses. Additionally, 4 participants who experienced technical difficulties (i.e., part of the videotaping was lost, or the

video playback did not work disrupting the experiment) and one who felt dizzy during the study such that it had to be interrupted were excluded. The number of people excluded from the analyses did not differ by condition.

2. Three participants who incorrectly reported the basis of the study were excluded from the analyses (exclusions did not differ by condition).
3. Eight participants who incorrectly reported the basis of the study were excluded from the analyses. Seven participants who experienced technical difficulties during the study, and one participant who randomly responded to all the questions with any key were also excluded (exclusions did not differ by condition).

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