This study examined the public behavior between adults and children in 557 groups and evaluated the effects of group size, number of children (16 years of age and younger), and number of adults on the cross-age interactions. For a 10-second period, all social interactions between members of a group were recorded using an unobtrusive observational methodology. Observations were made in a broad range of public settings, including shopping centers, restaurants, clinic waiting rooms, and libraries, in the Minneapolis area. Results indicated that as the size of the observed groups increased from two to six individuals, the average number of cross-age interactions decreased significantly. More specifically, the decrease appeared to be in touching and talking, but not in smiling. However, the decline in average number of interactions was primarily unidirectional, showing a strong decrease in child-to-adult interactions while the adult-to-child interactions were less strongly affected by group size. (Author/JMB)
Intimacy Between Adults and Children in Public Places

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What happens to cross-generation interactions between adults and children when others, either children or adults, are present? Although larger groups provide for potentially more dyadic interactions, a deduction often reinforced by the media in programs such as "The Waltons," it seemed to us that in a group of three or more people the extra individuals are going to reduce the contact between any specific pair. Although counterexamples can be thought of (e.g., the disinhibiting effect of a sociable person on two shy people or the peace making disinhibition produced by a neutral party), in general it seems probable that in larger groups it is more difficult to maintain specific interactions.

In a prior study (Rosenblatt, 1974) we found that the presence of one or more children reduced the adult-to-adult touching, talking, and smiling in selected public settings such as shopping centers, zoos, and parks. In this study we wished to expand the scope of the earlier research and examine the effect of increasing group size on the quantity of cross-generation social interactions. More specifically, we were interested in the effect of greater numbers of adults and children on dyadic talking, touching, and smiling between adults and children.

Method

This research, as in the prior study, was also intended to explore the usefulness and limitations of an unobtrusive observational methodology (cf. Webb, Campbell, Schwartz, & Sechrest, 1966). With increasing concern about the invasion of privacy whenever researchers probe into family interactions through more obtrusive means such as experiments, questionnaires, and interviews, it has become increasingly more important to determine the limits of less direct forms of investigation.
Procedure

In total four raters (two male and two female) were trained. Each rater was to observe groups of individuals containing at least one adult and one child (16 years of age or younger) and tally who touched, talked, or smiled at whom in a period of 10 seconds. Touching included only apparently deliberate contact and smiling was only recorded when it appeared to be directed at another individual in the group.

The raters would position themselves at a location in a public setting where they would have a clear view of an area where groups might either pass or sit for periods in excess of 10 seconds. Raters had been trained to time out a 10 second interval and hold in memory all within-group interactions which occurred over that period. At the end of 10 seconds they recorded all predefined interactions in a standardized matrix format. Observers also recorded the surmised age and group role (i.e., male parent, oldest male child, etc.) of each individual.

The public settings observed included shopping centers, an art show, an auto show, restaurants, fast food stands, ice cream parlors, clinic waiting rooms, a church parking lot, airport lounge areas, and libraries. All observations were conducted in the Minneapolis city area. We attempted to cover as broad a range of public settings as possible; however, we tried to stress those settings where we believed cross-generation groups would spend more of their time.

Results

Group Makeup

The partitions of the 557 groups observed by the number of adults and children within each case are shown in Figure 1. The upper matrix describes the number of cases of each type and the lower matrix provides the same
information as percentages of the total number of cases. The Chi Square for the adult by child distribution did not reach significance, \( X^2 (9 \text{ df}) = 4.58 \).

Approximately 91.4 percent of the groups observed had no more than two adults or children. Although we probably have an adequate number of observations for inferential statistics of the three adults or children cases, there are so few four adults or children cases that caution should be exercised in generalizing from them. It should also be noted that 80.1 percent of all groups observed contained three or fewer individuals.

All the groups observed appeared to be family units. It is probably safe to conclude that our study is an examination of the interaction of parents and their children in public settings.

**Social Interactions**

Figure 2 depicts the average number of social interactions from adults to children (AC), from children to adults (CA), and either from adults or children (ACA) which is a count of any cross-generation interactions emitted. Only the average or per person interactions are plotted to control for the absolute increase in interactions which would occur with a simple increase in the size of the group. For AC interactions the denominator is the total number of adults, for CA interactions the total number of children, and for ACA interactions the total number of individuals in the group.

As the group size increases from two to six individuals, the average ACA interactions emitted decrease significantly, \( F (4,552) = 5.22, p < .01 \). This decrease in interactions shows a small but highly significant linear correlation, \( r = -.19, (N = 557), p < .001 \). The AC (\( r = -.10, N = 557, p < .05 \)) and CA (\( r = -.13, N = 557, p < .001 \)) slopes in Figure 2 are remarkably similar in shape to the ACA curve and indicate a general effect of increased group size toward fewer per person social interactions being emitted.
Figure 3 graphs the separate types of ACA social interactions emitted as a function of the number of individuals in the group. Both the average amount of talking ($F(4, 552) = 3.55, p < .01; r = -.15, N = 557, p < .001$) and touching ($F(4, 552) = 3.47, p < .01; r = -.15, N = 557, p < .001$) decreased significantly with an increase in group size. Although the effect for smiles did not reach significance, the slope evidenced a slight decline. Although the above analysis shows a strong dampening effect on interactions between adults and children with increasing group size, we were more interested in the effect of the number of children on the interactions between adults and children.

The average for each of the three types of social interactions from children to adults by the number of children in the group is shown in Figure 4. Here the decline of child initiated interactions with increasing numbers of children is readily observed for talking ($r = -.09, N = 557, p < .05$), touching ($r = -.15, N = 557, p < .001$), and smiling ($r = -.12, N = 557, p < .01$). An important question then is does the decline in CA interactions indicate a basic decrease in child initiated interactions or a shift of these interactions to the other children. In the 220 cases observed with two or more children the average child to child interactions seem to be unaffected by the number of children present. Neither the interaction types taken together or singularly showed any significant change with increasing numbers of children or evidenced any significant linear trends. Even when we examine only those 139 cases without very young children, who may be less free to interact (3 years old or younger), we still find no significant increase or trend in child to child interactions with increasing numbers of children in the group.
Increasing numbers of children appear to cause a direct decrease in child to adult interactions without any concomitant increase in the child to child interactions. The children in larger groups seem to be less interactive in general; however, the primary decline is in child-initiated interactions to adults.

There was also a significant decrease in the AC interactions emitted with increases in the number of adults in the group, $F(3,553) = 27.33, p < .001; \rho = -.34 (N = 557), p < .001$. This overall effect was mirrored in significant declines in smiling ($F(3,553) = 2.84, p < .05; \rho = -.10, p < .01$), touching ($F(3,553) = 7.92, p < .01; \rho = -.19, p < .001$), and talking ($F(3,553) = 29.62, p < .01; \rho = -.36, p < .001$). The curves for the three response types by the number of adults are graphed in Figure 5. Of the 557 cases only 15 had three or four adults; therefore, the weight of this effect lies with the increase from one to two adults. With only three cases having four adults in our sample, the slight increase in interactions shown in the figure for those groups is based on too small a sample for speculation.

The dramatic decrease in AC interactions with the increase from one to two adults is interpreted as a sharp decline in parent initiated behaviors toward their children when both parents were present. It appears that when both parents are present they tend to concentrate slightly more on each other and significantly less on their children.

We wish to point out that all the analysis detailed above focused on emitted behavior. Our stress has been on the effects of others on the production of social behaviors directed toward other individuals in the group. We are currently examining the receptive behavior side of the group interactions to determine if specific children have more behavior directed at them by other children and adults.
At this point we are quite pleased with the usefulness of the unobtrusive observational methodology used in this study. Obviously we restricted the focus of our study to public behavior because our methodology is difficult to employ in private settings. We found we were able to adequately categorize and record the specific behaviors we selected for a 10 second time sample without the need to resort to more permanent recording techniques such as videotaping.
Bibliography


### Figure 1.

Partition of cases by the number of children and adults in each case for the number of cases observed (above) and for the percent of the total number of cases (below).
Figure 2.

Group size effects on general social interactions between adults and children. General social interactions is the sum of the talking, touching, and smiling behaviors emitted.
Figure 3.

Group size effects on selected social interactions between adults and children.
Number of children effects on selected social interactions from children to adults.

Figure 4.
Number of adults effects on selected social interactions from adults to children.

Figure 5.