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PROXEMIC BEHAVIOR OF BLACK AND WHITE FIRST-, THIRD-, AND FIFTH-GRADE CHILDREN

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Unobtrusive observations of the proxemic behavior of interacting pairs of first-, third-, and fifth-grade children were made in classroom settings of an upper lower-class black elementary school and a middle middle-class white elementary school. In both subcultures, males were less direct than females, particularly in the fifth grade. Blacks faced one another less directly than whites, especially in the earlier grades. As in a previous study by the present authors, blacks were found to stand closer than whites at the earliest grade level. In the present study, this difference disappeared by the fifth grade. These results indicate that while subcultural differences in distance and axis are learned early in life, only axis remains as a possible communication barrier between blacks and whites in the later elementary school years.

Hall (1959, 1966) has suggested that the way people position themselves when they talk may cause misunderstandings in cross-cultural and cross-subcultural encounters. For example, what may be a comfortable distance or degree of directness for members of one group may seem excessively intimate for others and unpleasantly impersonal for others. In particular, Hall (1966) has suggested that among Americans, lower-class blacks are quite different in proxemic behavior from middle-class whites. He has also proposed that such differences are learned at an early age and are basic to culture and subculture. The implication is that subcultural proxemic patterns are not likely to change once they are acquired; thus, they become rather permanent barriers to intergroup communication (Hall, 1966, p. 149).

Generally, previous research supports Hall's notion that members of certain nation cultures will differ in proxemic behavior. Although Forston and Larson (1968) were not able to prove their hypothesis that Latin American foreign students would sit closer to one another than American students, Watson and Graves (1966) found, as expected, that Arab students were closer and more direct than Americans. In a study where dolls were used as surrogates for human figures, Little (1968) was able to show that Mediterranean-culture subjects made closer placements than did North European subjects, as predicted. There is also evidence which suggests that differences in proxemic behavior have communicative significance in cross-national interactions; Collett (1971) has demonstrated that Arabs are more favorably inclined toward Englishmen who have been trained to behave like Arabs nonverbally (maintaining close distance, a high amount of eye contact, etc.) than toward Englishmen who behave in their usual manner.

There is also some support for Hall's idea that subcultures, as well as separate national cultures, vary in proxemic norms, although the evidence here is less clear. In studies of adult behavior, Willis (1966) found that the initial interaction distance of whites was slightly less than that of blacks, and Baxter (1970) found that Mexican-Americans stood closer than Anglos (whites), who, in turn, stood closer than blacks. Jones (1971), on the other hand, found rather similar distance scores among adult members of black, Puerto Rican, Italian, and Chinese subcultures.

The research is least conclusive with regard to Hall's notion that subcultural patterns in spatial orientation are acquired at an early age. In the first place, some of the evidence is inconsistent concerning the exact nature of

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subcultural differences among children. Although Baxter (1970) observed the same relationships among 5–10-year-olds as he did among adults, in our previous study of 6–8-year-old children (Aiello & Jones, 1971), we found quite different relationships. Blacks were found to stand closer, not farther away, than whites.[3]

A second source of ambiquity in past research on the acquisition of proxemic behaviors stems from the fact that the studies do not tell us whether subcultural differences are subject to change as children grow older. Investigations of normal and emotionally disturbed white American children, employing the "social schemata" technique, where subjects place figures on a felt board or dolls in a three-dimensional scene, have suggested that proxemic patterns are set early in the grade school years (cf. Fisher, 1967, Weinstein, 1965, 1967). However, these studies do not show at what age the actual interaction behavior of children has been established, nor do they tell anything about subcultural differences.

In light of the apparent contradictions and the incompleteness of previous research, the present study was designed to test better the hypothesis that subcultural proxemic differences are set early in childhood development. Upper lower-class black and middle middle-class white children in the first, third, and fifth grades were observed in an indoor setting which permitted control of the topic of conversation. There were two reasons for designing the study in this way. First, we wished to see if the findings of our previous investigation were replicable (Aiello & Jones, 1971), or whether they might be explained by the nature of the playground setting employed in that study. It is possible that the black children and the white children were not talking about the same kinds of things, or that the playground situation was uniquely different for the two groups in some other way that would affect proxemic behavior. Second, we wished to discover whether differences between blacks and whites remain stable or change during the elementary school years. In addition, we wanted to explore the process of the acquisition of sex differences in proxemic behavior.

We formulated several predictions on the basis of prior theory and research. We expected to find that black children would stand closer than white children. Hall (1966) contends that lower-class blacks are "more highly involved [pp. 172–173]" than middle-class white Americans, and that they should therefore interact more proximally. We found this to be true of young schoolchildren in our previous study (Aiello & Jones, 1971). We also expected to find that black children would be less direct in axis (shoulder orientation) than white children. Lower-class black adults are reputed to stand less directly than middle-class white adults (Scheflen, 1969), and judging from our initial study (Aiello & Jones, 1971), this seems to be true of first- and second-grade children too. Finally, we predicted that males would be less direct in axis than females. Since amount of eye contact is associated with directness of shoulder orientation (Mehrabian, 1968), the finding of several investigations that males maintain less eye contact than females (Argyle, 1967; Argyle & Dean, 1965; Exline, 1963; Exline, Gray, & Schuette, 1965) suggests that they may also be less direct. Jones (1971) found this to be true among adult members of each of four ethnic-racial groups. We expected that both black children and white children would show signs of having acquired this sex difference, especially by the time they reached the fifth-grade level. We made no specific predictions about how behavior would change across age groups, since this part of the study was exploratory. Hall's previously untested formulations in this area would suggest that subcultural differences in proxemic norms will remain stable once they have been acquired.

METHOD

Subjects

The subjects were 192 children from two New York City elementary schools, one school comprised predominantly of upper lower-class blacks and the other of middle middle-class whites. It should be noted that the particular schools chosen for study were selected because of the high degree of racial homogeneity existing

[3] It should be noted that lower-class blacks and Puerto Ricans and middle-class whites were compared in that study. The assumption was that these groups were likely to be separate and distinct subsocietal units. Additional findings were that Puerto Ricans stood closer than whites and that blacks were less direct in shoulder orientation than whites.

within them (black school, 98%; white school, 95%). Within each school, children were drawn in equal numbers from classes in three grades (first, third, and fifth) and placed in dyads according to sex (male–male and female–female). Thus, there were 8 dyads in each cell of the design, making a total of 96 dyads in the experiment.

The data were collected during a 1-week period of time in late June. At this point in the school year, the average approximate age of the children at each grade level was first grade, 6 years 10 months; third grade, 8 years 10 months; and fifth grade, 10 years 10 months. Those students who had been held back or placed ahead were eliminated from the study so as to maintain comparability in ages across the schools.

In order to create as little disruption as possible, the experimenters employed all of the subjects in each classroom group, completing all observations of one class before beginning observations of the next. This meant that it was not possible to select subject pairs at random. To control for the possibility of some relationship between competence in schoolwork and the acquisition of proxemic norms of behavior, since classes in the school were grouped by academic ability, two or three classes at each grade level in the schools were chosen at random from those in the middle range of ability.

Procedure

The composition of the dyads was determined by asking the teacher in each class to pair boys with boys and girls with girls so that each child would participate with someone whom he or she would normally choose as a partner for talk or play. This approach was adopted to facilitate interaction in the dyads and to keep the degrees of friendship within the various pairs as similar as possible.

The two experimenters (the present authors) came to each class at the beginning of the period. The teacher introduced them and explained that the members of the class were going to participate in an activity. In random order, two pairs of children were taken at a time by one of the experimenters to a separate classroom where each pair was introduced to one of two women judges, both college student seniors, similar in age and appearance to some of the younger white female teachers in the schools.

The experimental rooms were those rooms that the students knew were employed for out-of-class activities and were similar in size and appearance in the two schools. Each room was divided in half by desks with chairs on top of them so that both pairs of children could be studied at the same time in separate halves of the room but could not interact directly with each other.

Each judge invited her pair of students to talk about their favorite television commercial in order to select one "to act out," and she instructed them to tell her when they had made a decision. She then sat behind a desk and proceeded to copy information from a book, as though she had work to do, looking up occasionally. In actuality, the women were recording their judgments of the children's proxemic behavior, but this kind of semisurveillance activity on the part of teachers was familiar to the students and seemed to be highly unobtrusive as a method of observation.

Every 20 seconds, the judge glanced up at the children and made an estimate of the interpersonal distance and axis orientation of the dyad. In all, 6–7 judgments were collected for each pair. When the children had exhausted their topic before the full number of judgments had been taken and returned to the judge for instructions, they were asked to discuss another similar topic, for example, their favorite television show or comic strip. From time to time, the children wandered off from one another and discontinued verbal interaction, oftentimes apparently lost in thought, only to return to continue talking. When interaction was thus cut off, signified by the cessation of verbalization and an abrupt change in both distance and axis, no judgment was made until the pair resumed verbal interaction.

When the judgments of proxemic behavior were completed for each dyad, the children were taken by one of the experimenters to a separate room where they were given the opportunity to role play their chosen commercial, television show, or comic strip in the presence of the other experimenter and the rest of the members of the class who had already chosen their topics. Enactments were frequently enthusiastic and boistrous, suggesting that the children had accepted the task assigned to them during the data-gathering phase of the study. The children were not returned to the classrooms until their entire group had been tested so that none of them could discuss the activity with those who had not yet participated.

Measurement

The scales used to record proxemic behavior were adapted from those described by Hall (1963). Interpersonal distance was defined as the closest distance between the torsos of the children at the time of recording. Hall's distance scale is stated in terms of arm lengths rather than inches or feet. This method of specifying units is especially appropriate to the present study since it permits comparison of children of different ages by eliminating height as a variable. The units and their corresponding scores, as adapted from Hall, are presented in Table 1.[4]

Hall (1963) describes axis in terms of a scale with nine values, such that a score of 0 represents a head-on, face-to-face position, a 4 is a side-by-side position with both persons facing out in the same direction, and an 8 is a back-to-back position. Since in our previous study (Aiello & Jones, 1971) we found Hall's scale to be insufficiently fine-grained for the observation of children's

[4] In pretesting Hall's distance categories, we discovered that several modifications were needed. Some categories were dropped since they duplicated others; other categories were revised in description in order to provide equal-distant units; and judges' instructions were revised so that units were scored in terms of an average of the reaches of the two subjects being observed, thus avoiding ambiguity inherent in Hall's scale about which of the subjects were to be used as the base line for judgments.

TABLE 1

CATEGORIES AND SCORES FOR DISTANCE MEASUREMENT

Description of behavior	Score
Bodies touch	10
Just outside torso touch distance	20
Just short of complete forearm distance	30
Forearm (plus open hand) touch	40
Just outside forearm touch	50
Arm's length	60
Two forearms (just outside arm's length)	70
Just outside two forearms	80
Forearm plus arm's length	90
Just outside forearm plus arm's length	100
Two arms' lengths	110
Just outside two arms' lengths	120

Note.—Adapted from Hall (1963).

behavior, in the present study, we substituted a 25-point scale. Values may be thought of as hours and half-hours on a clock. For example, a 0 is a direct high-noon relationship. A 1½ (or "1:30 o'clock") position represents a shoulder orientation with a slight angle, as though one person were parallel to the long hand of a clock pointing to 12, and the person facing him were parallel to the short hand pointing halfway between the 1 and the 2. A side-by-side position is a 6 ("6 o'clock").

The judges were trained in the use of the scales before the experiment began. First, they practiced scoring the behavior of adults. After each judgment, the training "subjects" held out their arms to gage their actual distance, inspected the angle of their shoulders, and fed this information back to the judges so that they could assess their own accuracy. Second, the experimental procedure was pilot tested on a group of second-grade students. The judges rated the same pairs of children. Practice was continued until near perfect agreement was reached on succeeding dyads. Our previous studies (Aiello & Jones, 1971; Jones, 1971) have shown that this training method results in high interjudge reliability, both in laboratory and field situations.[5]

RESULTS

Separate analyses of variance for the distance and axis scores were conducted, employing a $2 \times 3 \times 2$ factorial design (Culture $\times$ Grade Level $\times$ Sex). Where there were interactions in these analyses, Duncan's New Multiple Range Test (1955) was used to test for the significance of differences between individual means.

Distance

The analysis of variance for distance scores revealed no significant main effects. Thus, the hypothesis that "black children would stand closer than white children" must be rejected although the results were in the expected direction. However, employing the .05 level as a criterion, there was one significant effect, the Grade $\times$ Subculture interaction ($p < .025$), and one nearly significant effect, the Subculture $\times$ Sex interaction ($p < .06$).

Inspection of the means presented in Table 2 shows the nature of the two interactions. In the case of grade and culture, it can be seen that at the first-grade level the black children stood closer than the white children, as expected, but this difference diminishes at the third grade, and actually seems to be reversed at the fifth grade. The multiple range test shows that the black–white difference is significant (.05 level) in the first grade, but not in the third or fifth grades. In the case of the Culture $\times$ Sex interaction, the effect appears to be accounted for by rather subtle differences in the combination of scores, whereby black females are closest in distance, white females are most distant, and white males and black males are intermediate. None of the individual means differ significantly from any other.

Axis

The analysis of variance for axis scores reveals two significant outcomes, the main effects for subculture ($p < .001$) and sex ($p < .005$). The mean axis score for blacks is greater than that for whites; thus, the hypothesis that "black children would be less direct in axis (shoulder orientation) than white children" may be accepted. Also, the mean score for males is greater than that for females, justifying acceptance of the hypothesis that "males would be less direct in axis than females."

At each grade level, as Table 2 shows, blacks are less direct than whites, and males are less direct than females. The means appear to show that the subcultural effect is stronger in the first and third grades, and that the sex difference is strongest at the fifth-grade level.

[5] In the first author's previous study of adults (Jones, 1971), samples of judges' reliabilities from field observations in the streets were around .85, despite the fact that the judges often could not get into highly favorable positions to view the subjects. Observation conditions were much better in the present study, as they were in the trial run of our previous study of children (Aiello & Jones, 1971), where perfect agreement was obtained in 18 of 20 judgments.

TABLE 2

MEANS FOR AXIS AND DISTANCE SCORES

Grade	Black			White			
	Male	Female	Sexes combined	Male	Female	Sexes combined	Grade level *M*
Axis							
1	2.34_x	2.27_x	2.30	1.54_x	1.15_x	1.34	1.82
3	2.35_x	2.11_x	2.23	1.54_x	$.99_x$	1.26	1.75
5	2.55_x	1.49_x	2.02	2.02_x	1.49_x	1.76	1.89
Grades combined	2.41	1.96		1.70	1.21		
Grades and sexes combined	2.18			1.45			
Sex differences	All males = 2.05[a]		All females = 1.58[b]				
Distance							
1	32.86_x	25.52_x	29.19	37.28_x	43.36_x	40.32	34.75
3	41.42_x	31.07_x	36.25	36.89_x	41.95_x	39.42	37.83
5	42.13_x	41.14_x	41.63	38.40_x	34.10_x	36.25	38.94
Grades combined	38.81	32.57		37.52	39.80		
Grades and sexes combined	35.96			38.66			
Sex differences	All males = 38.16[a]		All females = 36.19[b]				

Note.—Means with subscript "x" comprise the cells of the design (n = 8); other means are combined totals (total N = 96)
[a] Combined mean for all males (black and white).
[b] Combined mean for all females (black and white).

However, there are no significant interaction effects, so these may be chance relationships.[6]

DISCUSSION

Considering that the average age of the first-grade children in the present study is nearly equivalent to that of the first- and second-grade children combined in our initial study (Aiello & Jones, 1971)[7], the results concerning distance scores replicate our previous finding that blacks stand closer than whites in the early grade school years. In the present study, third- and fifth-grade children were also studied; the results show that the difference between black children and white children disappears among older children and that the overall subcultural difference is not significant.

The distance results might be explained in one of two ways. Both subcultural groups of children may be acquiring the same cultural norm. Or, considering the trend of the results and the significant Grade × Subculture interaction, it is possible that blacks are actually becoming more distant than whites as they grow older, a conclusion that would be consistent with data cited by Willis (1966) and Baxter (1970) showing that black adults stand farther apart than white adults. However, the fact that there is no support in either the present study or the authors' initial study (Aiello & Jones, 1971) for Baxter's conclusion that blacks stand closer than whites in the elementary school years calls for a closer comparison of the previous and present investigations.

Situational variation does not appear, in itself, to account for the differences in results. It is true that Baxter's (1970) observations were made in a zoo setting, whereas the

[6] When separate analyses of variance were conducted for each grade, the subcultural difference was significant in the first grade ($p < .001$) and the third grade ($p < .005$), but not in the fifth grade, while the sex difference was significant only in the fifth grade ($p < .025$).

[7] The data for the first and second graders in the initial study were gathered early in the school year (October), while the present study was conducted late in the school year (June).

authors' studies were both conducted in schools; therefore it is possible that different subcultural norms of behavior are in effect in each situation. However, since Baxter's results were robust enough to be generalized across indoor and outdoor locations, and the two studies by the authors produced similar results despite the fact that the first (Aiello & Jones, 1971) was conducted in a free play, out-of-doors situation and the second (the present study) in a controlled classroom setting, it does not appear that subcultural differences reverse themselves in varied settings. To some degree, Willis' (1966) study may be discredited since he did not control the situation, and blacks and whites may have been observed under different circumstances (e.g., streets rather than living rooms). Nevertheless, his findings do parallel those of Baxter.

A more likely explanation is that the lower-class black and middle-class white New York City residents studied in the present authors' two investigations are representative of different subsocietal groups from those observed in the other studies. Neither Baxter nor Willis reported the socioeconomic class of his subjects, although it would appear that Willis studied middle-class blacks and whites, since his data were gathered by college students who observed their interactions with family and friends. In addition, Baxter's study was conducted in Houston, Texas, whereas Willis' data were collected in unspecified locations, presumably in the Midwest.

Another potential explanation for the divergent results concerns the nature of the interaction behaviors observed. Whereas in the present authors' studies, proxemic behavior was recorded only when both subjects were talking to one another, in Baxter's (1970) study, relationships were scored exactly 10 seconds after the subjects had arrived at the observation post, whether they were talking or not. The present authors' informal observations suggest that among both adults and children, blacks are likely to move away from one another when not interacting directly, coming back together when they recommence talking. Since many of Baxter's subjects must not have been talking when their behavior was recorded, this might account for the greater distances that he found among blacks.

Although other research on subcultural groups has been concerned only with distance orientation, axis, or shoulder, orientation was also investigated in the present authors' two studies. In the present investigation, we were able to replicate the finding of our initial study (Aiello & Jones, 1971), that black children stand less directly than white children. The distinctive patterns of behavior reflected in this difference seem to be acquired by the first grade, and they seem to remain beyond that level. Thus, axis may be a persistent barrier to communication among blacks and whites.

It was also found that males of both subcultures stand less directly than females. This finding parallels the results of a previous study of adults (Jones, 1971) and suggests that children have begun to acquire adult proxemic sex-role behavior in elementary school.[8]

The present study also suggests directions for future research. It will be necessary to discern whether the differences found are rooted in social class or culture. In light of the evidence that subcultural differences in distance orientation change across grade levels, it will also be desirable to extend investigation beyond the elementary school years. Therefore, studies are needed in which several subcultural groups are observed, using children of varied socioeconomic class groupings and graduated levels of age, from the preschool level through the late adolescent years.

CONCLUSION

The results of the present study provide support for Hall's (1966) assertion that proxemic patterns are learned early in life, but only partial support for his contention that such behaviors are basic to subcultures and are therefore unlikely to change. The sex difference in directness of orientation seems to be established rather firmly somewhere within the elementary school years, but this norm is

[8] This conclusion should be subjected to further testing. In the authors' initial study (Aiello & Jones, 1971), males were actually found to be somewhat more direct than females in Grades 1 and 2 when observed in school playgrounds, judging from the axis score means. This outcome was interpreted cautiously, however, since the medians for males and females were identical.

held in common by blacks and whites. On the other hand, although subcultural differences in axis and distance appear as early as the first grade, only the axis scores remain stable as children grow older.

Valentine (1968) has warned against the assumption that subsocietal groups function as wholly separate and distinct cultures within the larger society. One must thereby question whether patterns of behavior among young minority group children have been completely and inflexibly learned when they enter school or whether new standards and norms, reinforced by predominantly white middle-class teachers, may exert influence. The findings of the present study suggest that among lower-class blacks, some proxemic patterns may be more basic to subcultural group membership and remain intact, while others may be subject to change.

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