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# LEADERSHIP AND NONVERBAL BEHAVIORS OF HISPANIC FEMALES ACROSS SCHOOL EQUITY ENVIRONMENTS

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Nonverbal behaviors of Hispanic elementary school students and their peers were examined in a small-group cooperative task with a total of 202 subjects. Thirty-five randomly selected groups were videotaped in ten desegregated schools, each group was gender-homogeneous, with three Hispanic and three Anglo students. Analysis of the videotapes revealed that Hispanic females used less vertical and horizontal space than Anglo females, and were also less likely to verbally interrupt or physically intrude on other group members. They had similar rates of handling the group resource cards and were given similar leadership scores by multi-ethnic trained observers. Among males, Hispanics are significantly more likely to use vertical or upward movements and physical intrusions, while Anglos use more verbal interruptions.

School and social status factors such as high- and low-equity desegregated school programs, ethnic and gender status, and school status variables of academic grades and English word knowledge had varying effects on teacher and peer ratings of leadership. High-equity schools garnered higher leadership scores for Hispanic females from both peers and teachers when all other nonverbal behaviors were controlled. This positive effect of the school on leadership ratings was evident only for males in

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teacher ratings Hispanic females and their peers do reflect adult models of nonverbal behavior and leadership, and that leadership is enhanced in the perceptions of teachers and peers when they participate in a high-equity desegregated elementary school

Hispanic females in desegregated schools face contradictory social and educational expectations from the dominant Anglo core culture and from gender expectations in Hispanic family and community settings (Baca-Zinn, 1985, Mirande & Enriquez, 1979, Zapata & Jaramillo, 1981) Many of these social and educational expectations are communicated nonverbally among peer groups and between teachers and students in the school setting In this research, we examined the variation in nonverbal behaviors among students and the relationship of those behaviors to ratings of their leadership We also focused on the expectations created for Hispanic female leadership in different school settings Among the school and social status factors we consider are various desegregated school environments, ethnic and gender status, and school status variables such as academic grades and English word knowledge scores All of these factors may influence the perceptions of Hispanic female leadership by their student peers and teachers

### NONVERBAL BEHAVIORS AND LEADERSHIP

Leadership can be assessed on the basis of many factors In this research, we focused on school status factors (e g , grade point average, English word knowledge, and peer rankings prior to the game), and nonverbal behaviors exhibited in a multi-ethnic interaction game Nonverbal behaviors take on shared meanings in a specific cultural setting (Henley, 1977) These nonverbal behaviors appear to influence a group's assignment of status and leadership as much as verbal elements of group interaction or attractiveness Some researchers suggest that the nonverbal channels of communication can be more influential than verbal channels (Mehrabian, 1972)

Several nonverbal behaviors studied in adults have been found to be associated with leadership and status within groups Individuals of higher status use more personal space (Mehrabian, 1972), touch more and intrude more into others' personal space (Henley, 1973) High status individuals in general yield their positions less and occupy more central positions in a group (Baxter, 1970) Schwartz, Tesser, and Powell (1982) found that elevation is the strongest predictor of social dominance, while lateral placement and other postures were less influential predictors Individuals perceived as leaders by others tend to talk more (Strodtbeck & Mann, 1956) and interrupt more (Zimmerman & West, 1975) The latter two behaviors are classi-

fied in this study as “nonverbal” because we are interested in rates of behavior, as opposed to the content of the verbal interactions

These nonverbal behaviors appear to be learned, and tend to vary with gender, social status, and race or ethnic background (Henley, 1977, Mayo & Henley, 1981) Among adults, males are generally more dominant and display higher status on a nonverbal level (Frieze & Ramsey, 1976) Men use more space with their arms and legs, make wider stretching gestures, and more gestures, than do women (Aries, 1982, Pearson, 1985) Men also rely on more open body positions to show authority and ease (Henley, 1977) Men touch others (Henley, 1977) and verbally interrupt others more than women do (Zimmerman & West, 1975) In contrast, women use a “restricted” personal space, and engage in more self-touching behaviors, which contributes to lower status in interactions (Henley, 1977)

Aiello and Jones (1971) identified gender and ethnic differences among Anglo, Black, and Puerto Rican first- and second-grade children in a study of proxemic behavior, including interaction distances and directness of shoulder orientation Middle-class Anglos stood further apart than minority students Significant sex differences were found only among Anglos, with males standing further apart than females The authors concluded that these nonverbal patterns are acquired early in life and demonstrate significant differences between the dominant culture and minority cultures in the use of space Jones (1971) found that females of each of three ethnic groups, Black, Anglo, and Puerto Rican, stood closer together than their male ethnic peers

### SCHOOL EQUITY AND LEADERSHIP

We can set the context of these nonverbal behaviors and the leadership associated with them within an equal status relations model of schools This model assumes that any status order in the larger society can create expectations about the competence of certain status groups (males vis-à-vis females, Hispanic vis-à-vis Anglo) which are accepted by all groups (Berger, Rosenholtz, & Zelditch, 1980) Similarly, status order in the larger society may lead to differential evaluation of leadership within a particular school setting When members of status groups interact, expectations for leadership may lead to dominance or influence by the higher ranked groups The equal status relations model proposed by Berger, Conner, and Fisek (1974) identifies the relationship of gender and ethnicity to the expectations of significant others in a society An individual's status order in the larger society (gender, ethnicity, or age) creates expectations about competence, which in turn may affect educational and interpersonal outcomes These expectations, skills, and behaviors may vary across status groups and across educational settings

Educational research on interracial and mixed academic status groups

consistently has shown that higher status children tend to be more active and influential than lower status children (Cohen, 1984) Both race and gender act as diffuse status characteristics that maintain status inequalities in the schools

### High Equity Schools

A variety of experimental and survey studies have identified factors and interventions which can create more equal status interactions within institutions (Mercer, Iadicola, & Moore, 1980) Rosenfield and Stephan (1981) identified variations in school desegregation factors that reduce negative stereotypes of minorities and enhance equal status contact, including desegregation of teaching staff, large proportions of minorities in desegregated classrooms, and administrative support of programs Johnson, Johnson, and Maruyama (1984) established through a meta-analysis of school research that cooperation in the classroom, as opposed to competition and individualism, promotes greater interracial interpersonal attraction and equal status relations

Simoniello (1981) looked at both family structure and school settings to identify factors that affect passivity and assertiveness among Hispanic females She argued that a key factor is a close relationship to the family, and access to informal mentoring in schools Depending upon such school factors, "a closed, male-dominated family can foster an independent, goal and achievement oriented woman, or a non-assertive, dependent, non-competitive woman" (Simoniello, 1981, p 134)

Iadicola and Moore (1983) showed that access to multicultural curriculum, minority parental power in the school, and larger proportions of minority students and faculty increases the probability of Hispanic males and females moving to higher status positions in small group interactions In schools where equal status relationships are *not* supported, research consistently has shown that status rankings of students by teachers and peers place Anglo females and Chicano males lower than Anglo males, and Chicanas at the bottom of the status hierarchy (Moore, 1983)

Ethnic and gender differences in leadership and nonverbal behaviors may be mediated by the cultural context, the school setting, in which these take place Those educational factors that influence the nonverbal behaviors of Chicanas, Chicanos and Anglos may also contribute to variations in the perceived leadership of these students

## HYPOTHESES

- 1 Males and Anglos will score higher than females and Hispanics on dominance measures use of vertical and horizontal space, verbal interruptions, physical intrusions, speaking time, and touching of game cards Females and Hispan-

- ics will score higher on use of self-touching behaviors. The former nonverbal behaviors will be associated with higher leadership scores. Self-touching behaviors will be associated with lower leadership scores.
- 2 Leadership Ratings will be more affected by target gender and ethnicity than nonverbal behavior ratings.
  - 3 Chicanos and Chicanas in high equity schools will be given higher leadership ratings than those in low equity schools.

## METHOD

During the 1975–1976 school year, 10 desegregated schools participated in an intensive study of school environments and student outcomes. These schools were selected from a sample of 184 elementary schools that had scored at the highest end of the continuum on a series of educational achievement, self-esteem and positive ethnic identity factors for Hispanic students (5 schools), and schools that had scored at the lowest end of that continuum (5 schools) (see Iadicola, Lewis, Moore, & Nickles, 1978, for a description of these factors). These schools were then evaluated for status equity conditions (multicultural curriculum, staff, parental involvement, testing/tracking, and others). The high-equity schools scored significantly higher than the low-equity schools on administrative support of desegregation and multicultural curricula, and had higher proportions of minority staff and minority parent involvement (Iadicola & Moore, 1983).

Information on the school environment was collected from administrators, student records, faculty, staff, and parent interviews and observations by trained personnel. Information on the students was collected from their teachers, parents, student files, student questionnaires, and from videotaped interactions which were later coded by trained personnel. Subsequently, 202 Anglo and Hispanic students were randomly selected from the third and sixth grade for videotaping.

A total of 35 groups were videotaped interacting in a cooperative group game, *Space Station Pegasus*. The game took place at a round game board, with resource cards representing materials needed by a stranded crew (see Iadicola & Moore, 1983, for a detailed description of the game). Each group was composed of six children of the same gender and grade, with three Anglo students and three Hispanic students. We chose to use all same-sex groups to observe behaviors when leadership positions are equally available to both males and females. As Lockheed (1976) demonstrated, leadership among school-aged females is suppressed by the presence of male peers of any ability level. Ridgeway (1987) also identified gender as a potentially confounding factor in measuring nonverbal behaviors in a task group.

Each videotape was coded three times by trained staff of both sexes and from varied ethnic groups (two Hispanic, two Black and two Anglo of each sex). Coders were randomly assigned to students across groups and seating

positions In 1978, a multi-ethnic staff used a bipolar semantic differential to rate students on global leadership (see Iadicola & Moore, 1983) In 1985, a new set of multi-ethnic staff timed or counted a series of verbal and nonverbal behaviors and interactions

### Nonverbal Variables

The following items were coded three times, each time by a randomly assigned coder (correlation coefficient for inter-rater reliability indicated in parentheses) number of seconds speaking ( .87), seconds touching the resource cards ( .81), seconds using more horizontal space than  $\frac{1}{6}$  of the table ( .86), seconds using upward vertical space, including standing up ( .85), number of physical intrusions, including touching or hitting others ( .67), number of verbal interruptions directed at other students ( .72), and seconds engaged in self-touching behaviors ( .76) The student was assigned the mean of the three scores

The total average group interaction time varied significantly between male and female groups Females interacted for a mean time of 3 minutes and 58 seconds, whereas male groups interacted a mean time of 3 minutes and 33 seconds To control for these group differences, students' individual behavior scores were divided by their group time for a weighted factor which is used in the final analyses In Table 1, both the raw and weighted scores are presented separately for ethnic and gender groups

### Leadership Variables

The leadership variables consist of the student group members' ratings of each other *after* the interaction, observers' ratings of leadership during the interaction and the classroom teachers' rating of generalized student leadership The student leadership rating was a count of the number of votes received by a student at the end of the game as "the student who most influenced the game" Observers rated each of the students on the following 11 semantic differentials which had a range of 1 to 7 (inter-rater reliability coefficient, .94) submissive/dominant, non-directing/directing, follows/initiates, unopinionated/opinionated, indecisive/decisive, rigid/innovative, nonmanipulative/manipulative, nonorganizing/organizing, complacent/demanding, introverted/extroverted, and ineffective/effective (See Iadicola & Moore, 1983, for factor loadings on these adjective pairs )

Classroom teachers completed survey ratings on a series of bipolar adjectives to describe each student in their classroom, including a leadership factor Teachers rated each student using the following adjective pairs. quick/slow, leads/follows, intelligent/dull-minded, able to concentrate/subject to distraction, organized/disorganized, good memory/poor memory, persevering/quitting, Reliability for this teacher scale was .93 (See Iadicola & Moore, 1983, for factor loadings )

**Table 1**  
 Mean raw and weighted nonverbal behavior scores  
 One-way analysis of variance by ethnicity

Behaviors	Males			Females		
	Anglo	Hispanic	F	Anglo	Hispanic	F
Physical intrusions (counted)	2 75	3 59	5 67*	2 58	2 05	0 69
Weighted score	1 63	2 14	7 08**	1 43	1 17	1 18
Verbal interruptions (counted)	4 05	2 95	3 68*	4 17	2 17	7 25**
Weighted score	1 92	1 57	5 12*	1 90	1 13	6 60**
Upward movement (timed)	10 02	24 16	4 25*	33 58	7 02	6 53**
Weighted score	8 41	11 52	1 59	9 20	4 24	4 77*
Horizontal movement (timed)	42 86	53 90	1 68	48 32	38 83	1 72
Weighted score	23 89	30 25	5 03*	23 52	18 86	4 14*
Self-comfort (timed)	26 52	29 38	0 66	13 26	7 87	1 52
Weighted score	9 91	10 24	0 34	4 54	3 41	0 14
Speaking time	29 16	27 68	0 88	37 31	30 38	2 87
Weighted score	14 82	13 08	1 36	14 09	12 18	1 52
Resource cards (timed)	38 89	48 70	1 69	31 57	47 39	3 27*
Weighted score	20 22	28 25	2 21	19 53	19 90	0 04
Average group time (seconds)	213 37			238 38		

Note  $n = 192$  Scheffé analysis of variance, grouped mean scores

\* $p \leq .05$ , ethnic group differences

\*\* $p \leq .01$

The teacher scale of leadership was only marginally correlated with observers' ratings,  $r = .186$ ,  $p \leq .05$ , (see Table 3) Student ratings of influence after the interaction game were more highly correlated with teacher ratings of leadership,  $r = .310$ ,  $p \leq .001$  The observer's ratings were also correlated with the students' ratings of influence after the game,  $r = .383$ ,  $p \leq .001$

#### Pre-game Status Variables

Students were asked prior to the beginning of the game session to give a pre-game ranking to each player, including themselves. Based on their interaction in prior school or neighborhood activities, they assigned each group member to one of six positions (values indicated in parentheses) deck hand (1), cook (2), communications officer (3), medical officer (4), second-in-command (5), and commander (6). Scores were summed over

the values of all positions assigned to him or her by all members in the group, including his or her own

In the classroom prior to the game, all students completed a questionnaire with information on social class, educational and occupational aspirations, and an English word knowledge test. The classroom teacher was asked to indicate, on the average, the letter grade the student would receive that year in seven academic subjects. Scores ranged from 4 (A) to 0 (F).

For the regression analysis, dummy variables were created for ethnicity, with (1) specifying Hispanic ethnicity and (0) coded for Anglos. Sex was coded (1) for females and (0) for males. The school status equity variable is a simple dummy indicator (school equity) of those schools in the original study having positive outcomes for minority students (with corresponding programs and staff that fit a positive status equity model) coded as (1) versus those schools that had negative outcomes for minority students (and few of the high-equity school conditions) coded as (0).

## RESULTS

### Nonverbal Behaviors

The initial focus of our research is on the general nonverbal behaviors of Hispanic females in comparison to their gender and ethnic peers. Substantial differences do occur in nonverbal behaviors in the group setting. Average scores for the raw and weighted measures (Table 1) indicate that children do vary between ethnic groups. Looking at weighted scores, Hispanic females are significantly less likely than Anglo females to move themselves upward, verbally interrupt or to use enhanced horizontal space in general. They were somewhat more likely to touch the resource cards. No significant ethnic differences were found in their speaking time, self-touching behaviors or number of physical intrusions.

Conversely, Hispanic males were more likely than their male Anglo peers to use physical intrusions and to expand their horizontal space. They were also more likely to use verbal interruptions during the game. When examining the scores weighted for group times, Hispanic males also emerge as the student group most likely to touch the resource cards for the longest period of time.

### Student Leadership

Students are perceived as having varying leadership skills. This is most evident in the votes after the game by other students in the group (see Table 2). In the female groups, both Anglo and Hispanic students voted signifi-

**Table 2**  
Mean pre-game status and leadership scores assigned

	Males			Females		
	Anglo	Hispanic	F	Anglo	Hispanic	F
<i>Pre-game status factors</i>						
Academic GPA	22.93	18.85	3.68*	22.71	21.05	0.87
English word score	29.46	21.41	5.94*	31.78	25.74	5.33*
Pre-game rank	18.90	22.38	8.36**	21.13	20.87	3.92
<i>Leadership ratings</i>						
Observer scale	46.83	45.06	1.43	46.66	45.51	1.25
Student vote	1.05	1.00	0.90	1.16	0.74	9.76**
Teacher scale***	19.66	17.33	4.58*	22.83	20.08	6.43*

Note:  $n = 192$ . One-way analysis of variance.

\* $p < .05$  for ethnic group differences.

\*\* $p \leq .01$ .

\*\*\* $p \leq .05$  for gender differences.

cantly less often for Hispanic females than for Anglo females. If we compare the pre-game student rankings in the male groups, it is evident that Anglo males gained in the eyes of their male peers during the interaction game. Anglo males moved from a lower average pre-game ranking than Hispanic males to similar average leadership votes when the game was concluded. Overall, the female groups did not have significant differences in pre-game rankings, but after the game, Anglo females' scores were increased significantly above those of Hispanic females. The trained observers, however, did not find significant differences by gender or ethnicity in the leadership skills exhibited by students during the interaction game itself.

### Leadership and Status Variables

We first consider the range of status indicators for students as they are correlated to the two independent observations of group leadership (see Table 3). Students' and trained observers' leadership ratings are independent of ethnicity or the school equity variable. Students' ratings of leadership are significantly correlated with the educational status factors, grade point average and English word knowledge and the pre-game student ranking. Interestingly, observers' ratings are unrelated to grades, but are significantly correlated with English word knowledge.

The classroom teachers, who did not view the interaction game, assigned students a leadership score from classroom observations. In this case, we can examine the independent effects of gender, along with other status factors. Teachers' ratings of leadership are significantly correlated

**Table 3**  
Correlations of pre-game status and nonverbal behaviors  
with leadership ratings

<i>Variable</i>	<i>Leadership Ratings</i>		
	<i>Observer</i>	<i>Student</i>	<i>Teacher</i>
Pre-game status factors			
Hispanic ethnicity	– 066	– 073	– 225**
School equity	– 013	002	065
Female sex	–	–	264***
Hispanic/school	– 001	– 045	– 082
Hispanic/sex	–	–	132*
Academic GPA	079	336***	406***
Word knowledge	252**	209**	591***
Pre-game student rank	–	477***	–
Nonverbal behaviors			
Physical intrusions	315***	183***	044
Verbal interruptions	108	054	382***
Upward movement	095	109	– 019
Horizontal movement	341***	243***	149*
Self comforting	– 307***	152*	– 142*
Speaking time	585***	462***	177*
Resource cards	452***	513***	093

\* $p \leq .05$

\*\* $p \leq .01$

\*\*\* $p \leq .001$

with ethnicity, gender, and the interaction term for these two variables, such that teachers are significantly more likely to rate Anglos and females as having leadership skills. Leadership ratings by teachers are substantially correlated with the educational factors—grade point average and English word knowledge scores. Anglo females, who scored highest on these two factors overall, are rated as having the highest leadership qualities by their teachers.

#### Leadership and Nonverbal Behaviors

Leadership ratings are correlated with the full range of nonverbal behaviors, and in the expected directions. The time speaking and amount of time controlling resource cards are highly correlated with the leadership ratings by both students and direct observers. The physical and verbal interruption rates are correlated positively with leadership scores, as are the measures of expanded personal space. Evidently, students and direct observers are influenced in their ratings of leadership by the nonverbal behaviors of students in the interaction setting. This fits the adult model of leadership, power, and status in the literature. As Henley (1977) posits, self-comforting

behaviors are negatively correlated with observer and student ratings of leadership. The only nonverbal behavior which is uncorrelated with leadership rating is the indicator of upward movement. It is quite possible that elevation above the game board is confounded by size, which at this age may vary considerably within ethnic and gender groupings.

*Teacher ratings and nonverbal behaviors* Consistency of leadership ratings among teachers, observers, and students may occur if students have a generalized presentation of themselves within the classroom which overlaps with behaviors used in the interaction game. We find positive correlations of teachers' leadership ratings with speaking time and use of personal space. The self-comforting measure is negatively correlated with ratings by teachers.

### PREDICTING LEADERSHIP

In Tables 4 to 6, we predict the leadership scores assigned to students by trained observers, peers in the interaction game, and finally their classroom teachers. We used regression analysis (ordinary least squares) to examine the combined effects of nonverbal behaviors, status factors, and the

**Table 4**  
Regression analysis of observer rating of student leadership

<i>Variables</i>	<i>Males</i>	<i>Females</i>
	( <i>n</i> =74) <i>Beta</i>	( <i>n</i> =62) <i>Beta</i>
Hispanic ethnicity	0.1	-.068
School equity	0.58	-.048
Hispanic school	-.045	.196
Word knowledge	.196	-.067
Academic GPA	-.054	-.116
Physical intrusions	-.047	-.034
Verbal interruptions	-.168	.152
Upward movement	0.59	.154
Horizontal movement	.190	.181
Self-comforting	-.230*	.009
Speaking time	.498***	.373*
Resource cards	.166	.063
Constant	31.67	38.08
$R^2$	.58	.45
Adjusted $R^2$	.48	.28
$F$	5.57***	2.75**

\* $p \leq .05$

\*\* $p \leq .01$

\*\*\* $p \leq .001$

**Table 5**  
Regression analysis of student rating of  
student leadership

<i>Variable</i>	<i>Male Beta</i>	<i>Female Beta</i>
Hispanic ethnicity	- 015	054
School equity	113	278*
Hispanic school	- 028	- 298*
Student ranking	284*	222*
Word knowledge	- 010	238*
Academic GPA	329**	193*
Physical intrusions	- 145	- 224*
Verbal interruptions	- 063	- 046
Upward movement	266*	- 101
Horizontal movement	027	207*
Self-comforting	022	- 098
Speaking time	273*	442***
Resource cards	334**	162
Constant	2 25	3 52
$R^2$	54	74
Adjusted $R^2$	43	67
$F$	5 15***	9 78***

\* $p \leq .05$

\*\* $p \leq .01$

\*\*\* $p \leq .001$

school setting All predictor variables were entered simultaneously, separately by gender

#### Observer Ratings

The observer's ratings of leadership for both males and females were predominantly related to speaking time In addition, leadership scores for males were negatively related to self-touching behavior Each equation explains substantial variance in the leadership scores assigned to male students,  $R^2 = .58$ ,  $p \leq .001$ , and female students,  $R^2 = .45$ ,  $p \leq .01$  None of the pre-game status factors are significantly related to the leadership ratings of the students, indicating that observed leadership occurs at equal rates in all educational settings and across all ethnic groups

#### Peer Ratings

Peers' leadership ratings, on the other hand, were highly related to the initial crew position they assigned to the other students *prior* to the game The higher this initial student ranking, the higher the student's final leadership votes Higher academic grade point averages and speaking time also generally predicted higher leadership scores assigned by students

For male students, the equation predicting leadership scores also shows

significant influence of upward movement and control of the resource cards. None of the ethnic, school equity, or English word knowledge factors contribute to predicting these scores. The equation explains over one half of the variance in leadership scores,  $R^2 = .54$ ,  $p \leq .001$ .

Female peer ratings of leadership also are related to factors beyond academic and pre-game crew assignments. Greater time speaking and use of horizontal space were associated with more votes of leadership. In contrast, physical intrusions by females were related to lower leadership votes awarded to them by other group members, regardless of ethnicity. The school equity factor has a significant simple correlation, and an interaction effect with Hispanic ethnicity. When the interaction term is removed from the equation, the percent of variance explained drops substantially, from .742 ( $p \leq .001$ ) to .586 ( $p \leq .01$ ). The direction of the beta indicates that Hispanic females in high-equity schools are given more votes for leadership, when controlling for other academic, social and behavioral scores.

Teacher Ratings

Classroom teacher ratings of general student leadership were straightforward and powerful, explaining over half of the variance in the scores (see Table 6). The equations for both male and female students were dominated by English word knowledge and the school equity variable. Evident-

**Table 6**  
Regression analysis of teacher rating of student leadership

<i>Variable</i>	<i>Male Beta</i>	<i>Female Beta</i>
Hispanic ethnicity	.026	.047
School equity	.349*	.344*
Hispanic school	.021	-.247
Word knowledge	.560***	.515***
Academic GPA	.062	.111
Physical intrusions	-.241	-.104
Verbal interruptions	.330**	.172
Upward movement	.129	-.189
Horizontal movement	.168	.113
Self-comforting	-.063	-.016
Speaking time	-.176	.095
Resource cards	.029	-.083
Constant	4.25	5.74
$R^2$	.54	.52
Adjusted $R^2$	.41	.38
$F$	4.46***	3.69***

\* $p \leq .05$   
\*\* $p \leq .01$   
\*\*\* $p \leq .001$

ly, teachers in the high-equity schools saw more leadership overall in their students, when compared with teachers rating students with similar skills and backgrounds in low-equity schools. In the prediction equation for males, verbal interruption rates, a classic dominance indicator, contributed to explained variance in the leadership scores.

## DISCUSSION

The assessment of leadership and the nonverbal behaviors of Hispanic females across varying desegregated schools is a complex theoretical and methodological effort. Each of the status factors had significant import for predicting female student ratings of leadership, but had little predictive power for male student ratings. Female students gave Hispanic females the lowest average leadership scores, even when behavioral and academic factors were controlled. Female peers also significantly downgraded leadership scores for physical intrusions, while male equations showed no effects from this variable. For both males and females, the leadership skill ratings were related to the pre-game status of the student. Research indicating that Hispanic females are often at the bottom of a school status hierarchy emphasizes the importance of these findings. In light of these factors, we reemphasize the finding that student leadership rankings for Hispanic females overall were related to attendance at a high-equity, integrated school.

In contrast, observer ratings of leadership were relatively unrelated to status factors. Many nonverbal factors were correlated with observer leadership ratings, but in the regression analysis the primary predictor of leadership was speaking time. This factor was one of only two measured variables (along with touching of the resource cards) that did not vary significantly by ethnicity. Evidently the observers did not hold to traditional ethnic or sex-role expectations for leadership, and this may reflect the deliberate ethnic and gender mix of the observers. This finding reinforces the equal status relations model posited by Berger, Conner, and Fisek (1974) and the prior research findings by Iadicola and Moore (1983) on gender and ethnic equity models for educational staff.

Teacher ratings of student leadership were very sensitive to a number of the pre-game status factors. They tended to rank female students higher overall and this is likely due to the higher English word knowledge scores of female elementary school students in general. As shown in Table 6, the school status equity score was independently and positively associated with higher teachers' leadership scores for both male and female students, regardless of ethnicity. This suggests that Hispanic females and their Hispanic male peers benefit not only in the evaluations of their peers at high-equity schools, but in their teachers' evaluations as well. Given the distinct cultural and gender patterns of leadership displayed by students, we con-

clude that Hispanic females in particular, and students in general, have enhanced educational and leadership opportunities in high-equity, integrated elementary schools

The results show that students of this age definitely vary in their use of nonverbal behaviors, with distinct gender and ethnic patterns emerging. Hispanic females are less expansive in their use of vertical and horizontal personal space than their peers. They are also less likely to interrupt or intrude. However, they showed no difference in use of self-comforting behaviors and they held their own in terms of speaking time and touching of the resource cards when interacting with Anglo females. Hispanic females are doing a fair share of handling resources and providing group leadership, not through the dominance cues of expanded personal space and physical or verbal intrusions, but by keeping their hands on the cards and participating in the discussion.

Nonverbal behaviors are used as criteria for leadership rankings by students and independent observers. The patterns for this age group parallel those for adults: physical touch, expansion, and physical or verbal dominance in the game are associated with higher ratings of leadership, whereas self-comforting behaviors are related to lower ratings. However, for student ratings of leadership, these relationships are affected by pre-game status factors, including ethnicity and the school equity environment.

One serious consideration for the behavioral and leadership findings is that these are displayed and rated (with the exceptions of teachers) in gender-segregated game settings. It is likely that students in a mixed-gender, task-oriented, cooperative group will revert to traditional sex-role expectations and that Hispanic and Anglo female behaviors and leadership ratings will be substantially altered. However, our research does give us some insight into the *potential* leadership and nonverbal behavior patterns of students, both male and female, especially in supportive educational settings.

One of our most important policy-relevant findings has to do with leadership ratings within the schools. Teacher and student peer ratings are affected by the pre-game status variables of students, including academic and social factors. These factors are mediated by the school equity environment, with high-equity schools providing the most positive setting for the evaluation of Hispanic female leadership. For the independent observers, the potential for leadership exists in both high- and low-equity schools and for both ethnic groups. Our goal is to enhance educational and leadership opportunities for Hispanic females and their student peers by providing more information about the positive effects of high-equity school settings.

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