

Attitude Toward Women's Societal Roles Moderates the Effect of Gender Cues on Target Individuation

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In 4 studies, participants read trait descriptions and formed impressions of 2 male and 2 female targets. They then attempted to recall which traits had described each target. As predicted, participants with a "progressive" attitude toward women's rights and roles (J. T. Spence, R. L. Helmreich, & J. Stapp, 1973) made fewer within-group recall errors for female targets than for male targets, indicating greater individuation of the female targets, whereas participants with a "traditional" attitude made fewer errors for male targets. The findings of a 5th study suggested that progressive participants were motivated to individuate women by their belief that it is important to improve the status of women and other groups low in power and by their identification with women and feminism. Traditional participants' greater individuation of men was believed to stem from their perception of men's higher status (as confirmed by pretests) and their acceptance of the status quo.

What factors determine whether a cognitive representation of any particular person will be individuated or category based? Prior research has found that members of in-groups tend to be more highly individuated than members of out-groups (e.g., Park & Rothbart, 1982) and that members of higher status groups tend to be better individuated than members of lower status groups (e.g., Lorenzi-Cioldi, 1998; Lorenzi-Cioldi, Eagly, & Stewart, 1995). Pertaining to gender groups, the out-group homogeneity hypothesis suggests that men and women will individuate members of their own gender group more than members of the other gender group. In contrast, the lower-status-group homogeneity hypothesis suggests that both men and women will individuate men to a greater extent than women, given that men are generally perceived to hold

higher status than women (Stewart & Vassar, 2000). In the present article, we consider the empirical support for these theories relative to gender groups and introduce an additional factor that we believe to be an important influence on which gender will be more highly individuated. We propose that individual differences, both in the degree of concern with gender inequities in society and in the motivation to reduce this disparity, may moderate the effect of gender cues on target individuation.

Influences on the Perceived Homogeneity of Gender Groups

One technique used to assess the extent to which members of different groups are perceived to be heterogeneous or homogenous is the *cued recall paradigm*, originated by Taylor, Fiske, Etcoff, and Ruderman (1978). In one common variation of this paradigm, participants read trait descriptions of target persons identified to be members of one of two groups (e.g., males or females). They then complete an unexpected memory test in which they attempt to match each trait with the target person that it had described. Categorization by group membership is indicated by a greater number of trait misassignments between targets of the same group than between targets of different groups (e.g., more confusions between two female targets than between a male and a female target). Less individuation of members of one group would be demonstrated by more within-group confusions for that group than for the other group (e.g., more confusions between two female targets than between two male targets). The cued recall paradigm has been used to study the homogeneity of both out-groups and lower status groups and is the paradigm used in the present experiments.

According to out-group homogeneity theory, people tend to individuate and, therefore, to better remember members of their

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own social groups; consequently, men would be expected to remember men better than women, whereas women should better remember women (Ostrom & Sedikides, 1992). Support for out-group homogeneity has been found in research on various groups (e.g., groups based on college major and sorority membership). However, it has received only limited support in research on gender groups (see Lorenzi-Cioldi et al., 1995). Some cued recall studies have found that participants better individuate targets who share their gender group membership (e.g., Frable & Bem, 1985; Ostrom, Carpenter, Sedikides, & Li, 1993, Experiment 1); other similar studies have not (e.g., Jackson & Hymes, 1985; Taylor et al., 1978). Young, van Knippenberg, Ellemers, and de Vries (1994) and Lorenzi-Cioldi et al. (1995) found that male participants, but not female participants, showed greater individuation for their gender in-group than for their gender out-group.

Fiske (1993) and Lorenzi-Cioldi (Lorenzi-Cioldi, 1998; Lorenzi-Cioldi et al., 1995) provided one possible reason for the discrepancy in findings for out-group homogeneity with gender groups. They proposed that the individuation of targets will be determined less by shared group membership with the target than by perceptions of the relative status of the targets' social groups. We would then expect memory for male and female targets to be influenced by the relative status ascribed to men and women. Lorenzi-Cioldi (1998) reviewed several theories supporting the prediction that members of higher status groups will be individuated to a greater degree than will members of lower status groups. For example, he suggested that people who hold high status might be perceived to be closer to Western society's ideal of the self-contained individual; therefore, they may receive the benefits of these societies' norms favoring individualization. He also reviewed work supporting the "subordination hypothesis," which suggests that more attention is paid to members of higher status groups because these groups tend to control desired resources. To gain access to these resources, the thoughts and feelings of members of high status groups must be anticipated. Similarly, Fiske (1993) argued that powerless individuals tend to pay a great deal of attention to those in power, because the powerful control the outcomes of the powerless. Increased attention to powerful others is likely to lead to their greater individuation. In contrast, powerful individuals have no need to attend to the powerless to achieve their goals and are therefore less likely to individuate those who hold less power. Park and colleagues (Park & Rothbart, 1982; Park, Ryan, & Judd, 1992) have also suggested that being in a lower status group places one in a vulnerable role and necessitates an awareness of the goals and actions of higher status others.

Greater individuation of targets with higher status occupation cues has been demonstrated in a number of studies using variations of the Taylor et al. (1978) cued recall paradigm (e.g., Sedikides, 1997, Experiments 1 and 2; Stewart & Vassar, 2000, in the male targets, but not the female targets, condition). Results consistent with the status hypothesis have also been reported in studies examining the individuation of members of two ethnic groups perceived to hold differential status levels. Stewart (2000) found that members of an ethnic group perceived to have relatively low societal status individuated members of a different ethnic group perceived to hold higher status to a greater degree than members of their own group. Because various studies have found that men are perceived to hold higher status than women (e.g., Ridgeway & Diekema, 1992; Wagner & Berger, 1997), we would then expect men to be better individuated than women. Supporting this hy-

pothesis, Lorenzi-Cioldi et al. (1995) found that both male and female participants made fewer within-gender-group memory errors for male targets than for female targets. The finding that both men and women individuated male targets more than female targets suggests that status effects are stronger than out-group homogeneity effects in determining gender group homogeneity. We concur that the perceived higher status of men plays an important role in whether male or female targets will be better individuated. However, we propose that not all perceivers will respond to status cues by homogenizing the lower status group.

Is Anyone Motivated to Individuate Women?

Sedikides (1997) stated that people often look to the attitudes and beliefs expressed by particular reference groups as a guide in developing their own attitudes and beliefs. He argued that "perceivers are more likely to individuate high- as opposed to low-status groups, because the former are regarded as having more valid beliefs and attitudes" (p. 126). But might we not find some individuals who believe that the attitudes and beliefs associated with particular lower status groups are more valid than those held by members of higher status groups? Fiske (1993) suggested that "the powerless are stereotyped because no one needs to, can, or wants to be detailed and accurate about them. The powerful are not so likely to be stereotyped because subordinates need to, can, and want to form detailed impressions of them" (p. 624). But might there not be some individuals who are highly motivated to individuate members of certain less powerful groups and who in fact tend to individuate members of lower status groups to a greater degree than members of higher status groups?

We agree with Lorenzi-Cioldi (1998) that status effects may override tendencies toward out-group homogeneity for gender groups. We propose, however, that individual differences in degree of complacency with the gender status quo may moderate the effect of status cues on perceptions of gender group homogeneity. We suggest that men and women with "progressive" attitudes toward women's rights and roles in society (as measured by the Attitudes Toward Women Scale; Spence & Hahn, 1997; Spence, Helmreich, & Stapp, 1973) will be particularly sensitive to the status inequality between women and men and will be motivated to reduce this disparity. Their concern with women's issues might cause them to identify with women and the challenges women face in seeking to gain more power in society. Because of their identification with women and their desire to improve women's societal status, progressive individuals may tend to individuate women. Just as forming individuated representations of men may serve to reinforce their higher status position, individuating women might play a role in improving women's status. Gender inequality might become a chronically accessible dimension for these individuals, and a tendency to counteract this inequality by individuating women could become a habitual cognitive strategy (Siegler & Stern, 1998).

Our central prediction is that progressive men and women will tend to individuate women more than men and will therefore remember women better than men. However, progressive individuals might not be immune to the tendency to better individuate members of higher status groups documented in other studies. If progressive individuals believe that men hold higher status than women (an assumption tested in Experiment 3), they might be somewhat motivated to individuate men more than women. The question then becomes which social factor will have a greater

impact on progressive individuals: the motivation to individuate (a) men more than women in deference to men's higher status or (b) women more than men in an attempt to compensate for women's lower status. Lorenzi-Cioldi et al. (1995) similarly questioned whether women would have a stronger tendency to individuate their gender in-group as predicted by out-group homogeneity theory or to individuate their gender out-group as predicted by the status hypothesis. As previously reported, the recall pattern of their female participants revealed the effect of status to be stronger than that of out-group homogeneity.

In the present research, we hypothesized that progressive individuals' attitudes toward women's rights and roles would overshadow the competing effects of status in determining which gender group they would individuate more strongly. However, if the effects of both status and attitude toward women were sufficiently strong, we might find that these opposing influences cancelled each other out, leading progressive individuals to individuate male and female targets equally. In contrast, participants with a more "traditional" attitude toward women should not be motivated to react against the status quo and would therefore be expected to exhibit the familiar status-driven pattern of better memory for men than women demonstrated in prior studies (e.g., Lorenzi-Cioldi et al., 1995).

Our hypothesis of greater individuation of women by progressive participants is consistent with the findings of two studies reported by Hall and Halberstadt (1997). In both studies, "women who preferred a less traditional marriage, who did less laundry in the home, and who had less traditional gender-role values scored significantly better at decoding the female voice" (p. 123). In contrast, women with traditional views on gender roles proved to be the better decoders of the male voice in the first study, although no differences in decoding male voices were found in the second study. Predictions for the relative individuation of men and women on the basis of out-group homogeneity theory, the lower-status-group homogeneity hypothesis, and our hypothesized interaction of gender status and attitude toward women's rights and roles are outlined in the Appendix.

Measuring Attitudes Toward Women's Societal Roles

How does one determine whether someone's attitude toward women's rights and roles is progressive or traditional? In the present research, attitudes were assessed with the Attitudes Toward Women Scale (AWS; Spence & Helmreich, 1972, 1978; Spence, Helmreich, & Stapp, 1973). The widely used AWS was designed to measure "the rights, roles, and privileges women ought to have or be permitted" (Spence & Helmreich, 1978, p. 39). Spence and Hahn's (1997) examination of mean scores on the AWS in 1972, 1976, 1980, and 1992 reflected a trend toward increasingly progressive attitudes, particularly for female respondents. In the 1990s, scores on some of the items began to exhibit ceiling effects on the egalitarian end of the scale. However, Spence and Hahn noted that in studies as recent as 1995 researchers have "nonetheless obtained positive results with the AWS, even with samples of college women, suggesting that there is sufficient within-group variability for the scale to retain its utility" (p. 31).

Eagly and Mladinic (1989) related that the AWS has sometimes mistakenly been interpreted as a measure of general attitudes toward women, when in fact the scale was more narrowly defined by its creators. They found people's generally positive stereotypes and at-

titudes toward women to be unrelated to their scores on the AWS. They concluded that the AWS does not tap general attitudes toward women, as its name might suggest, but rather it assesses attitudes toward women's rights and societal roles. Because attitude toward women's rights and roles was the dimension that we believed would influence our participants' individuation of women, the AWS was the appropriate scale for the present studies. We hypothesized that men and women with progressive AWS scores would have a tendency to individuate women more than men.

The Present Experiments

Four experiments assessed whether participants' explicit attitudes toward women's societal roles were associated with implicit tendencies to individuate men and women differentially. Participants formed impressions of two male and two female targets who were each described according to four traits. They then completed an unexpected memory test, in which they were asked to indicate which traits had described each target person, and after which they completed the AWS and other measures. To determine whether participants had categorized the targets by gender, the numbers of within-gender-group and between-gender-group errors were compared. Categorization by gender would be reflected by more memory confusions between targets of the same gender than between targets of different genders. Because categorization by gender is a well-established finding, we expected to find the effect in all four experiments.

Lesser individuation of targets of a particular gender would be indicated by more memory confusions between targets of that gender than between targets of the other gender. For all four experiments, we predicted that participants with traditional attitudes toward women's roles would make fewer within-gender-group recall errors for male targets than for female targets, whereas participants with more progressive attitudes would make fewer errors for female targets. The patterns of memory errors would indicate whether people who differed in their views concerning women's roles would also differ in their tendency to individuate women. A fifth experiment further explored the mechanisms behind traditional and progressive participants' relative individuation of women and men.¹

¹ Two prior experiments with paradigms similar to the present studies established a precedent for the expectation of individual differences in gender group individuation. Frable and Bem (1985) found that sex-typed and cross-sex-typed participants were significantly more likely than androgynous or gender-undifferentiated participants to individuate members of their own gender group more than members of the other gender group. Androgynous and gender-undifferentiated participants individuated male and female targets equally. Frable and Bem interpreted this finding in terms of a greater tendency for gender schematic individuals (whether sex-typed or cross-sex-typed) to process information about people in gender-related terms. Carpenter (1993) also found that gender-typed participants were more likely than androgynous participants to individuate their gender in-group more than their gender out-group. However, at least two studies have failed to find differences in gender group individuation associated with sex role classification (Beauvais & Spence, 1987; Lorenzi-Cioldi et al., 1995).

Experiments 1a and 1b

Method

Participants

Undergraduate students enrolled in an introductory psychology course at a state university in the southeastern United States participated as one means to fulfil a course requirement or to receive extra credit. Seventy-three women and 31 men participated in Experiment 1a; 61 women and 23 men participated in Experiment 1b. All participants were White.²

Overview and Design

In both experiments, participants were asked to form impressions of two male and two female students, each of whom was described by four traits. Target gender was indicated by names typically associated with men and women. The traits describing the targets and the order in which the targets appeared were counterbalanced. Participants then completed an unexpected memory task in which they attempted to match each target trait with the person it had described. As their final task, participants completed the AWS, along with various filler questionnaires. Participant gender was recorded. Participants were categorized as having progressive or traditional attitudes toward women's rights on the basis of a median split of scores on the AWS.

The materials and procedure for Experiments 1a and 1b were identical, with the exception that targets in Experiment 1b were associated with occupation cues as well as gender cues. Both target occupation and target gender were within-subject factors: Participants read descriptions of either male professors and female graduate students or female professors and male graduate students. The occupation cues produced no significant effects on participants' performance on the name-matching task in Experiment 1b and are therefore not discussed further.

To assess target individuation, within-gender-group errors on the name-matching test were analyzed in a 2 (experiment: 1a or 1b) \times 2 (participant gender) \times 2 (attitude: progressive or traditional) \times 2 (target gender) mixed design, with repeated measures on the last factor. Target order (male or female targets presented first) was entered as a covariate.

Procedure

Four female experimenters, working alone or in pairs, conducted experimental sessions attended by 2 to 15 participants. Participants were told that the study examined how first impressions are formed. Each participant read written instructions while an experimenter read the instructions aloud. The instructions stated that participants would receive information about two male and two female students at their university and that this information would consist of four personality traits describing each student. It was explained that each description would be given on a separate page and that participants would be given a few moments to read each description and to form impressions of the described people. Participants were also told that, to maintain confidentiality of the described individuals, only first names would accompany the descriptions.

Participants were given 30 s to read each of the four descriptions. Each stimulus page contained the target's name followed by four personality traits. For example, some participants read on the first page, "Kathryn is usually tense, independent, timid, and kind," and then read descriptions of the other female target and the two male targets. The label "student descriptions" appeared in the upper right-hand corner of each stimulus page. The experimenter then collected the materials and explained to participants that the next task might take them a bit by surprise, because they would be asked to remember which individual had been described with each trait. Participants were allowed 5 min to finish the unexpected name-matching test. They then completed a questionnaire packet that included the AWS and were debriefed and dismissed.

Materials

Pretests. Pretests reported in Stewart and Vassar (2000) indicated that students from the same population as the present study perceived the traits used to describe the targets to be equally descriptive of males and females and perceived men to hold significantly higher status than women.

Impression formation task. Target gender was indicated by two-syllable names selected from Kasof (1993) to be unassociated with characteristics such as age. The female target names were Kathryn and Mary, and the male names were Thomas and Alan. The 16 traits (four lists of four traits) used to describe the target persons were the same as those used in Lorenzi-Cioldi et al. (1995) and in Stewart and Vassar (2000): careless, independent, cold, incompetent, illogical, kind, practical, serious, spontaneous, stable, tense, flexible, refined, timid, irritable, and submissive. Each trait list contained two positive and two negative traits, with the mean evaluations of the four trait lists being approximately equal (Bagly, Mladinic, & Otto, 1991).

The order in which targets were presented was counterbalanced such that either the two male targets or the two female targets appeared first. The order in which the trait descriptions were presented was held constant across conditions, so that each description was paired equally often with male and female targets. For example, some participants read that Mary was "irritable, practical, incompetent, and refined," whereas others read that Alan possessed these traits.

Name-matching task. Participants were asked to match each of the 16 traits with the target person who had been described by that trait in the impression formation task. This test consisted of a 4 \times 16 matrix, with the four columns headed by the target names and each of the 16 rows beginning with 1 of the 16 target traits listed in random order. Participants were asked to indicate which person was described by each trait by placing an "X" in the appropriate column beside each trait.

The name-matching task provided measures of two types of errors: between-group errors and within-group errors. In the present study, *between-group errors* occur when a male target's trait is ascribed to a female target or when a female target's trait is ascribed to a male target. *Within-group errors* are assignments of one target's trait to another target of the same gender. There were twice as many ways to make between-group errors as within-group errors (e.g., a male target's traits could be misattributed either to the other male target, which would be a within-group error, or to one of the two female targets, which would be a between-group error). Therefore, the total number of between-group errors was divided by 2 for comparison with within-group errors, as is conventional in cued recall paradigms such as those of the present experiments.

As in Lorenzi-Cioldi et al. (1995) and Stewart and Vassar (2000), the name-matching measure in the present experiments was constructed such that a participant's between-group errors for one group were always equal to his or her between-group errors for the other group, as long as the participant followed instructions to match each target with only one trait. For example, if a participant assigned a male target's trait to a female target, he or she would then have to assign one of the female targets' traits to that male target in order to have matched each trait with only one of the targets. The majority of our participants adhered to the constraint that each trait be assigned to only one target.

Attitudes Toward Women Scale. Participants were categorized as having a "progressive" or "traditional" attitude toward women's rights based on a median split of scores on the AWS. The 25-item version of the AWS was administered to participants, along with various filler questionnaires

² In initial analyses, the findings for the small number of African American students who participated in this study were found to differ substantially from the findings for White participants. Although we found these differences interesting, there were too few African American students in the studies to adequately explore the nature of the differences; therefore, data from African American participants were not included in the analyses of the first experiment.

Table 1
 Mean Within-Group Recall Errors for Male and Female Targets as a Function of Participants' Attitude Toward Women's Societal Roles: Experiments 1a and 1b

Recall errors	Participants			
	Traditional		Progressive	
	Male targets	Female targets	Male targets	Female targets
Experiment 1a				
<i>M</i>	0.73	0.96	1.17	0.53
<i>SD</i>	0.90	1.08	1.41	1.03
Experiment 1b				
<i>M</i>	0.95	1.45	0.90	0.50
<i>SD</i>	1.10	1.60	1.14	0.83
Experiments 1a and 1b combined				
<i>M</i>	0.83	1.18	1.05	0.52
<i>SD</i>	1.00	1.35	1.30	0.94

(Spence et al., 1973). On this scale, items such as "Under modern economic conditions, with women active outside the home, men should share in household tasks such as washing dishes and doing laundry" are rated on a 4-point agreement scale ranging from 0–3, with higher numbers indicating more progressive attitudes toward women. The scale also includes reverse-scored items, such as "swearing and obscenity are more repulsive in the speech of a woman than a man." This version of the AWS generally produces Cronbach alphas higher than .80 and has been demonstrated to have good test-retest reliability (Spence & Hahn, 1997). The 25-item AWS also tends to be highly correlated with the original 55-item version. The Cronbach alphas for the AWS in each of the present experiments were .79 or higher.

Results and Discussion

Categorization by Gender

The first analysis examined whether targets were categorized by gender, which would be demonstrated by a pattern of more confusions between targets of the same gender than between targets of different genders. The analysis of variance (ANOVA) included error type (within-gender-group vs. between-gender-group errors) as a within-subject repeated measures factor, experiment and participant gender as between-subjects factors, and target order (male or female targets presented first) as a covariate. A main effect for error type demonstrated that there were significantly more within-gender-group errors ($M = 1.78$) than between-gender-group errors ($M = 1.01$), $F(1, 184) = 41.36$, $p < .0001$, a pattern consistent with categorization by gender. No other effects were significant.

Effect of Attitude Toward Women's Societal Roles on Memory for Male and Female Targets

Our central hypothesis was that attitude toward women's rights and roles, as measured by the AWS, would interact with target gender in determining the pattern of within-gender-group recall errors for male and female targets. Specifically, we predicted that participants with a progressive attitude toward women's rights would make fewer within-gender-group recall errors for female targets than for male targets, whereas traditional participants would make fewer errors for male targets. This question was examined in a 2 (experiment: 1a or 1b) \times 2 (participant gender) \times 2 (attitude: progressive or traditional) \times 2 (target gender) mixed

design, with repeated measures on the last factor and with target order included as a covariate.

As predicted, the Target Gender \times Attitude interaction was significant, $F(1, 180) = 13.50$, $p < .0001$ (see Table 1).³ Simple effects tests indicated that participants in both experiments who had progressive AWS scores made significantly fewer within-group recall errors for female targets than for male targets, $F(1, 180) = 8.34$, $p < .004$. In contrast, traditional participants made fewer within-group errors for male targets than for female targets, $F(1, 180) = 5.17$, $p < .03$. Replicating a number of studies (e.g., Lorenzi-Cioldi et al., 1995; Taylor et al., 1978), no evidence of out-group homogeneity for gender groups was found, nor was there a significant Participant Gender \times Target Gender \times Attitude interaction. Both male and female participants individuated males more than females if they were traditional and females more than males if they were progressive. The only additional significant effect was an Experiment \times Attitude interaction, $F(1, 180) = 4.19$, $p < .05$, which reflected a larger number of within-group errors for traditional participants in Experiment 1b than for other participants in the two experiments.

Experiments 2a and 2b

In Experiments 2a and 2b, we investigated whether the greater individuation of women displayed by progressive participants in Experiments 1a and 1b would be replicated in a population that was more uniformly progressive. We examined the pattern of memory errors for male and female targets exhibited by students at an unusually liberal college. *The Princeton Review* named this college the "most liberal college in America" in 1996, and the college remained in the "top 5" in 1997 (*The Princeton Review On-line*, 1998). The 1996 freshman survey conducted by the American Council on Education (1996) reported that 81% of first-year students at this institution categorized themselves as either "liberal" or "far left," compared with 33% of first-year students at other highly-selective liberal arts colleges that partici-

³ The Target Gender \times Attitude interaction was significant in separate analyses of Experiment 1a, $F(1, 100) = 8.53$, $p < .004$, and Experiment 1b, $F(1, 80) = 5.29$, $p < .03$, as well as in the analysis of the combined data sets.

pated in the national survey. The report further stated that only 6% of students at this college agreed with the statement that "it is better for married women to stay at home," compared with 18% at comparable colleges. Additional evidence of the markedly progressive orientation of students at this college has been obtained in other research with this population on prejudice measures ranging from the well-established Modern Racism Scale (McConahay, Hardee, & Batts, 1981) to more recent measures such as the Universal Orientation Scale (Phillips & Ziller, 1997; e.g., see Christie, 1999; Stewart, Graves, Perrotta, & Tirodkar, 1999). Consequently, we predicted that male and female first-year students at this college would exhibit particularly progressive attitudes toward women's roles in society and would make fewer recall errors for information about female targets, compared with male targets.

In addition to further exploring the effects of a progressive attitude toward women on the individuation of women and men, we were also interested in determining the cognitive processes underlying differential memory for male and female targets. Whereas the methodology of Experiment 2a was almost identical to that of Experiment 1a, Experiment 2b was modified to provide more information about participants' cognitive processes during the impression formation task. Specifically, participants in Experiment 2b were allowed to spend as much time as they desired in forming impressions of each target, whereas in the other experiments participants were given exactly 30 s for each target during the impression formation task.

If individuating members of one gender group more than the other were due to greater attention to targets in that group, we might find progressive participants choosing to spend more time reading trait descriptions of female targets and traditional participants choosing to spend more time reading about male targets. This pattern of results would suggest that greater individuation of certain targets was due to greater attention to these targets during encoding, rather than to other cognitive processes such as the elaboration, storage, and retrieval of information about the targets (Palmeri, 1997). Null findings would of course be more difficult to interpret and would not necessarily rule out attention as the mediating mechanism behind greater target individuation. Measurement of reading time is only one of many measures of attention that might be implemented to further study the role of attention in target individuation.

Method

Participants were undergraduate students attending a small liberal arts college in the northeastern United States: 15 women and 16 men in Experiment 2a; 28 women and 25 men in Experiment 2b.⁴ Students in Experiment 2a participated in the study in response to student experimenters' request for volunteers and did not receive course credit or payment for their participation. Students in Experiment 2b were paid for their participation.

The materials and procedure of Experiment 2a were identical to those of Experiment 1a, with the exception that the questionnaire packet included additional measures.⁵ The procedure of Experiment 2b differed in that participants completed the impression formation task on computer rather than on paper and were allowed as much time as desired to form impressions of each target. Specifically, instructions on the computer screen included the following statements:

Take as much time as you like to form each impression. The amount of time that participants in this study spend forming an impression of each person usually ranges from a few seconds to a few minutes.

When you have finished reading and examining a description, press the "m" key. The next description will then appear on the screen.

The range of "usual" impression formation times was added to the instructions after pilot testing revealed that providing no time guidelines resulted in participants interrupting the impression formation task to ask for more specific information concerning the amount of time they should spend on the task. Stimuli were displayed and reading times were recorded in Experiment 2b with MEL software (Schneider, 1995).

Results and Discussion

Categorization by Gender

To assess whether participants categorized the targets by gender, we compared their between-group and within-group errors in a 2 (experiment: 2a or 2b) \times 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor and with target order entered as a covariate. As in the prior experiments, there were significantly more within-group errors ($M = 2.19$) than between-group errors ($M = .77$), $F(1, 80) = 34.29$, $p < .0001$. In fact, the mean difference between types of errors was considerably larger than that found in the previous experiments, demonstrating that the liberal arts students clearly noted the targets' gender and relied on this information in categorizing the targets. No other effects were significant in this analysis.

The Liberal Arts College Students' Attitudes Toward Women's Societal Roles

Our prediction that students at the progressive liberal arts college would tend to remember women better than men rested on the assumption that students at this college would have particularly progressive views about women's rights and roles in society. To test this premise, we compared the AWS scores of the liberal arts college students who participated in Experiments 2a and 2b with those of the state university students who participated in Experiments 1a and 1b. On a 4-point scale ranging from 0–3, with higher

⁴ Most of the participants appeared to be White. However, the precise ethnic composition of the sample could not be ascertained because of the reluctance of these students to categorize themselves into ethnic groups. The questionnaire item asking participants to indicate their ethnic group received responses such as "universal," "does not exist," and "every."

⁵ The questionnaire packet in Experiment 2a contained the AWS, the Bem Sex Role Inventory (BSRI; Bem, 1974), the Modern Sexism Scale (Swim, Aikin, Hall, & Hunter, 1995), and the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996). The ASI assesses ambivalent attitudes toward women and contains two subscales: a Hostile Sexism Inventory (HSI) and a Benevolent Sexism Inventory. On all measures except the BSRI, participants' scores indicated an orientation toward egalitarianism or low sexism. The HSI was the only measure found to moderate participants' pattern of recall errors. A significant Target Gender \times Participant Gender \times Hostile Sexism interaction, $F(1, 24) = 9.32$, $p < .005$, revealed that superior recall for female targets, compared with male targets, was found for all participants except female participants high in hostile sexism. Female participants who scored higher on hostile sexism showed a non-significant trend toward better recall for male targets. Null findings for the BSRI were obtained by Beauvais and Spence (1987) and by Lorenzi-Cioldi et al. (1995), as well as in the present experiment. However, the low reliability of the BSRI for our participants complicates interpretation of this null finding.

Table 2
Mean Within-Group Recall Errors for Male and Female Targets by Participants With a Progressive Attitude Toward Women's Societal Roles: Experiments 2a and 2b

Recall errors	Participants			
	Male		Female	
	Male targets	Female targets	Male targets	Female targets
Experiment 2a				
<i>M</i>	1.81	0.25	1.53	1.00
<i>SD</i>	2.34	0.77	2.47	1.69
Experiment 2b				
<i>M</i>	1.28	0.96	1.25	0.79
<i>SD</i>	1.57	1.46	1.99	1.17
Experiments 2a and 2b combined				
<i>M</i>	1.49	0.68	1.35	0.86
<i>SD</i>	1.90	1.27	2.15	1.36

numbers indicating more progressive attitudes toward women, the mean AWS score was 2.20 for the state university students ($M_s = 2.03$ for male participants and 2.36 for female participants) and 2.61 for the liberal arts college students ($M_s = 2.61$ for male participants and 2.62 for female participants). An ANOVA incorporating school sample (liberal arts college vs. state university) and participant gender as between-subjects variables confirmed that the liberal arts college students' AWS scores were significantly higher than those of the state university students, $F(1, 260) = 34.32, p < .0001$.⁶

Further, an initial analysis of within-group errors combining the data from Experiments 2a and 2b with the data from Experiments 1a and 1b, with school sample entered as one of the independent variables, could not be successfully completed because of the especially progressive orientation of the liberal arts sample: With a median split on the AWS calculated for the combined data set, only 5 women and 8 men in the sample of 84 liberal arts students were classified as traditional, resulting in data for an insufficient number of participants in some cells of the design. It seems that students at the liberal arts college indeed had substantially more progressive attitudes toward women's rights than students at the state university. Would this difference translate into these students individuating female targets more than male targets?

The Effect of Attitude Toward Women's Societal Roles on Memory for Male and Female Targets

The liberal arts college students' within-group recall errors were analyzed in a 2 (experiment: 2a or 2b) \times 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor and with target order entered as a covariate. As predicted, the liberal arts college students in both experiments made significantly fewer within-group errors for female targets than for male targets, $F(1, 80) = 6.28, p < .02$ (see Table 2). As is evident in Table 2, this effect did not significantly differ for participants in Experiments 2a and 2b or for male and female participants. Overall, as predicted, the progressive liberal arts students individuated women more than men. There were no additional significant effects in this analysis.

The Role of Reading Time in Target Individuation

As stated above, participants in Experiment 2b showed the same pattern of better memory for female targets exhibited by participants in Experiment 2a. An analysis of the time participants spent forming impressions of male and female targets (with reading times converted to natural logs to control for the effects of response outliers) revealed that the greater individuation of female targets was not related to longer time spent forming impressions of the female targets. A 2 (participant gender) \times 2 (target order) \times 2 (target gender) ANOVA, with repeated measures on the last factor, produced no significant effects. Male participants spent an average of 18.45 s forming impressions of male targets and 19.01 s forming impressions of female targets. Female participants spent 20.39 s and 18.26 s forming impressions of male and female targets, respectively. A new variable was calculated by subtracting reading times for female targets from reading times for male targets. Neither an analysis of within-group errors incorporating the "difference score" variable as a covariate nor various regression analyses produced additional significant effects. Nevertheless, it is interesting to note the similar patterns of memory errors in Experiments 2a and 2b (see Table 2), despite the longer time participants spent forming impressions of targets in Experiment 2a (all participants were allotted 30 s per target) compared with Experiment 2b (participants spent an average of 19 s per target).

Experiment 3

The experiments previously presented in this article found support for the prediction that traditional men and women would individuate men more than women, whereas progressive men and women would individuate women more than men. These findings are consistent with the hypothesis that attitude toward women's rights and roles in society, coupled with an awareness of men's higher status, influences whom people individuate (see Appendix).

⁶ There was also a main effect of participant gender indicating that women had higher AWS scores than men, $F(1, 260) = 5.06, p < .03$; however, a significant School Sample \times Participant Gender interaction revealed that the effects of participant gender were limited primarily to the state university sample, $F(1, 260) = 5.04, p < .03$.

Why are the presumably egalitarian progressive individuals individuating women more than men rather than individuating men and women equally? We proposed that people with a progressive attitude toward women individuate women to a greater degree than men to aid in improving women's status. They are (either consciously or unconsciously) attempting to compensate for the general homogenization of women prompted by women's lower status in society. In contrast, traditional people were believed to individuate men more than women because of a perceived need to possess as much information as possible about those who hold power and status in society and because of their acceptance of the status quo. Although our findings in four experiments are consistent with these hypotheses, the exact mechanism behind the findings cannot be pinpointed with the name-matching paradigm. Other alternative explanations for the findings are possible. Experiment 3 surveyed students from both the state university where Experiments 1a and 1b were conducted and the progressive liberal arts college where Experiments 2a and 2b were conducted in an attempt to provide a clearer interpretation of the findings.

One alternative explanation for the findings is that progressive men and women individuate women more than men because they perceive women to hold higher status than men. If progressive participants believe that women actually hold more power than men whereas traditional individuals believe that men hold higher status than women, then their patterns of individuation would simply be another instantiation of the status effect. Both progressive and traditional participants would be individuating the gender group that they believe has the most control over important outcomes in society. Although previous research has documented that men are generally perceived to hold higher status than women (e.g., Lorenzi-Cioldi et al., 1995; Stewart & Vassar, 2000), Experiment 3 is the first study to examine whether perceptions of men's higher status are shared equally by participants with progressive and traditional attitudes toward women.

A second alternative explanation for progressive participants' greater individuation of women is that progressive individuals perceive the target traits to be more stereotypic of men than women and that, therefore, their better memory for women is simply due to an incongruity effect. The trait descriptions would be more memorable when paired with women than with men if the descriptions were seen as more surprising for women. As is the case with the alternative status hypothesis, previous research can only partially address the trait incongruity hypothesis. Prior studies have found that the target traits used in the present study are perceived to be equally typical of men and women (e.g., Lorenzi-Cioldi et al., 1995; Stewart & Vassar, 2000). However, no data have addressed whether the traits' perceived typicality for men and women differs for progressive and traditional individuals. This question was examined in Experiment 3.

In addition to attempting to rule out plausible alternative explanations for the findings of the four name-matching studies, we also endeavored to provide stronger support for our primary hypotheses in Experiment 3. We hypothesized that progressive and traditional participants would perceive the target traits to be equally typical of men and women but that both groups would perceive men to hold higher status than women. We believed that progressive participants would be more highly motivated than traditional participants to individuate women, because of their desire to improve women's societal status. This difference in motivation to individuate women was addressed in Experiment 3 by asking traditional and progres-

sive participants to rate their degree of agreement with statements such as "It is important in U. S. society to pay attention to those with little power in order to help them get ahead." We predicted that progressive participants would endorse such statements more strongly than traditional participants.

We also believed that a strong concern for improving women's status might be related to progressive men and women having a stronger sense of identification with women than would traditional men and women. The extent to which progressive and traditional individuals identified with women and women's issues was addressed by assessing their degree of agreement with statements such as "I consider myself to be pro-feminist" and "I identify with the group 'women'." Progressive individuals were expected to show stronger agreement with these statements.

Method

Participants in the primary study were 12 female and 6 male undergraduate students enrolled at a state university and 28 female and 25 male undergraduate students enrolled at a liberal arts college.⁷ In addition, 10 female and 7 male undergraduates from the same liberal arts college completed a supplementary questionnaire. Participants from both colleges completed several questionnaires displayed on a computer screen with MEL software (Schneider, 1995). In addition to the AWS, a demographics form, and various filler questionnaires, participants completed a questionnaire that contained seven items assessing their degree of identification with women (e.g., "I identify with the group 'women'," "I identify with the difficulties women face," and "I consider myself to be a feminist") and five items concerning their belief in the importance of attending to women and members of other stigmatized groups (e.g., "It is important to pay attention to women, to associate their gender with their accomplishments, in order to help women get ahead in society" and "It is important in U.S. society to pay attention to those with little power in order to help them get ahead"). Additional statements (e.g., "I identify with the group 'men'") were also included on the questionnaire. Participants indicated their degree of agreement with each statement by entering a number from 1 to 7, with higher numbers indicating stronger agreement.

Participants also completed paper-based measures assessing the perceived typicality of the 16 target traits for men and women and the perceived status of men and women. On the trait typicality questionnaire, participants estimated the proportion of women and men in the U.S. who possess each of the 16 traits (e.g., "What percentage of White males in the U.S. are practical?"). Participants rated the typicality of each of the target traits for one gender group before rating the other group. The order in

⁷ The 53 liberal arts college students who participated in the primary component of Experiment 3 had participated in Experiment 2b earlier in the experimental session. Similarly, the 18 state university participants had completed an experiment identical to Experiment 2b before participating in Experiment 3. Analyses of the state university students' reading time data produced only one significant and one marginally significant effect: Greater time spent forming impressions of female targets relative to male targets was correlated with stronger endorsement of the statements "When I read about someone whose accomplishments I admire, I often take notice of the person's gender" ($r = .40, p < .05$, one-tailed) and "I consider myself to be pro-feminist" ($r = .37, p = .066$, one-tailed). Although these findings are consistent with the hypothesis that motivation to attend to women will lead to greater attention to female targets (as measured by time spent forming impressions of female vs. male targets), they do not, on their own, provide sufficient evidence to specify attention as the mediator for the relationship between attitude toward women and the relative individuation of women and men. Regression analyses directly assessing the mediating role of attention in this relationship produced no significant effects.

Table 3
Traditional and Progressive State University Students' Perceptions of the Typicality of Target and Status Traits for Men and Women and Their Degree of Agreement With Items Related to Belief in the Importance of Attending to Members of Lower Status Groups and to Identification With Women and Women's Issues: Experiment 3

Perceptions and beliefs	State university students					
	Traditional			Progressive		
	Men	Women	All	Men	Women	All
Target trait typicality estimates						
Percentage of men likely to display target traits	42.78	44.63	43.71	43.28	41.04	42.16
Percentage of women likely to display target traits	42.89	42.75	42.81	46.88	44.38	45.63
Status estimates						
Percentage of men with high status	30.25	46.11	38.18	38.34	32.00	35.17
Percentage of women with high status	20.57	35.78	28.18	19.84	25.52	22.68
Item agreement (7-point scale) ^a						
It is important in U.S. society to pay attention to those with little power in order to help them get ahead.	2.75	3.40	3.08	4.00	4.71	4.36
I identify with the group "women."	2.50	4.00	3.25	4.50	6.14	5.32
I identify with difficulties women face.	3.00	3.80	3.40	4.50	4.71	4.61
I consider myself to be progressive in terms of my views on women's issues.	3.00	3.60	3.30	4.00	5.14	4.57
I consider myself to be pro-feminist.	2.50	3.00	2.75	5.50	4.57	5.04
I consider myself to be a feminist.	1.00	3.40	2.20	3.50	3.86	3.68

^a Scale ranges from 1 to 7, with higher numbers indicating stronger agreement.

which the groups were rated was counterbalanced. On the status measure, participants estimated the proportion of women and men in the U.S. who displayed each of nine status indicators, such as earning high incomes, being influential, and having high status (e.g., "What percentage of White females in the U.S. occupy powerful positions?"). As with the trait typicality questionnaire, the order in which the gender groups were rated was counterbalanced. The materials and procedure for the state university and liberal arts college students were identical with the exception that the initial liberal arts college sample did not complete the trait typicality questionnaire. Instead, 17 additional students from the same population completed this measure.

Results and Discussion

Perceptions of the Target Traits' Typicality as Descriptors of Men and Women

Did both progressive and traditional participants perceive the traits used to describe targets to be equally typical of men and women? A reliability analysis of ratings of the traits' typicality for men and women produced a Cronbach alpha of .91 for the state university sample and .95 for the liberal arts college sample. The trait typicality ratings were therefore averaged into a single trait typicality factor for male and female targets. The state university participants' trait typicality ratings were analyzed in a 2 (attitude) \times 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor. The analysis produced no significant effects (e.g., target gender main effect, $F[1, 14] < 1$), suggesting that the traits were perceived to be equally typical of men and women, regardless of participants' gender or attitude toward women (see Table 3). Because of the low sample size, an alternative analysis providing greater statistical power was also con-

ducted. The relative typicality of the target traits was examined in a correlation matrix comprising ratings of the traits' typicality for men, ratings of the traits' typicality for women, and attitudes toward women (entered as a continuous variable). No significant effects were found for the correlation of the AWS with trait typicality for either women ($r = -.02, p = .93$) or men ($r = -.14, p = .58$), buttressing the argument that both progressive and traditional participants perceived the traits to be equally typical of men and women. The liberal arts college students' trait typicality ratings were analyzed in a 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor.⁸ As with the state university sample, no significant effects were found (see Table 4).

Perceptions of the Relative Status of Men and Women

Was the perception that men hold higher status than women shared both by progressive and traditional students at the state university and by students at the progressive liberal arts college? The nine status assessment items produced a Cronbach alpha of .92 for the state university sample and .90 for the liberal arts college

⁸ As with the previous experiments, analyses combining the liberal arts college and state university samples, with school sample and attitude toward women both included as independent variables, could not be conducted. When a median attitude toward women score was calculated for the combined samples, too few state university students were classified as "progressive" ($n = 3$) to provide an adequate sample size in some cells of the design.

Table 4
State University (More Traditional) and Liberal Arts College (More Progressive) Students' Perceptions of the Typicality of Target and Status Traits for Men and Women and Their Degree of Agreement With Items Related to Belief in the Importance of Attending to Members of Lower Status Groups and to Identification With Women and Women's Issues: Experiment 3

Perceptions and beliefs	Students					
	State university			Liberal arts college		
	Men	Women	All	Men	Women	All
Target trait typicality estimates						
Percentage of men likely to display target traits	42.95	42.54	42.75	52.16	49.59	50.88
Percentage of women likely to display target traits	44.22	43.70	43.96	53.06	52.04	52.55
Status estimates						
Percentage of men with high status	32.95	37.88	35.42	27.36	28.39	27.88
Percentage of women with high status	20.33	29.80	25.07	24.24	23.52	23.88
Item agreement (7-point scale) ^a						
It is important in U.S. society to pay attention to those with little power in order to help them get ahead.	3.17	4.17	3.67	5.54	4.86	5.20
I identify with the group "women."	3.17	5.25	4.21	3.92	5.86	4.89
I identify with difficulties women face.	3.50	4.33	3.92	4.36	5.61	4.99
I consider myself to be progressive in terms of my views on women's issues.	3.33	4.50	3.92	5.56	5.14	5.35
I consider myself to be pro-feminist.	3.50	3.92	3.71	4.84	5.21	5.03
I consider myself to be a feminist.	1.83	3.67	2.75	4.00	4.79	4.40

^a Scale ranges from 1 to 7, with higher numbers indicating stronger agreement.

sample. Consequently, these items were averaged to produce a single status variable. The state university participants' status ratings were analyzed in a 2 (attitude) \times 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor. A significant main effect of target gender indicated that, overall, men were perceived to hold higher status than women, $F(1, 14) = 17.35, p < .001$. There were no additional significant effects in the analysis, indicating that the perception that men hold higher status than women was shared by progressive and traditional men and women at the state university (see Table 3). The status ratings of the liberal arts college participants were analyzed in a 2 (participant gender) \times 2 (target gender) design, with repeated measures on the last factor. Like the state university students, the liberal arts students perceived men to hold higher status than women $F(1, 50) = 37.62, p < .0001$. This effect did not significantly differ for male and female participants (see Table 4).

Motivation to Individuate Women

Were progressive men and women more likely than their traditional counterparts to identify with women and women's issues and to believe that it is important to attend to members of lower status social groups in order to help improve those groups' societal status? We first compared the motivation questionnaire responses of the progressive and traditional state university participants. We then compared the responses of all of the state university participants with students from the liberal arts college, who were identified as having significantly more progressive attitudes toward women than students at the state university (see Footnote 8). The

strongest support for our hypotheses would be provided by parallel findings in the two analyses.

Findings for progressive and traditional state university participants. Reliability was adequate on the subsets of items designed to assess participants' identification with women (Cronbach $\alpha = .72$) and their belief in the importance of attending to lower status individuals (Cronbach $\alpha = .67$). The two subsets were also found to be significantly correlated ($r = .68, p < .002$, two-tailed). Therefore, items from both subsets (combined Cronbach $\alpha = .82$) were submitted to a multivariate analysis of variance (MANOVA) assessing differences in progressive and traditional participants' motivation to individuate women. Attitude and participant gender were between-subjects variables in the MANOVA.

The multivariate effect for attitude toward women was significant, $F(12, 4) = 6.04, p < .05$. Trends consistent with the prediction that progressive participants would be more highly motivated to attend to women than traditional participants were obtained on all but one of the motivation-assessment items. Univariate tests revealed that progressive individuals agreed with three items significantly more strongly than traditional individuals: "It is important in U.S. society to pay attention to those with little power in order to help them get ahead," $F(1, 15) = 6.14, p < .03$; "I identify with the group 'women'," $F(1, 15) = 8.16, p < .02$; and "I consider myself to be pro-feminist," $F(1, 15) = 6.65, p < .03$; (see Table 3). Marginally significant effects were found for two items: "I consider myself to be progressive in terms of my views on women's issues," $F(1, 15) = 4.24, p = .06$; and "I consider myself to be a feminist," $F(1, 15) = 3.15, p = .10$. These findings are consistent with the hypothesis that a belief in the importance of attending to lower status groups and a sense of identification with

women and feminism motivate progressive individuals to individuate women more than men. The multivariate effect for participant gender did not reach significance.

An analysis conducted as a manipulation check confirmed that participants identified more strongly with their same-gender group than with the other-gender group (e.g., men agreed more strongly with the statement "I identify with the group 'men'" than with the statement "I identify with the group 'women'"), $F(1, 15) = 29.81$, $p < .0001$. The pattern of stronger same-gender than other-gender identification did not significantly differ for progressive and traditional participants.

Findings for state university and liberal arts college participants. For the data set combining the questionnaire responses of the state university participants and the more progressive liberal arts college participants, reliability for the items assessing identification with women and belief in the importance of attending to lower status others was satisfactory (Cronbach $\alpha = .79$). A MANOVA examining responses to these items was conducted, with school sample (state university vs. liberal arts college) and participant gender included as between-subjects variables.

The multivariate effect for school sample was significant, providing more support for our hypothesis, $F(12, 57) = 2.32$, $p < .02$. Univariate tests revealed that students at the progressive liberal arts college indicated significantly stronger agreement than the state university students on five items: "It is important in U.S. society to pay attention to those with little power in order to help them get ahead," $F(1, 68) = 10.17$, $p < .002$; "I consider myself to be pro-feminist," $F(1, 15) = 9.21$, $p < .003$; "I consider myself to be progressive in terms of my views on women's issues," $F(1, 68) = 10.70$, $p < .002$; "I consider myself to be a feminist," $F(1, 68) = 8.85$, $p < .004$; and "I identify with the difficulties women face," $F(1, 68) = 7.71$, $p < .007$; (see Table 4). A weak trend was found for the item "I identify with the group 'women'," $F(1, 68) = 2.04$, $p = .16$. Mean comparisons of three additional items were nonsignificant, but in the predicted direction. The multivariate effect for participant gender was also significant, $F(12, 57) = 5.20$, $p < .0001$, with women's responses more similar than men's to the response pattern of progressive participants overall (see Table 4).

General Discussion

Four experiments found evidence for the hypotheses that targets would be categorized by gender and that attitude toward women's rights and roles would determine whether male or female targets would be better individuated. In Experiments 1a and 1b, participants with a traditional attitude toward women's roles made fewer within-group recall errors for male targets than for female targets, indicating better individuation of the male targets. In contrast, progressive participants made fewer within-group recall errors for female targets than for male targets, indicating better individuation of the female targets. Participants in Experiments 2a and 2b were students from a particularly liberal college whose scores on the AWS indicated that they held significantly more progressive attitudes toward women than participants in Experiments 1a and 1b. As predicted, these students showed the same pattern of fewer within-group recall errors for female targets found for progressive participants in Experiments 1a and 1b.

The findings for traditional participants in the present experiments replicated findings reported by Lorenzi-Cioldi et al. (1995).

Like Lorenzi-Cioldi, we interpret traditional participants' greater individuation of men in terms of their tendency to individuate members of higher status groups. The findings of Experiment 3 confirmed that both traditional and progressive individuals perceive men to hold higher status than women. Because higher status individuals are perceived to control desired outcomes, many people may believe that it is important to maintain individuated representations of those who hold higher status to anticipate their feelings and actions (Fiske, 1993; Lorenzi-Cioldi, 1998; Park, Ryan, & Judd, 1992). Experiment 3 also demonstrated that traditional participants' pattern of fewer recall errors for the higher status male targets were not attributable to the target traits being incongruous with male stereotypes and therefore more memorable when paired with male targets. Both progressive and traditional participants perceived the traits to be equally typical of men and women, overall. Traditional participants' greater individuation of male targets, despite all targets being described with nonstereotypic traits, is particularly important given previous speculation that the lower-status homogeneity effect could be detected in this paradigm only when targets are described with stereotypic traits (Sedikides, 1997).

Progressive participants did not show the pattern of greater individuation for the higher status male targets that would have been consistent with the lower-status-group homogeneity hypothesis, despite the fact that Experiment 3 revealed that they believed men to hold higher status than women. Instead, as predicted, these participants individuated the female targets more than the male targets. We attribute this finding to progressive participants' desire to see women's societal status improve. The Experiment 3 findings confirmed that progressive men and women were more likely to identify with women and women's issues and to believe that it is important to attend to members of lower status groups to help them improve their societal status.

Prior research has demonstrated that traditional views of women are often activated at an implicit level (for a review, see Greenwald & Banaji, 1995). Just as stereotypic responses to women may become automatized for some perceivers, progressive individuals' tendency to individuate women more than men may have developed without their conscious awareness. Support for this contention is provided by recent research in cognitive psychology. Siegler and Stern (1998) studied the development of elementary school students' strategies for solving a problem that could be addressed through the use of either a multistep arithmetic procedure or a simpler and faster heuristic strategy. They found compelling evidence that a switch to a more effective strategy could be made without the problem solvers' awareness of their change in strategies: "Almost 90% of children showed the insight at an implicit, unreportable level before they showed it at an explicit, reportable one" (p. 377). Karmiloff-Smith (1992) similarly argued that strategy discoveries often occur first at an implicit, unconscious level. Therefore, in the present research, it is possible that progressive men and women's greater individuation of women may have been an *unconscious* response to a *conscious* concern with women's lower societal status.

Out-Group Homogeneity, Status, and Attitude Toward Women's Societal Roles

A pattern of out-group homogeneity for both gender groups was not obtained in any of the present experiments, replicating the null

findings for this effect reported in several previous studies (e.g., Jackson & Hymes, 1985; Lorenzi-Cioldi et al., 1995; Taylor et al., 1978). Unlike Lorenzi-Cioldi et al. (1995), we did not find that our participants made fewer overall within-group memory errors for the higher status male targets. Therefore, the present data are better explained by the hypothesized interaction of status effects and attitude toward women's rights and roles than by hypotheses based on status effects alone or on out-group homogeneity theory (see Appendix).

Future studies might assess the relative impact of status, out-group homogeneity, and attitudes toward members of lower status groups on the individuation of people categorized into groups on dimensions other than gender. For example, which factor would have the strongest influence on memory for members of ethnic groups perceived to hold different levels of status? Plant and Devine (in press) recently introduced a measure of people's internal and external motivation to respond to members of stigmatized groups without prejudice. It would be interesting to examine whether members of ethnic-majority groups with progressive scores on this measure (i.e., those with high motivation to avoid being prejudiced) would individuate members of ethnic groups perceived to hold lower societal status to a greater degree than members of their own ethnic group. Future experiments might also examine the effects of crossing perceived gender status cues and perceived ethnic status cues on target individuation.

A Question of Processes

Having established that the individuation of men and women may be affected not only by sociostructural factors such as status, but also by qualities of the perceiver, we may then investigate the processes involved in progressive and traditional individuals' differential individuation of men and women. Two possible mediators were examined in the present research. Drawing from research on the cognitive processes involved in the effects of group status on target individuation, we first assessed whether the effects of attitude toward women on target individuation might be due to differential attention directed toward women and men. Some theorists have found evidence for the contention that the greater individuation of members of higher status groups is the result of increased attention to these individuals (Fiske, 1993; Kelley, 1951). In the present research, we examined whether attitude effects on the individuation of men and women might also be related to differences in attention.

In identical studies performed with two different populations, we assessed the relationships among various views concerning women's societal roles, amount of time spent reading information about male and female targets during an impression formation task (with reading time being one established measure of attention), and memory for the male and female targets. The study of the state university population reported in Footnote 7 provided weak support for a relationship between greater time spent forming impressions of women relative to men and both the belief in the importance of attending to women and identifying oneself as pro-feminist. However, regression analyses specifically testing the mediating role of attention in attitude effects on target individuation failed to produce significant effects. A parallel study conducted with a liberal arts college population (Experiment 2b) also found no support for an attentional mediator in the relationship between attitudes toward women and the relative individuation of

male and female targets. Nevertheless, these findings do not rule out attention as a possible mediator. Progressive individuals' strong endorsement of beliefs in the importance of attending to members of lower status groups (Experiment 3), along with the supporting data trends in the study reported in Footnote 7, suggests that future research using measures other than reading time to study the mediating role of attention in attitude effects on target individuation is warranted.

We next assessed the possible mediating role of differential cognitive organization of information about men and women in our findings. Lorenzi-Cioldi (1998) and others have proposed that perceptions of group homogeneity for lower status groups and certain out-groups may result from participants' organization of information about higher status group and in-group members into "person" categories and their organization of information about members of lower status groups and out-groups into "group" categories. According to this perspective, differential individuation would not be due to greater attention to members of certain groups, but rather to a difference in the way information about group members is cognitively organized. The results in the four cued recall studies reported in the present article, as well as the findings of Lorenzi-Cioldi et al. (1995), are consistent with this perspective. Participants clearly categorized targets by gender, making more memory confusions between targets of the same gender than between targets of different genders. But did attitudes toward women influence the cognitive organization of information about men and women in the same manner that status cues have been found to influence the cognitive organization of information about targets of varying status?

In the four present cued recall studies, progressive individuals seemed to organize information about women into person categories, as evident in their relative success in matching traits with the female targets that they had described. In contrast, progressive participants seemed to organize information about men into a group category, a strategy demonstrated by their high degree of success in identifying traits that had described the male gender group in general and their low degree of success in matching traits with the particular male targets that they had described. Conversely, traditional individuals appeared to organize information about men into person categories and information about women into group categories.

Lorenzi-Cioldi (1998) used a free recall task to seek additional support for the mediating role of cognitive organization in perceptions of lower-status-group homogeneity. He found that traits describing higher status group members were more likely than traits describing lower status group members to be recalled in person category clusters (i.e., participants tended to list together traits that had described each individual higher status target before listing traits that had described different targets; Study 9). Would progressive attitudes toward women lead to greater person category clustering for female targets than for male targets, just as status cues led to greater person category clustering for higher status targets? We sought additional support for the mediating role of cognitive organization in our findings by conducting a free recall study modeled after Lorenzi-Cioldi's (1998) Study 9. Participants were progressive students from the same population sampled in Experiments 2a, 2b, and one component of Experiment 3. Our data revealed only that progressive students were more likely to organize information about targets into person categories rather than group categories (i.e., listing together traits

describing different members of the same gender group), regardless of the targets' gender, $F(1, 19) = 6.46, p < .02$ (Stewart, David, & Sanchez, 1999). In fact, the percentages of person and group categorizations for male and female targets were almost identical. Therefore, support for the mediating role of cognitive organization was found in studies using cued recall but not free recall paradigms.

What then are the cognitive processes responsible for traditional participants' greater individuation of men and progressive participants' greater individuation of women? Our pattern of results across a series of studies using cued recall, free recall, reading time, and self-report measures provides mixed support for the mediating roles of attention and cognitive organization. The variability in our findings might be due to our use of measures not ideally suited to isolating the precise attention or cognitive organization processes behind our findings, despite the empirical precedents for our choice of measures. However, it might also be the case that the observed attitude effects on target individuation are the result of different cognitive processes altogether (e.g., storage or retrieval processes). Future experiments might address this issue using innovative paradigms established by researchers in cognitive psychology. For example, paradigms assessing the effects of perceptual interference or divided attention at encoding versus at retrieval might prove helpful in isolating the process or processes behind the novel pattern of data reported in this article (Mulligan, 1998; Naveh-Benjamin, Craik, Guez, & Dori, 1998).

Effects of Attitudes Toward Women's Societal Roles: Past and Future

Over 30 years have passed since the formation of the National Organization for Women (NOW) in 1966, a group dedicated to "bringing women into full participation in the mainstream of American society now, exercising all the privileges and responsibilities thereof" (Deckard, 1983, p. 324). Despite their many gains, women have not yet obtained the goals set forth by NOW. There continues to be a pattern of occupational sex segregation in the workplace and a substantial gender wage gap favoring men (Estes & Glass, 1996; Jacobs, 1989; Tomaskovic-Devey, 1995). Our research suggests that traditional men and women react to this status imbalance by better individuating the higher status men who are perceived to control desired outcomes. In contrast, progressive men and women react against this inequity by better individuating women, despite the lower status of the female gender group.

The divergent findings for progressive and traditional participants represent an important contemporary individual difference and introduce questions concerning future societal trends. Gergen (1973) stated that social psychological theories are largely molded by contemporary history. He argued that the major theoretical principles of social psychology are "firmly wedded to historical circumstances" (p. 315) and that even well-documented social psychological phenomena should not be expected to remain stable over time. Similarly, Agronick and Duncan (1998) stated that "it is necessary to link social change to individual lives to understand personality development more adequately. . . in such analyses, attention is paid to the intertwined nature of historical period, cohort membership, and psychosocial life tasks" (p. 1553).

In a longitudinal study of 86 women spanning 30 years, Agronick and Duncan (1998) found that changes in the importance attributed to the women's movement were associated with changes

in the women's personalities. Women who ascribed increasing importance to the women's movement also became increasingly self-accepting, dominant, empathetic, and independent. In another study using the same sample, Roberts and Helson (1997) found that this group of women became increasingly individualistic from 1950 to 1985 and that greater individualism was associated with increased self-focus and increased resistance to social norms. The authors speculated that a shift toward greater individualism might have been adaptive for these women during the 1960s and 1970s given the dramatic changes in society's views of women's roles that took place in these decades. Finally, in several studies examining perceptions of men's and women's characteristics in the past, present, and future, Diekmann and Eagly (in press) found that stereotypes of men and women were perceived to have changed over time as women's social roles changed. Further, people reported an expectation that the traits typical of men and women would change even more in the future (with women expected to do more of the changing).

On the basis of these findings, it is reasonable to expect the individual differences detected in the present experiments to be sensitive to significant changes in sociohistorical context. Almost certainly, there were far fewer individuals with progressive attitudes toward women's roles in the 1950s. Consequently, fewer individuals would have been expected to form representations of women that were more individuated than their representations of men. Of course, such retrospective predictions can only be speculative. But a focus on the importance of sociohistorical context in influencing attitudes and behaviors also offers interesting predictions concerning the relative individuation of men and women in the future.

In a context in which men and women held equal societal status, would progressive and traditional individuals no longer differ in the degree to which they individuated men and women? Or with the gender status gap eradicated, would we instead find memory for men and women dictated by out-group homogeneity for gender groups? It might also be the case that higher status individuals would tend to be individuated to a greater degree, as the lower-status-group homogeneity hypothesis predicts. But perhaps status cues other than gender would guide individuation. In the coming decades, we might find that occupational status cues override effects of gender cues in determining target individuation. Stewart and Vassar (2000) found that occupational status influenced memory for male targets but not female targets. They attributed the absence of occupational status effects in the female target condition to the lower status of the female gender group overall and the consequent lesser importance ascribed to women's occupational status. Perhaps occupational status cues will come to have equal impact for male and female targets in the future. Of course, a context of equal status for men and women may not arrive anytime soon. Spence and Hahn (1997) cautioned that "if the political forces currently promoting modern sexism continue to gain strength, old-fashioned sexism may also be on the rise" (p. 32). In a time of fluctuating social norms, the present paradigm provides a relatively nonreactive tool for assessing some of the effects of changing attitudes toward women's and men's social roles.

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Appendix

Theoretical Predictions Concerning the Individuation of Men and Women

Out-group homogeneity:	Men will individuate men more than women.
	Women will individuate women more than men.
Status:	Both men and women will individuate men more than women.
Status + Attitude toward women's rights, roles, and privileges in society:	Traditional men and women will individuate men more than women.
	Progressive men and women will individuate women more than men.

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