STATUS ROLES AND RECALL OF NONVERBAL CUES

Judith A. Hall, Jason D. Carter, and Terrence G. Horgan

ABSTRACT: In two experiments, interpersonal status was experimentally manipulated by assigning one dyad member to be the owner of a mock art gallery and the other to be the owner's assistant. Without forewarning, participants were asked immediately following the interaction to recall their partner's hand gestures, self-touch, gazing, smiling, and nodding. Accuracy of recall was determined by comparing these ratings to their partners' behavior as coded from the videotape. In both experiments, assistants were more accurate at recalling the amount of owners' self-touch than vice versa, but there was little evidence of an accuracy difference in recall of the other nonverbal cues. When accuracy was defined as the correlation between a participant's ratings of the partner's behaviors and the partner's actual behaviors, there was evidence that assistants were more accurate than owners when a combined *p*-value was calculated across both studies.

KEY WORDS: nonverbal sensitivity; recall accuracy; status; power.

Social psychologists have hypothesized that people with weak or subordinate status display enhanced interpersonal sensitivity, either as a general skill or vis-à-vis superiors (e.g., Fiske, Morling, & Stevens, 1996; Henley, 1977, 1995; LaFrance & Henley, 1994; Snodgrass, 1985, 1992). The present article describes two experiments in which status was manipulated in order to examine its effect on interpersonal sensitivity. As indicated

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below, almost no research has examined status effects on sensitivity within an interacting dyad. The present research employed a novel operational definition of sensitivity, namely accuracy of recalling the partner's nonverbal behavior. This definition of sensitivity has not been previously employed in nonverbal sensitivity research, although noticing nonverbal cues is a logical precursor to making interpersonal judgments (Funder, 1995). Because it was not feasible to ascertain in an on-line manner which cues participants were noticing in each other, we used recall immediately after the interaction as a proxy for participants' noticing of nonverbal cues during the interaction.

Theoretical Considerations

Who Is More Sensitive and Why?

The best known hypothesis is that weak people or subordinates have enhanced interpersonal sensitivity compared to powerful people or superiors (e.g., Henley, 1977). However, the literature has provided little systematic insight as to why this might be so. Henley proposed that it is advantageous for weak or subordinate people to be able to judge others' cues accurately because this would help the weaker person to cope with low power (for example, it might make it easier for the subordinate to please the superior). It follows, therefore, that weaker people might put extra effort into noticing others' cues and might also, as a consequence, develop better judgment skills (Henley, 1977).

However, a number of alternative explanations, both motivational and non-motivational, could exist for why subordinates might be more sensitive than superiors. An alternative motivational explanation would that the superior's motives, rather than the subordinate's, account for any such effect. Higher levels of sensitivity could be found in weaker or subordinate persons if the stronger or higher-status person were motivated to *withdraw* attention from lower-status others or to try *less* hard to decode the meanings of their cues (Fiske, 1993).

Nonmotivational explanations for greater relative sensitivity in subordinates are also possible. Subordinates might be presented with cues from superiors that are easier to judge than vice versa (Snodgrass, Hecht, & Ploutz-Snyder, 1998), or superiors might have limited capacity to attend to or process the nonverbal cues of subordinates (Patterson, 1995). Such limited capacity might stem from competing tasks (such as the need to make complex decisions) or from the necessity of attending to many subordinates.

Another nonmotivational explanation for greater accuracy on the part of subordinates could be related to the impact of violated role expectations: a behavior that is incongruent with the superior role would be perceptually salient to subordinates and therefore more likely to be noticed and/or decoded. The person memory literature has found that incongruent person information is better remembered than congruent information (Hastie, 1984; Hastie & Kumar, 1979). Enhanced memory for role-incongruent nonverbal cues, in particular, is implied by Burgoon's expectancy violations model (Burgoon, 1978, 1983). Finally, Fiske and Stevens (1995, cited in Fiske et al., 1996) found evidence that lower-power individuals gave special attention to expectancy-disconfirming information about hypothetical higher-power partners. Although Fiske et al. (1996) attributed this effect to the subordinate's motive to be accurate about the hypothetical partner, a heightened tendency to notice expectancy-disconfirming information need not be motivationally based; the simple fact of a behavior being perceived as role-incongruent could produce heightened cue processing in the perceiver. Thus, published evidence supports the possibility that behavior that is inconsistent with the superior role might be remembered especially well by subordinates.

To this point we have considered explanations for why weaker or subordinate persons might display greater interpersonal sensitivity than more powerful or situationally superior persons. We have focused on this because it is the main hypothetical outcome discussed in the literature. However, one could as easily make the case that higher-status (more powerful, etc.) people should display the *greater* sensitivity (Hall & Halberstadt, 1997). It is indisputable that managers, charismatic leaders, military officers, teachers, and parents (to give but a few examples) all have strong motives to attend to, and accurately judge, cues sent by their employees, followers, soldiers, students, and children. Riggio (2001), for example, has discussed in detail the functional importance of interpersonal sensitivity on the part of managers in organizations. Subordinates' motives might also produce a sensitivity advantage in superiors: subordinates might withdraw their efforts to be sensitive due to resentment (Noller, 1980).

Finally, nonmotivational factors can also be invoked to explain greater sensitivity in superiors. Subordinates might be too burdened by task demands to attend to superiors' cues; subordinates' ability to attend to the superior might be hindered by anxiety or self-preoccupation (Patterson, 1995); or the expectancy-violation explanation mentioned above could also be operative (i.e., a cue that is not expected to be displayed by subordinates would be perceptually salient to superiors).

Although this review of possible causal paths and outcomes is not

exhaustive, it gives an indication of the potential complexity of the relation of status/dominance to interpersonal sensitivity. Research on the relation of status/dominance to sensitivity thus faces two challenges, first to ascertain whether the traditionally predicted greater sensitivity among lower-status people exists and second to discover the explanatory mechanisms. Thus far no theory has specified under what circumstances, for whom, and for what definitions of status and sensitivity enhanced or depressed interpersonal sensitivity should be expected. Also, little attention has been paid to the different processes that might underlie such differences. As the examples offered earlier illustrate, one might find that *either* superiors or subordinates display greater sensitivity, depending on their current motivational, cognitive, or emotional state.

Kinds of Sensitivity

It is evident from the examples given above that there is more than one kind of "sensitivity." One distinction that has rarely been made explicit is between "sensitivity" defined as accurate interpretation of another's cues and "sensitivity" defined as attending to, and accurately recalling, another's cues. LaFrance and Henley (1994) refer to the "attentiveness" of lower-power people and to their "nonverbal decoding skills" as though these are interchangeable (p. 294). However, these are distinct concepts. One could be attentive without drawing accurate inferences about the other person; on the other hand, one could have highly developed decoding skills but not use them effectively due to weak motivation or other factors that interfere with one's ability to notice or process the relevant cues.

Another distinction is between trait and situationally based sensitivity. Most research on the relation of status (and related concepts, such as dominance) to interpersonal sensitivity has treated both constructs as traits, that is, as stable qualities of a person.[1] Trait interpersonal sensitivity has typically been operationalized as the ability to make accurate interpretations of affective nonverbal cues that are presented in a standardized test format (for example, with the Profile of Nonverbal Sensitivity or PONS test of decoding nonverbal cues; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979). In such studies, trait status/dominance has been operationalized by social class, achieved characteristics such as job rank, and personality characteristics such as dominance.

It is important to note that the trait approach is only one way of examining the link between status and interpersonal sensitivity. Status/dominance and sensitivity can both be defined as transitory attributes that are

embedded in situational requirements or role relations (Hall & Halberstadt, 1997). One reason this distinction between trait and transitory sensitivity is important is that it requires us to focus on the *processes* whereby accurate interpersonal perception is achieved. Trait accuracy implies the appropriate use of pre-existing knowledge about the meanings of cues, or a habitual tendency to attend to others' cues, whereas situational or role-based accuracy implicates contextually influenced motivational or cognitive factors as the sources of increased or decreased sensitivity. Indeed, if status is randomly assigned in a laboratory experiment, such transitory factors can be the *only* sources of different levels of sensitivity, as randomization would equalize the groups on their pre-existing skills or habits. In "real life," success in decoding or recalling another's cues likely rests on both trait and transitory factors.

Review of Previous Findings

Although we do not employ a trait definition of status/dominance in the present research, we review this literature because it comprises most of the published work in this area. In a meta-analysis of studies using trait definitions, Hall, Halberstadt, and O'Brien (1997) found a *positive* correlation between scores on the PONS test of decoding accuracy and both social class and dominant personality, thus contradicting the hypothesis that low status/dominance is associated with enhanced sensitivity. That meta-analysis also examined subordination defined as traditional gender-role ideology in women and found that women with a more liberal gender-role ideology and with a more "liberated" division of labor within their marriage excelled in decoding nonverbal cues compared to their less liberated counterparts.

In a study not included in the meta-analysis, Hall and Halberstadt (1994) related female university employees' scores on the PONS test to objective data on job rank. Women with higher job rank were more accurate at decoding nonverbal cues with a negative and submissive tone compared to women with lower rank, and equal in accuracy at decoding other kinds of nonverbal cues. Thus, these results did not suggest that lower-ranked individuals were the better decoders.

To summarize, studies that define status/dominance and sensitivity as traits have found essentially no evidence that sensitivity is enhanced in people with lower status/dominance. Indeed, for several definitions, the results went in the other direction. The literature is small, however, and the definitions of both status and sensitivity have been limited.

Only Snodgrass (1985, 1992) has measured situationally based sensitivity. Individuals interacted in experimentally assigned status roles (teacher-learner and boss-subordinate) and made ratings of their own and the partner's attitudes. Snodgrass (1992) found that subordinates were relatively more accurate than superiors in judging how they were viewed by the other, and that the superiors were relatively more accurate than subordinates in judging how the other viewed him/herself. Thus, either the superior or the subordinate was relatively more sensitive, depending on the measure. But Snodgrass's measure of sensitivity did not distinguish the relative contributions of good decoding by one party and good encoding (expression) by the other party. Therefore, subordinates' greater accuracy for how they were viewed by the partner does not necessarily mean that subordinates were more motivated to decode well than were superiors. Subsequent analysis indeed revealed that the accuracy effect was likely due to superiors sending cues that were easier to judge than those sent by the subordinates (Snodgrass et al., 1998).

Thus, there is no evidence to date that situationally based subordinate status produces increased interpersonal sensitivity attributable to the subordinate's motives. However, considering how little research addresses this question, it is premature to reach any strong conclusions. In the present research, all significance testing is two-tailed to acknowledge that a strong prediction cannot be made regarding whether superiors or subordinates would display the greater sensitivity.

The Present Research

In the present article we present two experiments in which status was manipulated and recall of the partner's nonverbal cues was measured. Both experiments had the same basic design, with an additional comparison group in Study 2. College students were randomly assigned to be either the owner of a mock art gallery or the owner's assistant. In these roles, participants engaged in two different interactive tasks while being videotaped.

To measure recall of nonverbal behavior, participants were separated immediately after their interaction and asked (without forewarning) to rate each other's hand gestures, self-touch, gazing, smiling, and nodding. These behaviors were chosen because they are commonly occurring, generally salient, and easy to score from videotapes. Accuracy scores were created by comparing participants' ratings of these behaviors in the partner to independent coders' judgments of the same behaviors from videotapes. Three different accuracy scores were created, one based on absolute difference

scores, one based on within-dyad correlations, and one based on between-dyads correlations. We used three different scoring methods because each addresses accuracy in a somewhat different way and none is intrinsically more correct or appropriate than the others (Hall & Bernieri, 2001). Whatever the scoring methods' strengths and weaknesses, it is important to keep in mind that participants were randomly assigned to their status roles, thus ruling out possible method biases as an explanation for any status-role differences that might be found.

Method

Participants

The participants in Study 1 were 120 college students (52 males, 68 females) enrolled in introductory psychology courses at Northeastern University, who participated to fulfill course requirements. The participants in Study 2 were 180 students (58 males, 122 females) recruited in the same manner. Though no systematic sociodemographic data were collected, the great majority of students were Caucasian and were freshmen or sophomores from a variety of majors within the university. In addition, in Study 2, we recruited 720 undergraduate students in the same manner to be videotape raters.

Procedure

Individuals participated in dyads. Within dyads, they were randomly assigned to the assistant or owner role (or, in Study 2, to the equal-status condition). Participants arrived at the laboratory individually and were taken to separate rooms where they were shown a videotape on which the senior investigator delivered instructions.

Study 1. The videotaped instructions to the owners in Study 1 went as follows:

> In your first activity, you are the owner of an art gallery and the other participant is your assistant. You are considering giving the assistant a promotion, and to make your decision you have decided to ask the assistant to help you choose some artwork for the gallery; that way you can evaluate the assistant's taste and judgment about art and get a better feel for how it would be to work closely with the assistant. We will provide you with various pieces of art and you will choose the best

> three for your gallery, using input from the assistant any way you wish. You will have five to seven minutes in which to discuss the art and choose the best three. You will also be given a form on which you will evaluate the assistant's ideas and manner. In the second activity, you will still be owner of the art gallery. You and your assistant will be building a creative structure to be used as a window display. You will build this out of commonplace materials such as paper cups, straws, and toothpicks. I will give you more detailed instructions later, but the important thing to understand right now is that as art gallery owner your job is to help guide the two of you toward making the best structure you can, while evaluating the assistant's performance. Again, you will be given an evaluation form to complete.

The assistants' instructions were the same except that the roles were reversed.[2] Both participants were informed that gift certificates to a local music store would be awarded to those receiving the best performance evaluations.

After watching their instructions, the participants were brought together in the laboratory, where videotaping equipment and an assortment of original, amateur artworks were in plain view. The experimenter assigned seats, turned on the recording equipment, and left the room. When the discussion was over the experimenter again took the participants into separate rooms so that the laboratory could be rearranged for the building task. The experimenter then brought the participants back into the laboratory, where they were shown videotaped instructions for the building task. In this task, participants were instructed to build an aesthetically pleasing structure 15 in. high using paper cups, drinking straws, yarn, craft sticks, paper clips, toothpicks, bamboo skewers, masking tape, and scissors. The experimenter then turned on the recording equipment and left the room for 10 minutes. Upon completion of the building task, the experimenter took the participants into separate rooms for completion of the post-experimental questionnaire.

Study 2. Study 2 was identical to Study 1, with the following changes. In Study 2 the assistant was described as applying for the assistant's job and, accordingly, a 6-min job interview with the owner replaced the building task. Study 2 also included an equal-status condition, in which the dyad members were co-owners of the gallery who were planning to hire a new assistant; during the job interview task, they took turns conducting "practice" interviews with each other. Finally, in Study 2 gift certificates were offered only to assistants.

Post-Experimental Questionnaire

In both studies, the post-experimental questionnaire contained several counterbalanced sections.

Manipulation check items. In both studies, manipulation check items relating to power/status were included in order to confirm that assigned status had the desired subjective effect. The five manipulation check items were: I felt I had some authority/power over the other person, I felt the other person "looked up" to me while we were playing our roles, I felt that I was the dominant one in the interaction, I felt the other person had some authority over me (scored in reverse), and I felt as though I had less power in the interaction than the other person (scored in reverse). All were answered on a scale that went from −3 (strongly disagree) to 3 (strongly agree). These items were averaged into a status/power composite. To establish discriminant validity for the status manipulation, we also included items relating to positive affect (3 items) and anxiety (5 items). Items that belonged a priori in each of these categories were averaged to create positive affect and anxiety composites.

Report of partner's nonverbal behavior. All participants rated their partner on 9-point scales that went from "hardly ever" to "a great deal" for the following nonverbal behaviors: used hands to gesture, gazed at me, touched him/herself, smiled, and nodded.

Scoring of Nonverbal Behavior

In Study 1, a trained assistant counted the frequency of occurrence of gesture, self-touch, smile, and nod and timed the total duration of gaze with a stopwatch, all during preselected portions of the videotaped tasks (minutes 1, 2, and 3 of the discussion and minutes 1 and 2 and 4 and 5 of the building task). Only one participant was coded at a time (the other was covered up) and the tape was viewed with the sound off. Interjudge reliability was ascertained by correlating data of the primary coder against an independent observer for a sample of 10 dyads (20 individuals). These correlations were: gesture, .97; gaze, .99; self-touch, .99; nod, .99; and smile, .99.

In Study 2, 720 raters participated in small groups, again viewing only one participant at a time and with the sound turned off. Each rater rated one nonverbal behavior for one participant in each of 4 dyads. Within a group, different rating booklets were distributed to different raters so that a

variety of nonverbal cues would be judged in each group. Each of the 180 participants in Study 2 was rated by 4 raters for each nonverbal behavior. For a given nonverbal behavior, the raters marked a 9-point scale (with the poles "hardly at all" and "nearly all the time") every 30 s during minutes 1 and 2 and minutes 4 and 5 of the interview task, and again during the corresponding minutes of the art discussion task. Altogether, a rater produced a total of 8 ratings for each task or 16 ratings altogether. Hereafter in this article, all analyses are based on the mean over these 16 ratings, averaged across the raters for each participant.

In Study 2, reliability was assessed by calculating Cronbach's alpha for the set of four judges who rated each participant for a given nonverbal behavior, for each of the 16 ratings of a given behavior (see above). The medians across these 16 alpha coefficients were as follows: gesture, .78; gaze, .73; self-touch, .70; nod, .70; and smile, .82. The lower interobserver agreement in Study 2 compared to Study 1 is likely due to using naive raters instead of trained coders. However, combining the data across the 16 mean ratings per participant for all analyses in Study 2 increased our effective reliability above these figures, owing to the additional reduction in random error gained by aggregation (Rosenthal & Rosnow, 1991).

Scoring of Recall Accuracy

Absolute discrepancy. This accuracy score was calculated via a three-step process. First, the participants' ratings of their partner were standardized (using *Z*-scores) for each nonverbal behavior. Second, the observer ratings for each nonverbal behavior were standardized. And third, the absolute difference between these two standardized scores was calculated for each participant for each nonverbal behavior. Thus, accuracy scores consisted of the absolute gap between how a participant said the partner behaved and how the independent raters said the partner behaved, for each nonverbal behavior. Smaller values indicate greater accuracy.

Profile correlation. The profile correlation (Colvin & Bundick, 2001; Snodgrass, 1985, 1992) was calculated individually for each dyad member. It consisted of the correlation, across the five nonverbal behaviors, between the participant's ratings of the partner's behavior and the partner's independently coded behavior. Because the five behaviors were the "cases" for this correlation, accuracy cannot be scored separately for each behavior. In the calculation the independently coded behaviors of the partner were put in *Z*-scored form so that they would be on a comparable scale of measurement. A larger profile correlation indicates greater accu-

racy in recalling the patterning (profile) of the partner's behavior across the five nonverbal variables. (Each profile correlation was transformed to its Fisher *z* equivalent for statistical analysis and then converted back to the correlation metric for reporting of results; Rosenthal, 1991.)

Group-level accuracy correlation. Here, individual dyad members did not receive unique accuracy scores, but rather accuracy was calculated for the entire group of either assistants or owners (Bernieri, Zuckerman, Koestner, & Rosenthal, 1994; Funder, 2001). The group-level accuracy correlation was the correlation, across all assistants (or owners), between the participants' rating of their partners for a given nonverbal behavior and the partners' independently coded behavior. Because this correlation was calculated separately for each nonverbal behavior, the groups received five accuracy correlations, one for each nonverbal behavior.

For all three methods, the accuracy of assistants was compared to that of owners. For the first two measures, this was done via an analysis of variance (ANOVA) using role (assistant vs. owner) as a repeated-measures factor, and for the third measure, this was done by comparing the assistants' group-level accuracy correlation to the owners' group-level accuracy correlation using the Fisher z-based version of the Pearson-Filon test for comparing nonindependent, nonoverlapping correlations (Raghunathan, Rosenthal, & Rubin, 1996).[3]

Results

Preliminary Results

Manipulation checks. Matched *t*-tests on the status/power composite revealed that assistants reported feeling much less status and power than did owners: in Study 1, $t(58) = 8.29$, $p < .00001$, and in Study 2, $t(59) = 8.70$, $p < .00001$. As one might expect, in Study 2 the equal-status group's feelings of status/power fell midway between those of assistants and owners (M equal-status $= .20$, M assistants $= -.77$, M owners $= 1.25$).

Owners and assistants did not differ in positive affect or anxiety in either study (ps $> .16$). Thus, any behavioral differences between assistants and owners can be attributed with reasonable confidence to status/power and not to feelings of positive affect or anxiety.

Correlations among recall accuracy scores. In both studies, the five absolute discrepancy scores were essentially uncorrelated with each other:

TABLE 1

Assistant-Owner Differences on Absolute Discrepancy Accuracy

Accuracy score	Assistant	Owner	*F*
Study 1			
Hand gesture	1.03	1.08	.01
Self-touch	.84	1.07	6.95**
Gaze	.87	1.04	2.24
Smile	.96	1.02	.34
Nod	1.07	1.07	.01
Study 2			
Hand gesture	.95	.98	.16
Self-touch	.88	1.19	4.72*
Gaze	.96	.97	.07
Smile	.70	.83	.34
Nod	.90	.96	.04

Note: For the absolute discrepancy measure of accuracy, smaller values indicate greater accuracy.

*$p < .05$; **$p < .01$.

in Study 1, the median intercorrelations for assistants and owners were both .04, and in Study 2, the median intercorrelation was .13 for assistants and .11 for owners.

The correlations between methods (profile correlation and absolute discrepancy) were also calculated. In Study 1, the assistants' profile correlation score was marginally significantly related to their self-touch absolute discrepancy score, $r(57) = -.24$, $p < .07$. In Study 1, the owners' profile correlation score was related to their gesture absolute discrepancy score, $r(58) = -.24$, $p < .07$, and to their self-touch absolute discrepancy score, $r(58) = -.48$, $p < .001$. (Because smaller values for the discrepancy scores signify greater accuracy, these negative correlations mean that accuracy scores based on the two methods of scoring were positively related.) In Study 2, the assistants' profile correlation score was significantly related to their nodding absolute discrepancy score, $r(58) = -.28$, $p < .03$, their gesture absolute discrepancy score, $r(58) = -.39$, $p < .002$, and their self-touch absolute discrepancy score, $r(58) = -.37$, $p < .004$. For owners in Study 2, there were no correlations of note between the two

methods of scoring accuracy. Thus, with the exception of Study 2's owners, there was some convergence between the two scoring methods.

Sex differences. In neither study was sex significantly correlated with any of the accuracy scores for either assistants or owners (all $ps > .19$).

Effects of Assigned Status: Assistant-Owner Differences

Absolute discrepancy. Using the absolute discrepancy scores as dependent variables, a series of ANOVAs was performed in each study which treated the dyad as the unit of analysis. The equal-status dyads from Study 2 were excluded from this analysis. Independent variables were sex of assistant, sex of owner, and status role (assistant/owner), the last being a repeated-measures factor.

Table 1 shows the results for the absolute discrepancy accuracy scores. In Study 1, the only significant difference was for recall of self-touch, for which assistants showed better recall than owners. (Recall that smaller values on these scores indicate greater recall accuracy.) In Study 2, again the only significant difference was for self-touch, with assistants again showing better recall.[4]

The preceding results do not speak to the locus of the recall difference, in other words whether assistants paid extra attention or owners paid less attention, compared to a baseline. In Study 2, this question was addressed by comparing the accuracy of participants in each role condition to that of participants in the equal-status condition. For this analysis the accuracy scores of the dyad members in the equal-status condition were compared via *t*-test to the accuracy of assistants and owners, respectively. We did this analysis for all of the absolute discrepancy accuracy variables. None of the *t*-tests approached statistical significance ($ts < 1.51$). Moreover, there was no consistent pattern; for some accuracy scores, the equal-status group was intermediate between the assistants and owners, but for others they were more accurate than either, or were similar to either assistants or owners.

Profile correlation. The same three-way ANOVAs described above were run on the profile correlations. As explained above, each participant received one profile correlation which reflected his or her success in remembering the patterning of the partner's behavior over the five nonverbal

TABLE 2

Assistant-Owner Differences on Profile Correlation Accuracy

Accuracy score	Assistant	Owner	*F*
Study 1	.24	.08	3.48^{+}
Study 2	.31	.16	2.34

Note: For the profile correlation measure of accuracy, larger values indicate greater accuracy.
$+p < .10$.

cues. Table 2 shows the mean profile correlations for assistants and owners. In both studies, the means suggested more accuracy in assistants, though in neither study did the difference reach a statistically significant level ($p < .07$ in Study 1 and $p < .14$ in Study 2). When a combined *p*-value was calculated (Rosenthal, 1991), the recall of assistants was better than that of owners ($Z = 2.36$, $p < .05$). Thus, there is some evidence that assistants were more accurate than owners in recalling the overall patterning of their partners' nonverbal cues.

We compared the profile correlations of the equal-status dyads to those of the assistants and owners in Study 2, using the same method described above for absolute discrepancy. The equal-status dyads' profile correlations ($M = .20$) were not significantly different from those of either the assistants ($M = .31$, $t = 1.00$) or the owners ($M = .16$, $t = .23$).

Group accuracy correlations. Table 3 presents the group accuracy correlations, higher values of which indicate greater accuracy. The correlations suggest greater accuracy on the part of assistants, but the difference between the groups was significant only for self-touch in Study 1. Examination of the self-touch group accuracy correlation for the equal-status dyads revealed an overall correlation of $-.12$ (average over both members of the dyad), which was closer to the accuracy of the owners in both studies than to that of the assistants.

Discussion

In two experiments, we examined the impact of status roles, defined as assistant versus owner of a mock art gallery, on accuracy of recalling a partner's nonverbal behavior immediately after the interaction. Our studies

TABLE 3

Assistant-Owner Differences on Group Accuracy Correlation

Nonverbal behavior	Assistant	Owner
Study 1		
Hand gesture	.18	.08
Self-touch	.47***[a]	.05
Gaze	.37**	.15
Smile	.37**	.19
Nod	.18	.17
Study 2		
Hand gesture	−.05	.24^{+}
Self-touch	.23^{+}	−.06
Gaze	.21	.12
Smile	.57****	.44***
Nod	.25*	.19

Note: Entries are Pearson correlations between participants' ratings of their partners' behavior and the partners' independently coded behavior (for each correlation, $N = 59–60$).

[a]Assistant-owner difference is significant at $p < .05$.

$^{+}p < .10$; $*p < .05$, $**p < .01$, $***p < .001$, $****p < .0001$.

break new ground in several ways. No previous study has defined interpersonal sensitivity as the accurate recall of another's nonverbal behavior, and only Snodgrass's (1985, 1992) studies have examined interpersonal sensitivity between actual interactants in the context of a status manipulation; unfortunately, Snodgrass's methodology made it difficult to assess decoding accuracy independent of the encoding accuracy of the partner.

Also lacking is research that can address the mechanisms that might produce a sensitivity advantage for one group or the other. Henley's theorizing strongly points to the lower-status person's motives to attend to and/or accurately judge others (Henley, 1977, 1995; LaFrance & Henley, 1994). However, Snodgrass et al. (1998) concluded that, in her studies, the enhanced sensitivity of subordinates was due not to a heightened motivation to decode well on the part of subordinates but rather to the fact that superiors sent very clear cues.

In the present experiments we found that assistants had better recall of the owners' self-touch than vice versa, based on two different methods for calculating recall accuracy (absolute discrepancy and group correlation; see definitions provided earlier). However, for these same measures assis-

tants had little advantage at recalling the owners' other nonverbal cues. For a third measure, the profile correlation, which indicated how strongly an individual's recall of the five nonverbal behaviors was correlated with the partner's actual scores on those behaviors, neither study showed a significant assistant-owner difference but the combined probability over the two studies was $p < .05$. We will postpone discussion of this result until after the results for self-touch have been discussed.

Why Did Assistants Have Superior Recall for the Owner's Self-Touch?

As noted earlier, there are many possible reasons why one person in a dyad might be more attentive to (or better in judging) the other's cues. First we shall address possible motivational reasons for our finding that assistants recalled the partner's self-touch better than owners did. Were assistants trying especially hard to notice the owners' nonverbal cues? This is a reasonable hypothesis, given that they were hoping for good evaluations from the owner. We find this explanation to be unconvincing because it is difficult to imagine why assistants would be selectively motivated to attend to self-touch when other cues, such as the gazing and smiling of the owners, could be expected to yield more information about how owners were evaluating them. Indeed, of all the behaviors we measured, the other's self-touch is the least likely to indicate whether one is making a good impression.

Another motivational explanation could be that the owners *withdrew* their attention from the assistants. This possibility is not well supported because comparisons with the equal-status condition in Study 2 showed that the owners displayed accuracy on recalling self-touch that was similar to that in the equal-status condition. This suggests that the assistant-owner difference was not due to owners' withdrawing attention from their assistants, but rather to some factor or factors that enhanced the assistants' recall. Thus, the hypothesis that the accuracy difference on self-touch was due to owners withdrawing attention from assistants was not supported.

Moving now to nonmotivational explanations for the accuracy difference, one might suggest that assistants and owners would differ in emotional states, and that these states would influence their attention to the other's cues. Anxiety, for example, could interfere with cue processing (Easterbrook, 1959; Patterson, 1995). However, the post-experimental questionnaire revealed no difference between assistants and owners on positive affect or anxiety. We found, moreover, in correlational analyses (not reported) that these self-rated emotions were not significantly related to recall accuracy in either study. Furthermore, even if affective states had

differed between assistants and owners, this would not explain why assistants had better recall for self-touch and not the other nonverbal cues. Therefore, it does not appear that affective states accounted for the assistant-owner accuracy difference.

A second non-motivational explanation is suggested by Snodgrass's studies described earlier: in a dyadic sensitivity paradigm there can be ambiguity over whether good communication is the result of a decoder's trying hard to judge well or the expressor's sending cues that are easy to judge (Noller, 1980; Snodgrass et al., 1998). Thus, assistants would have greater accuracy if the owners' cues were intrinsically easier to recall than their own cues. While hypothetically this could happen, it remains a question why owners' cues would be intrinsically easier to remember. In both of our studies, owners touched themselves less than assistants did, due to their having to hold a clipboard with the evaluation form on it. However, it is not clear how the overall level of the other's behavior would translate into ease of recollection, since one could argue that either a low quantity or a high quantity of behavior might be easier to remember. Although we do not believe that assistants' greater accuracy for recall of self-touch was due to the difference in amount of actual self-touch, this explanation cannot be completely ruled out until additional studies are conducted.

A final nonmotivational interpretation is based on violated role expectations. As suggested earlier, when a behavior is not role-congruent, it may be more salient when it occurs and therefore more likely to be noticed and remembered (e.g., Burgoon, 1978, 1983; Hastie, 1984; Hastie & Kumar, 1979). This interpretation has the potential to explain why there was an accuracy difference for self-touch but not for the other behaviors. It is well established that self-touch is associated with anxiety or inner conflict (e.g., Ekman & Friesen, 1969, 1974; Shreve, Harrigan, Kues, & Kagas, 1988; Waxer, 1977). We believe it likely that, based on a lay understanding of this relation, participants would have expected self-touch to occur more among assistants than among owners (because assistants, who were being evaluated, would have had more reason to be nervous than owners, who were doing the evaluating). In fact, Carney, Hall, and Smith LeBeau's (2000) survey of college students' beliefs about status and behavior confirms this expectation. In that study, students were asked to describe the nonverbal behavior of hypothetical low- and high-status persons interacting in an employment setting. Participants expected the high-status person to engage in significantly less face, neck, head, and hair self-touch than the low-status person.

We would not predict differential recall as a function of status for the other behaviors—smiling, nodding, gazing, and gesturing. These behaviors

are congruent with both the assistant and the owner roles and therefore should not be more attention-grabbing to one dyad member than the other. Thus, participants in both roles could be expected to speak (and therefore gesture), to show a friendly attitude by smiling and nodding, and to demonstrate interpersonal interest by gazing. But self-touch is a very different kind of nonverbal behavior in that it serves intrapersonal rather than interpersonal functions, being labeled a "self-adaptor" by Ekman and Friesen (1969). In light of this, we propose that assistants and owners would respond differently to seeing self-touch (i.e., signs of anxiety) on the part of the other. Whereas owners might expect to see these movements coming from those whom they are evaluating, assistants might not expect to see these movements coming from those who are evaluating them. Therefore, self-touch could have greater perceptual salience for assistants than owners. If this is the case, then it follows that assistants might notice these movements more than owners would.

Profile Correlation Results

As reported earlier, the profile correlation showed significantly better recall among assistants than owners when calculated as a combined probability across the two studies. Because neither study was individually significant for this measure, we should not overinterpret this result. Nevertheless it is consistent with the hypothesis that subordinates show superior sensitivity to superiors than vice versa (e.g., Henley, 1977). A feature of the profile correlation is that it does not isolate accuracy for a particular nonverbal cue, and therefore we cannot tell how much the assistants' superior recall of the owners' self-touch may be contributing to scores on the profile correlation. Analyses reported earlier showed that accuracy on the profile correlation was related significantly or marginally so to the absolute discrepancy measure of self-touch accuracy for Study 1's assistants and owners and Study 2's assistants. However, the profile correlation was also related to some of the other nonverbal cues' absolute discrepancy scores. Therefore, at present it is difficult to interpret the status difference for the profile correlation. Why the status manipulation would encourage assistants or owners (or both) to change their appraisal of the *relative amounts* of each of the five nonverbal behaviors is not clear.

Sex Differences

The relation between status and interpersonal sensitivity has often been discussed in the context of understanding sex differences in nonver-

bal behavior and sensitivity. Henley (1977; LaFrance & Henley, 1994) proposed that the low status of women in society might explain why women persistently score higher than men do on tests of decoding affective nonverbal cues (Hall, 1984; Hall, Carter, & Horgan, 2000). Although comparison of assistants to owners in the present research did suggest that the lower-status person had better recall of self-touch, there was no sex difference for this kind of accuracy, nor for any other. Thus, the present research does not shed light on the status interpretation of sex differences in interpersonal sensitivity, at least as far as recall is concerned. If future studies continue to find no sex differences for recall of nonverbal behavior, this would be interesting for it would suggest that women's superior decoding ability does not rest simply on their paying extra attention to nonverbal cues (cf. Graham & Ickes, 1997).

Conclusion

In conclusion, we found that assistants were more accurate than owners in the recall of the partner's self-touch. However, there was no evidence in favor of a motivational explanation, on either the assistants' or owners' parts, although motivational explanations have been emphasized to date (Fiske, 1993; Henley, 1977). The most satisfactory explanation for the present result is that self-touch was seen as more role-incongruent when it occurred among owners than among assistants (owing to the association of self-touch with anxiety or discomfort) and was therefore perceptually more salient to, and likely to be noticed and recalled by, assistants than owners. We also found that assistants tended to be more accurate in recalling the relative amounts of the five nonverbal behaviors emitted by the owner than vice versa.

Although contributing new findings to a small and ambiguous existing literature on interpersonal sensitivity and status, the present research is not without limitations. We employed only one definition of sensitivity and we used only one operational definition of the status/dominance concept. We do not know how recall accuracy would relate to trait dominance, for example, or to other experimentally defined status roles. Furthermore, although there is merit in employing several different ways to score recall accuracy, it is not necessarily clear how one should interpret discrepancies among them. Finally, as acknowledged above, we cannot definitively explain the status differences we obtained. On the other hand, uncovering new complexities in the relation of status to interpersonal sensitivity under-

scores our earlier contention that these concepts do not have a simple connection (Hall & Halberstadt, 1997).

Notes

1. As often noted (e.g., Ellyson & Dovidio, 1985; Hall & Halberstadt, 1997), there are many possible theoretical and operational definitions of status and related concepts such as dominance, power, authority, rank, and expertise. Although for convenience we sometimes refer to all such "vertical" distinctions between people as "status," we do not mean to suggest that these terms are synonymous or interchangeable.
2. Both studies also included a manipulation of the assistant's role definition such that the goal for half of the assistants was to demonstrate that they were easy to get along with, and for the other half to demonstrate that they had good judgment about art. This manipulation was designed to enhance the assistant's desire to be perceived as interpersonally rewarding versus competent, respectively. However, manipulation checks were unsuccessful in both studies and there were few effects of assistant's role definition on accuracy. This variable is not discussed further.
3. The commonest situation when testing the difference between nonindependent correlations is the overlapping case in which one variable is represented in both of the correlations to be compared (e.g., r_{12} vs. r_{13}). However, in the present situation the correlations to be compared were nonindependent and *nonoverlapping* because there were four variables involved, none of which was represented in both correlations. Specifically, we were comparing the correlation between the owners' ratings of the assistants and the assistants' actual behavior versus the correlation between the assistants' ratings of the owners and the owners' actual behavior (i.e., r_{14} vs. r_{23}).
4. Because of the possibility that how much participants spoke would be related to how much they attended to and recalled their partners' cues (for example, the assistant might have better recall than the owner if the owner did most of the talking and the assistant was therefore able to devote cognitive resources to observing the owner), a coder used a stopwatch to time the total duration of speech for each participant using the same time samples described above for scoring of nonverbal behavior (reliability was $r = .85$ in Study 1 and .94 in Study 2, correlation of the primary coder with a second coder). Results showed that in Study 1 there was no assistant-owner difference in talking time ($p = .86$), while in Study 2 the assistant spoke more than the owner ($p < .001$). Because these results do not go in the direction that would implicate talking time as a mediator of recall accuracy, that variable is not discussed further.

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