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**Attention in the preschool classroom :
the relationships among child gender,
child misbehavior, and teacher attention.**

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ATTENTION IN THE PRESCHOOL CLASSROOM: THE RELATIONSHIPS
AMONG CHILD GENDER, CHILD MISBEHAVIOR, AND TEACHER ATTENTION

A Thesis Presented

by

JENNIFER DOBBS

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University of Massachusetts Amherst in partial fulfillment
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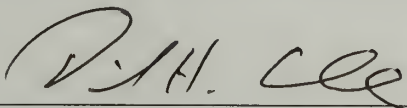
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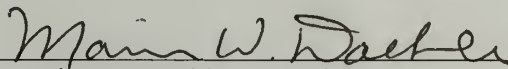
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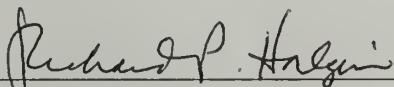
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ABSTRACT

ATTENTION IN THE PRESCHOOL CLASSROOM: THE RELATIONSHIPS AMONG CHILD GENDER, CHILD MISBEHAVIOR, AND TEACHER ATTENTION

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Research in preschool classrooms has shown that boys receive more attention from their teachers than girls do, and also that misbehavior is positively associated with teacher attention. However, boys misbehave more often than girls. As a result, it is unclear if child gender, misbehavior, or a combination is responsible for the gender gap in teacher attention. This study is a cross-sectional observation of preschool classrooms designed to illuminate the nature of these relationships outside of misbehavior episodes. An ethnically diverse sample of 153 preschool children and their teachers were observed through videotapes of preschool classrooms during both free play and structured lesson time. While total attention was not related to either child gender or misbehavior, relationships emerged when specific types of attention were considered. When gender and misbehavior were analyzed simultaneously, gender predicted positive interactions, while misbehavior predicted commands unrelated to discipline. Both variables were involved in the prediction of rewards. When these relationships were examined within

Puerto Rican, African-American, and Caucasian groups, some differences in attention distribution appeared.

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CHAPTER I

INTRODUCTION

The task of studying and understanding all the influences on a child's development is a formidable one. More difficult still is intervening to promote positive outcomes for children. The home environments and life experiences of children are amazingly diverse, and producing change in the family environment can be extremely difficult. There is one experience most children share, however, and that is attending school. Most children in the United States spend 1200 hours or more in school every year. Undoubtedly, this experience has many long-reaching effects. Research in schools can identify beneficial and detrimental aspects of schooling. This knowledge can be used to develop the best possible environment for the education and positive development of children. Increasingly, school is starting at earlier ages, creating the need for research into the preschool classroom environment and its effect on children. The attention that teachers provide preschoolers is one critical area of this research effort.

It is a long-established principle of behavioral theory that attention can be used to affect behavior. In particular, many studies have shown that there is a relationship between attention from adults and a child's behavior. Depending on the type of attention and the situation in which it occurs, attention can have a positive or negative effect on a child's behavior. For instance, negative maternal control predicts externalizing problems in children (Campbell, Pierce, Moore, & Marakovitz, 1996; Winsler, Diaz, McCarthy, Atencia, & Chabay, 1999). With regard to teacher attention, an observational study of preschool classrooms revealed that less criticism and commands from teachers were associated with more on-task behavior from the children (Fagot, 1973). A case study of a

six-year-old boy demonstrated that praise and other positive teacher attention could increase appropriate behavior and decrease misbehavior (Ellis & Blake, 1986). Project STAR, a longitudinal study on the effects of class size, concluded that low student-teacher ratios are related to increased student achievement and decreased misbehavior (Achilles, 1996). These studies all highlight the importance of teacher attention in a child's school experience.

Given the link between attention and child behavior, it is surprising that relatively few studies have investigated the amount and types of teacher attention received by students. The studies that do exist have resulted in three basic conclusions: 1) boys receive more teacher attention than girls do, 2) high levels of child misbehavior are associated with high levels of teacher attention, and 3) boys misbehave more often than girls. These findings are discussed in detail below.

The gender gap in teacher attention is present both in total attention and in most categories of attention that have been studied. Boys receive more commands, louder reprimands, greater disapproval, more unrequested assistance, and more negative controlling behaviors from their teachers than girls (Serbin, O'Leary, Kent, & Tonick, 1973; Stipek & Sanborn, 1985; Wittmer & Honig, 1988). A few studies have investigated preschool teachers' responses to specific types of child behavior. Boys are more likely than girls to receive teacher attention—both positive (joining play or giving favorable comment) and negative (criticizing or punishing)—in response to aggression (Fagot, 1984a; Serbin et al., 1973). Girls, by contrast, are more likely to have their aggression ignored (Fagot & Hagan, 1985; Fagot, Hagan, Leinbach, & Kronsberg, 1985). Additionally, boys are more likely than girls to receive positive teacher attention for

withdrawn behavior (Fagot, 1984a) and more likely than girls to receive positive attention and teaching in response to appropriate behavior (Serbin et al., 1973). Only Fagot (1984) reported an instance in which the gender gap was reversed. In that study, girls were more likely than boys to receive positive attention for dependency. Taken together, these studies establish a pattern of greater total teacher attention for boys as young as 13 months and as old as 5 years. This pattern extends throughout formal schooling (e.g., French & French, 1984; Sadker & Sadker, 1995).

These patterns of differences in teacher attention based on child gender may have significant effects on children. As discussed above, attention has a powerful relationship to child behavior, and it is likely that causality in the relationship is bi-directional, meaning that child behavior affects teacher attention and vice versa. Additionally, teacher attention is likely to be linked to opportunities for learning and special services. Girls' early learning difficulties are underidentified by teachers, compared to objective criteria such as standardized tests that indicate similar numbers of boys and girls with learning problems (National Research Council, 1998; Stowe, Arnold, & Ortiz, 1999). For example, one study of elementary school children found that teachers identified 204 boys as having special needs, whereas only 95 girls were so labeled. In addition, teachers described the special needs boys with more elaborate detail than they did the girls (Green, 1993). In an observational study of preschoolers, teachers tended to notice a child's language development difficulties only when paired with the disruptive behavior more commonly seen in boys (Stowe et al., 1999). Girls' early learning struggles often go unnoticed by teachers (Morgan & Dunn, 1988). It may be that boys' higher levels of

teacher attention result in teachers being more aware of boys' needs and more likely to refer them for special services.

The second conclusion of the literature on teacher attention is that children who misbehave frequently receive more teacher attention than do children who rarely misbehave. In a study of British elementary school classrooms, children who had behavior or learning problems spent 4% of their time in individual interactions with teachers, while children who did not have special needs spent 2.4% to 2.6% of their time interacting with teachers (Croll, 1985). Unfortunately, behavior and learning problems were not examined separately, making the results of this study difficult to interpret. Other studies support the idea of an increased level of total attention for children with behavior problems, at least partly due to high levels of what has traditionally been called "negative attention," meaning that children who misbehave more receive more discipline, commands, criticisms, and other forms of corrective or controlling attention. Wittmer and Honig (1988) observed the types of attention teachers showed to children who were playing appropriately, expressing a need, not engaged, or misbehaving. Positive child behaviors tended to be followed by positive teacher behaviors, while negative child behaviors were usually followed by negative teacher behaviors. Thus, the more children misbehave, the more negative teacher attention they receive. A similar situation occurs in the home, as behaviorally-at-risk children receive more negative control and less praise from their mothers, compared to typical children (Winsler et al., 1999)

The third and final related conclusion of previous studies in this area is that boys misbehave more than girls do. This is a well-established phenomenon among preschoolers, as well as toddlers and school-age children (Arnold, McWilliams, &

Arnold, 1998; Fagot & Hagan, 1985; Keenan & Shaw, 1997; Stipek & Sanborn, 1985). The largest gender gap occurs with aggressive behavior, just the kind of behavior most likely to attract and receive a teacher's attention. Thus, this difference in level of misbehavior could account for the gender gap in teacher attention. French (1986) observes that boys' misbehavior commands attention from their teachers, while the relatively docile behavior of girls makes them seem less in need of attention.

These three findings combine to reveal a major confound in previous studies of teacher attention. Why is it that boys receive more attention in the preschool classroom than girls do? Is it because they are boys or because they misbehave more than girls? Or, in fact, do both variables independently predict attention? This study will attempt to illuminate the relationships among child gender, child misbehavior, and teacher attention.

A second area of focus for this study is specific types of teacher attention. Previous studies have often measured teacher attention as a single, undifferentiated variable, or as falling into two categories—"positive attention" and "negative attention." For instance, most studies linking teacher attention to child misbehavior found that children who misbehaved a lot received increased negative attention; however, these studies did not differentiate among the many specific types of attention. These studies were a good starting point, but they reveal little about the complex nature of teacher-child interactions in a preschool classroom.

The popular distinctions of "positive" and "negative" attention were not used in this study. Previous studies have defined negative attention as including such things as discipline, commands, insults, and criticism. Positive attention has included praise, rewards, and teaching, among other things. Some of these types of attention are much

more complex, however, than such a categorization implies. Commands, for instance, can occur in a number of different situations and may vary greatly in the effect they have on a child. For instance, a command to stop misbehaving and a command to come to the table for snack time are quite different from one another. Another difficulty with the concept of “negative attention” is that it is often unclear how much of that attention is occurring in a discipline context and how much is not. One would expect a child who misbehaves a lot to receive more discipline than a child who does not, simply according to the definition of discipline. A more interesting question is whether children who misbehave a lot also receive more attention than their classmates outside of discipline situations. That is, are teachers paying more attention to “problem” children even when they are not acting up? To determine if the relationship between children’s rate of misbehavior and teacher attention extends even to the times when children are behaving appropriately, this study focuses exclusively on attention that occurs outside of discipline situations.

There has been very little previous research on specific types of teacher attention that occur outside of discipline. Although these common types of attention, such as praise, commands, and physical warmth, have not been studied extensively, it is expected that each type of attention has different triggers and different effects on a child. In order to understand which children are receiving which types of attention, why, and with what effect, this study will examine each of the specific types of teacher attention separately.

The present study examined how specific types of teacher attention are distributed as a function of child gender and misbehavior. Consistent with the research discussed above, boys are expected to receive more total teacher attention than girls. The

relationship between total teacher attention and child misbehavior is difficult to predict since this study focuses exclusively on attention outside of the discipline context.

Previous research has implicated “negative” attention and discipline as the explanation for the positive correlation between attention and misbehavior. It is possible that teachers give difficult children more attention generally as a preventative measure, less attention outside of misbehavior incidents to compensate or out of dislike, or that total attention outside of discipline situations will have no relationship to child misbehavior. Only one previous study has addressed the gender/misbehavior confound, finding that teacher discipline was independently related to both child gender and misbehavior in a sample of 11 to 14 year old British students (Hurrell, 1995). However, this study only examined direct responses to misbehavior; how misbehavior affects attention outside of such interactions has not been considered. With such little previous literature, it is difficult to hypothesize how gender and misbehavior level work together in the prediction of preschoolers’ total non-disciplinary teacher attention. It is possible that the two variables may share responsibility for the prediction of teacher attention, or it may be that attention outside of discipline is only predicted by child gender.

With regard to specific types of teacher attention, boys are expected to receive more of the different types of attention than girls. Although research on specific types of attention is limited, boys appear to be receiving the majority of all types of attention in the classroom. There is no evidence at this time to indicate that any of these specific types of attention is distributed differently than general or total attention. Further, it is expected that children with high levels of misbehavior will receive more commands from their teachers than their classmates. Even when children are not misbehaving, teachers

may keep a close watch on the “problem” children in the classroom. Thus, children with higher rates of misbehavior are expected to receive more commands than their classmates do, even outside of discipline situations. When teachers must spend large proportions of their time attending to a child’s misbehavior, that child may have fewer opportunities to participate in teaching activities in the classroom (Arnold, 1997). Thus, children with high levels of misbehavior are predicted to receive less teaching than their classmates do. Furthermore, it is tentatively supposed that children with more misbehavior will have fewer positive interactions with their teachers, including fewer instances of praise and rewards; however, there is not much literature on which to base this prediction. The last question regarding specific types of attention deals with the simultaneous predictive power of gender and misbehavior on attention. As with total attention, there is no previous research on this topic.

Finally, this study will address how each of the above relationships vary based on the child’s ethnicity. Minority children and children of low socioeconomic status are disproportionately at-risk for a wide variety of problems, including low achievement in school and juvenile delinquency. In addition, these children are understudied, and relatively little is understood about the mechanisms that lead to poor outcomes for these populations. The attention studies cited above were done almost exclusively with Caucasian children. Only Wittmer and Honig (1988) included a significant portion of African-American children in their sample; none of the studies included Hispanic participants. Due to the lack of previous research in this area, there is no foundation to predict how ethnicity might affect the distribution of attention. Although exploratory,

this study may provide an important starting point in understanding the early school experiences of minority children.

CHAPTER II

METHOD

Participants

One hundred fifty-three children and approximately 50 preschool teachers participated in this study through a larger intervention project. Participants were recruited from 18 preschool classrooms at seven child care centers in the Springfield, Massachusetts, area. Five of these centers primarily serve economically disadvantaged families from diverse ethnic backgrounds, and two serve a predominately Caucasian population of higher socioeconomic status (SES). 72.5% of the children attended the lower SES centers, while 27.5% attended the higher SES centers. The racial/ethnic makeup of the children in the study is approximately 31% Puerto Rican, 31% Caucasian, 31% African-American, and 7% multiracial. Seventy-five of the children are girls and 78 are boys. The children ranged in age from 38 to 64 months, with a mean of 53.2 months ($SD = 6.2$).

Procedure

Parents were introduced to the study through a letter sent home with children from each preschool center. Research assistants visited each classroom and videotaped children during both free play and structured learning activities. Research assistants were instructed to focus the camera on one group of children for three minutes, scan clockwise for 30 seconds, then focus on the next group of children for 3 minutes. If all of the children were assembled in one location, the research assistants focused the camera on the entire class. Most of the videotaping was completed on one day, but some classrooms were taped on two separate days to increase the time children were on tape.

Twelve trained research assistants coded the videotapes for teacher-child interactions. Each child involved in the study was watched and teacher-child interactions were coded that involved the child individually or as a part of some subset of the class. In other words, teacher attention directed toward the class as a whole was not coded, because this study focuses on the differential attention children receive from their teachers. The coding system created was a hybrid interval-event system (for complete coding manual, see appendix). Negative interactions, teaching, rewards, physical warmth, and nonspecific positive interactions were coded for their presence or absence in each 30-second interval. Negative teacher-child interactions, such as criticism or insult directed toward the child, which were not part of a discipline episode or a command, were considered negative interactions. Teaching was defined as instructional behavior such as questions, informational statements, demonstrating/helping behavior, or requests for the child to demonstrate a skill. Rewards are tangible rewards or privileges given to a child after the completion of an appropriate behavior. Physical warmth includes any affectionate physical contact that the teacher directs toward the child. Nonspecific positive interactions are positive moments between teacher and child that do not fit the coding categories of praise, rewards, or teaching. This includes playing, encouragement, compliments, and pleasant conversations.

Praise and commands are highly verbal forms of attention and easy to quantify. Due to this, they were coded on an event basis. Praise was coded when a teacher expressed a favorable judgment about a behavior or product of the child. Commands were defined as a verbal statement given with the intention of directing a child's behavior. Commands that occurred in the context of discipline were not coded in this

category. Finally, child misbehavior was coded on an interval basis. Child misbehavior was considered to be any misbehavior demonstrated by a child, regardless of whether he or she actually got in trouble for it. This includes aggressive, hostile, defiant, disruptive, or non-compliant acts.

The codes in each individual category were totaled and then averaged over the total number of intervals the child appeared on camera. Thus, attention and misbehavior were measured as rates of occurrence in on-camera intervals. Reliability was assessed by randomly selecting 47 children to be coded by a second research assistant. The coders were blind to which children would be used for reliability analyses.

Intraclass correlations (ICC's) were calculated from the reliability pairs. Negative interactions occurred extremely infrequently, and in fact were never coded by both coders for any of the reliability children. Thus, the code was dropped from the study. Teaching, with an ICC of .30, was low in reliability, but was included in the study analyses on an exploratory basis. The other three interval-based attention codes, rewards, physical warmth, and nonspecific positive interactions, all had ICC's indicating adequate reliability (.67, .87, and .65, respectively). Praise (.82) and commands (.76) were also reliable codes. Finally, child misbehavior reliability, with an ICC of .52, was considered marginally reliable.

CHAPTER III

RESULTS

Analytic Plan

The 18 classroom environments in this study varied a great deal, particularly in terms of teacher-child ratios. Thus, it was expected that the total amount of attention available would be different from classroom to classroom. In order to facilitate comparisons across classrooms, the observational data was standardized within classroom. Unless otherwise noted, analyses include all 153 children and use a standard .05 alpha level.

Boys and girls were compared on misbehavior rates and a composite total attention variable. The total attention variable includes nonspecific positive interactions (including the subtype of physical warmth), rewards, praise, and non-discipline commands. Teaching was excluded because of its low reliability. Correlational analyses examined the relationship between the total attention variable and children's level of misbehavior. Multiple regression was used to investigate the combined predictive powers of misbehavior and gender on total attention. Finally, gender differences on the specific types of attention were investigated, followed by the relationship between child misbehavior and each specific type of attention. For each type of attention, a multiple regression was run using gender and misbehavior as simultaneous predictors.

The role of child ethnicity was examined by dividing the children into three groups—Puerto Rican, African-American and Caucasian. Since there were only 10 multiracial children in the sample, they were not included in the ethnicity analyses. Due

to the small size of the groups and exploratory nature of the ethnicity analyses, results approaching significance ($p < .10$) are discussed, but should be interpreted with caution.

Comparisons of the rates of attention received by the three groups were made using a multivariate analysis of variance (MANOVA). Since some classrooms contained almost all children of a single ethnic group, standardization by classroom is not helpful in comparing attention received by ethnic groups. Thus, for the MANOVA and post-hoc tests only, unstandardized variables were used as the dependent variables. Misbehavior, total attention, and the specific types of attention were included in the analysis. For each dependent variable with a significant or borderline significant F -value, Bonferroni post-hoc tests were performed to determine which of the groups differed from one another. The remainder of the ethnicity analyses investigate the relationships among gender, misbehavior, and attention. For these analyses, variables standardized within classrooms were again used to promote ease of comparison across the different classroom environments. All analyses performed above on the complete sample were repeated with each of the individual ethnic groups.

Descriptive Statistics

The mean number of on-camera intervals for the children was 92.9, meaning that children were coded for approximately 46 minutes each, on average. Unstandardized means and standard deviations for misbehavior, total attention, and the specific types of attention are listed in Table 1. A correlation matrix of the specific types of attention is reported in Table 2.

Gender, Misbehavior, and Total Attention

A comparison of classroom-standardized misbehavior levels revealed that boys misbehaved .59 SDs more often than girls did, $t(151) = 4.01, p < .001$. Contrary to prediction, boys and girls received similar amounts of total attention, $t(151) = -.50, p = .619$. Additionally, misbehavior was not correlated with total teacher attention ($r = .07, p = .428$).

It is possible that the relationship between misbehavior and attention might differ based on gender. To examine this possibility, a gender by misbehavior interaction term was included in a multiple regression predicting total attention. The gender-misbehavior interaction term ($b = -.06, SE = .17, p = .717$) was small and non-significant. The interaction term was dropped, and a second multiple regression was run using only gender and misbehavior as predictors. Neither misbehavior ($b = .09, SE = .17, p = .320$) nor gender ($b = .13, SE = .16, p = .434$) were significant predictors of total teacher attention.

Gender Differences in Specific Types of Attention

To evaluate the possibility that gender differences would emerge for individual subtypes of attention, t-tests were conducted comparing boys and girls on nonspecific positive interactions, physical warmth, rewards, teaching, praise, and commands. Both nonspecific positive interactions ($t(151) = -2.01, p = .046$) and rewards ($t(58) = -2.13, p = .038$) were received more often by girls than by boys. Boys, more frequently than girls, received non-discipline commands ($t(151) = 2.23, p = .027$) from their teachers. While not significant, there was a trend indicating more teaching for boys than for girls ($t(151) = 1.70, p = .091$). There were no significant gender differences for physical warmth

($t(151) = -.57, p = .570$) or praise ($t(151) = -.004, p = .997$). Boys' and girls' means and standard deviations for each type of attention can be found in Table 3.

Misbehavior and Specific Types of Attention

The details of the misbehavior-attention correlations are listed in Table 4. Misbehavior was correlated with commands ($r = .31, p < .001$). No other significant correlations emerged. The relationship between gender and misbehavior necessitates controlling for one variable when investigating the predictive power of the other so that results are not obscured by the gender-misbehavior confound. Each type of attention was regressed on gender, misbehavior, and a gender-misbehavior interaction term. The interaction term was not significant in any of the analyses, so analyses were run using only gender and misbehavior as predictors. Regression results can be found in Table 5.

For commands, misbehavior ($b = .29, p = .001$) was a significant predictor of attention, controlling for gender. Gender, while controlling for misbehavior, no longer predicted commands received, despite the fact that there was a significant gender difference for commands in the analyses above. Physical warmth, praise, and teaching were not significantly predicted by either term. Gender ($b = .29, p = .069$) was a nearly significant predictor of nonspecific positive interactions, while misbehavior did not predict. The only case in which both gender and misbehavior were related to the attention variable, while controlling for the other, was rewards. Gender ($b = .71, p = .007$) was a significant predictor, and misbehavior ($b = .27, p = .057$) approached significance.

Child Ethnicity

As a first step toward understanding the role of child ethnicity in the relationships described above, all previous analyses were rerun separately by child ethnicity. The resulting three groups were 48 Puerto Rican participants, 48 Caucasian participants, and 47 African-American participants. Descriptive information on these groups is available in Table 6.

The dependent variables analyzed were misbehavior, total attention, nonspecific positive interactions, physical warmth, rewards, teaching, praise, and commands. Of these, MANOVA results indicated group differences for the following: misbehavior ($F(2, 140) = 8.32, p < .001$), total attention ($F(2, 140) = 2.40, p = .095$), nonspecific positive interactions ($F(2, 140) = 3.65, p = .028$), physical warmth ($F(2, 140) = 3.34, p = .038$), teaching ($F(2, 140) = 4.99, p = .008$), and commands ($F(2, 140) = 2.97, p = .055$).

Bonferroni post-hoc tests indicated significantly more misbehavior for African-American children ($M = .096$) than Puerto Rican children ($M = .032, p < .001$). Additionally, there was a trend indicating that the Caucasian children ($M = .067$) also misbehaved more often than the Puerto Rican children ($p = .082$). In the case of total attention, there was a borderline significant finding of more attention for Puerto Rican children ($M = .16$) than for Caucasian children ($M = .12, p = .091$).

Nonspecific positive interactions were received by Puerto Rican children ($M = .10$) more often than Caucasian children ($M = .061, p = .039$). There was also a near-significant finding of more positive interactions for Puerto Ricans than for African-Americans ($M = .067, p = .110$). Caucasian children ($M = .021$) were more likely to receive physical warmth from their teacher than were the Puerto Rican children ($M =$

.0072, $p = .038$). Caucasian children ($M = .0087$) received less teaching than their African-American ($M = .027$, $p = .007$) or Puerto Rican counterparts ($M = .021$, $p = .104$). Finally, there was a trend toward more non-discipline commands for African-American children ($M = .058$) than for Puerto Rican children ($M = .040$, $p = .063$).

Total Attention. The remaining ethnicity analyses examine the relationships between attention and other variables. As in the whole group analyses above, boys misbehaved more than girls for both Puerto Rican ($t(46) = 3.74$, $p = .001$) and Caucasian ($t(46) = 2.57$, $p = .014$) groups. However, there were no gender differences on misbehavior for the African-American children ($t(45) = .088$, $p = .931$). There were no gender differences for any of the groups on total attention. Total attention was not correlated with misbehavior in any of the ethnic groups. Total attention was regressed on gender and misbehavior for each ethnic group. The results of these analyses can be found in Table 7. Neither the gender nor the misbehavior terms were significant for any of the groups.

Specific Types of Attention. African-American and Caucasian children showed no gender differences on any specific type of attention. Puerto Rican girls received more positive interactions ($t(46) = -2.42$, $p = .019$) and rewards ($t(19) = -2.14$, $p = .046$) than Puerto Rican boys. There were no other gender differences for Puerto Rican children. Complete results of the t-tests are listed in Table 8.

To examine the relationship of specific types of attention to misbehavior rates, correlational analyses were performed separately by ethnicity. The results for African-American children paralleled those of the entire sample; non-discipline commands were significantly correlated with child misbehavior ($r = .70$, $p = .026$), while no other specific

types of attention were. The correlation between misbehavior and commands approached significance in the Caucasian group ($r = .26, p = .076$), and, as with the African-American children, there were no other significant correlations. In contrast to the other groups, the Puerto Rican sample did not have a significant correlation between misbehavior and commands ($r = .16, p = .285$). The only significant correlation for this group was between misbehavior and teaching ($r = .29, p = .049$).

The final step in understanding the combined relationships of misbehavior and gender with specific types of attention was to run multiple regressions separately by ethnicity. For the Puerto Rican group, gender was a significant predictor of positive interactions ($b = .78, SE = .32, p = .019$), with girls receiving more positive interactions than boys. The gender coefficient was not significant for any of the other ethnic groups. Misbehavior was not a significant predictor of positive interactions for any of the samples.

Gender was a significant predictor of rewards for the Puerto Rican group ($b = .90, SE = .40, p = .037$), and the Caucasian group ($b = 1.04, SE = .46, p = .036$). In each case, girls received more rewards than boys did. Gender was not significant for the African-American group. Misbehavior approached significance in the Caucasian sample ($b = .42, SE = .25, p = .105$), with more child misbehavior associated with more rewards. None of the other groups' equations included a significant or near significant misbehavior term.

The ethnicity analyses found just one near-significant predictor for teaching. For Puerto Rican children, more misbehavior was associated with more teaching ($b = .29, SE = .16, p = .082$). None of the other groups showed any significant results in the prediction of teaching.

The final type of attention analyzed was commands. Misbehavior was a significant predictor for African-Americans ($\underline{b} = .38$, $\underline{SE} = .15$, $p = .012$), while gender was not significant. Neither the Puerto Rican nor the Caucasian sample showed any significant results, although the misbehavior coefficient for Caucasians ($\underline{b} = .21$, $\underline{SE} = .15$, $p = .158$) seemed more likely to indicate a possible relationship than did the misbehavior coefficient in the Puerto Rican sample ($\underline{b} = .081$, $\underline{SE} = .18$, $p = .65$).

CHAPTER IV

DISCUSSION

Contrary to previous research, this study found no relationship between total teacher attention and child gender; additionally, there was no relationship between total attention and misbehavior. The preponderance of previous findings favoring boys over girls in terms of teacher attention made the results of the gender analyses surprising. This sample was similar to previous samples both in age and in the relationship between gender and misbehavior, with boys misbehaving more often than girls. The nonsignificant results could be accounted for by the removal of disciplinary attention. When specific types of attention were analyzed separately, relationships were found both with gender and with misbehavior. Thus, it seems that aggregating different types of attention into a single variable obscures the relationships among attention, gender, and misbehavior.

Previous research has rarely been more specific than the broad categories of “positive” and “negative” when defining attention. In this study, boys received some types of attention more often, while girls were favored in other types, and some types showed no gender differences. Boys received more commands than girls, echoing the finding of the one previous study to research commands (Serbin et al., 1973). Additionally, there was a trend toward more teaching for boys than for girls. This finding must be cautiously interpreted, as it was not fully significant. However, it is not unexpected given the concern in the literature that boys may receive more academic help than girls do. Although this study did not record the circumstances in which teaching occurred or whether teaching was prompted by a behavior of the child, it may be that

boys received more teaching because their academic struggles were more pronounced, they were more assertive in seeking help, or teachers expected the boys to require more assistance. These explanations are consistent with the hypothesis that girls with learning problems tend to behave in ways that discourage teacher attention (Morgan & Dunn, 1988), as well as the finding that boys are more likely than girls to be referred for special services, despite similar levels of need (e.g., Stowe et al., 1999).

The finding that girls received more positive interactions and more rewards from their teachers than boys was surprising based on past research; however, no one had previously studied these specific types of attention individually. Further research should address outcomes associated with the use of positive interactions and rewards in the classroom to determine what, if any, effect these types of attention have on preschool children. There were no significant gender differences for either physical warmth or praise. Each of these types of attention occurred at low levels, perhaps making differences difficult to detect. However, rewards were coded even less frequently, and still showed a significant gender difference, so floor effects are unlikely to be the sole explanation for nonsignificant results. These two variables seem very similar to positive interactions and rewards, types of attention received more often by girls. It is unclear why teachers would distribute positive interactions and rewards in a gender-biased way, yet issue physical warmth and praise equally to boys and girls.

Previous literature linking attention to misbehavior focused on “negative” attention, the control-oriented attention children receive in discipline situations. The results of this study showed that the relationship between misbehavior and attention extends even outside of discipline situations, to those times when a child is behaving

appropriately. The correlation between misbehavior and non-discipline commands suggests that teachers pay particular attention to “problem” children, using commands to control their behavior even when they are not misbehaving. Most likely, teachers do this in an attempt to prevent future misbehavior. Further research is needed to determine if this technique has the desired effect. It may reduce misbehavior, or it may actually encourage it by giving children more opportunities to misbehave or by communicating their teachers’ expectation of misbehavior.

The absence of a relationship between child misbehavior and any other types of attention indicates that children receive approximately the same amount of positive interactions, physical warmth, rewards, praise, and teaching, regardless of their overall level of misbehavior. One might expect children who misbehave often to receive less reinforcement for appropriate behavior, in the form of praise and rewards, or to lose out on the opportunity to be taught academic lessons. This was not the case in these preschool classrooms.

Since boys misbehave more than girls, the most complete understanding of the relationships among misbehavior, gender, and attention can only come when both misbehavior and gender are used as predictors of attention. In this way, the predictive power of each variable controlling for the other can be seen. These analyses further support the notion that different types of attention are distributed in different ways. Commands were predicted only by misbehavior and not by gender in our multiple regression. The gender difference displayed in the t-tests disappeared when controlling for misbehavior. These findings suggest behavior rather than gender may be the critical

factor in commands, and point to the importance of considering both variables when investigating the distribution of teacher attention.

In contrast, child gender, but not misbehavior, emerged as an explanation for the unequal distribution of positive interactions in the preschool classroom. As with positive interactions, rewards showed gender differences, but no simple correlation with misbehavior. The results of the multiple regression, however, indicated a more complicated phenomenon. Rewards were significantly predicted by gender while holding misbehavior constant. When gender was controlled, misbehavior was very close to significance as a predictor of rewards. The misbehavior term indicated that children who misbehaved more received more rewards, while controlling for gender. This result implies that both child gender and misbehavior level may be important in predicting how often the child will receive rewards from his or her teacher. Girls who misbehave a lot would be expected to receive the most rewards, while boys who rarely misbehave would receive the fewest. The borderline significance level of the misbehavior term and the unpredicted outcome make it important that this finding be replicated in future research. If it is replicated, then it would seem that teachers distribute rewards in a most unusual way, relative to other types of attention.

Splitting the complete sample into three separate groups by child ethnicity complicated matters further. Comparisons among the three groups revealed that they differed in rates of misbehavior and attention. Though there were many differences, they did not appear to reflect any cohesive pattern. One interesting highlight was that Puerto Rican children received more positive interactions than Caucasian children. The Caucasian children, however, received more physical warmth than the Puerto Rican

children, providing more evidence that positive interactions and physical warmth, despite their similar definitions, are distributed in different ways. More information can be gained by comparing the relationships between attention and predictor variables in the different ethnic groups.

The relationship between gender and misbehavior revealed an important difference among the groups. In both the Puerto Rican and Caucasian samples, boys misbehaved more often than girls. In the African-American sample, however, there was no gender difference in misbehavior. While it is generally accepted as fact that boys misbehave more often than girls do, very little research has compared this relationship across ethnic groups. Arnold, McWilliams, & Arnold (1998) found that boys misbehaved more than girls in a sample of preschoolers that was 73% African-American, 23% Hispanic, and 3% Caucasian. Additionally, a study of third through eighth grade children reported that African-American boys misbehaved more often than African-American girls (Hudley, 1993). The absence of a gender difference in this sample of African-Americans is not only interesting on its own, but also raises the question of whether teachers will show different patterns of attention distribution with African-American children than with children of other ethnic backgrounds.

The total attention analyses for the individual ethnic groups had the same results as those for the entire sample. Total attention was not predicted by either child gender or child misbehavior. Once again, this finding highlights the importance of separating attention into well-defined, individual types. Treating all attention as the same obscures the different types of relationships that exist for different types of attention.

Neither the African-American nor the Caucasian samples had any gender differences on specific types of attention. It may be that the nonsignificant findings were due to the small group sizes and a lack of power, as the difference in gender means often seemed comparable to those for the entire sample. Despite the small group size, the Puerto Rican group did show significant results; Puerto Rican girls received more positive interactions and rewards from their teachers than boys did. Thus, it seems the predictive power of gender was especially strong for children of that ethnicity.

Correlations between misbehavior and attention revealed that commands were significantly correlated with misbehavior for the African-American children and nearly so for the Caucasian children. This was not the case for the Puerto Rican children, however, as teaching was the only attention type to be correlated with misbehavior. Higher levels of misbehavior were associated with higher levels of teaching. As in the gender analyses above, these results indicate some similarity between the African-American and Caucasian groups, and perhaps some important differences for the Puerto Rican group. These differences, if replicated, may represent a cultural phenomenon or they may be a function of language. More study of diverse populations of children is needed to answer these questions.

Multiple regression analyses for both Puerto Rican and African-American children revealed the same patterns discussed above. In contrast, the results for the Caucasian group differed from the individual analyses above. Gender was a significant predictor of rewards when controlling for misbehavior. Additionally, misbehavior approached significance while controlling for gender. When analyzed separately, rewards had not been associated with either child gender or misbehavior in this group.

This finding demonstrates the importance of considering predictive factors simultaneously to best understand the relationships among attention, gender, and misbehavior.

The analyses by child ethnicity are at best preliminary and hampered by low power; thus, it is difficult to draw conclusions. Some general impressions, however, are worth noting. It seems that gender plays an especially powerful role in the attention received by Puerto Rican children. Most of the significant results for that group were related to gender, rather than misbehavior. In contrast, misbehavior appeared to be the most important variable for African-American children. There were no significant results for this group by gender. Additionally, this was the only group in which boys and girls misbehaved at similar levels. The fact that African-American boys and girls behaved similarly may be related to the fact that teachers treated them similarly. The directionality of that relationship would be an interesting topic to pursue in further research. Finally, in the Caucasian group, neither of the two predictor variables emerged as more prominent. It is clear that more research with larger groups will be necessary to understand differences in attention distribution patterns by child ethnicity.

The differences among the ethnic groups, and the differences between the group analyses and those of the sample as a whole, demonstrate the importance of considering ethnicity in the question of children's experiences in the classroom. It is clear from the results of this study that treating preschool children as one homogeneous group obscures the different experiences of different children. It may ignore the experiences of members of minority groups, or even result in conclusions that are untrue for any group, as when opposite results cancel out one another. It is crucial that researchers make the effort

necessary to include children from a variety of backgrounds in their studies and run at least some analyses separately by group.

In the same way, it is clear that treating attention as a single construct is not a useful way to understand the patterns of attention distribution. Only when specifically defined types of attention were analyzed did significant results emerge about the predictive power of child gender and misbehavior. Different types of attention were distributed in different ways, and it is also likely that these different types of attention affect children in different ways. Thus, when future research considers the effect of unequal attention distribution, it will be important to consider specific types of attention, rather than total attention.

The power of this study to detect relationships is limited by the moderate reliability of the observations. Additionally, the sample sizes become quite small when the children are divided into groups based on both ethnicity and gender. Improvements in each of these areas would facilitate the investigation of patterns of attention distribution. Child ethnicity emerged as an important variable in this study. However, ethnicity and SES are confounded, making it difficult to interpret the differences among the ethnic groups. Additionally, this study does not include teacher ethnicity, which may also be important, particularly in terms of the match between teacher and child ethnicity. The correlational design of this study does not allow for causal conclusions, and so the mechanism responsible for differential attention is unclear. Longitudinal studies should be conducted, as well as studies that consider the relationship between teacher attention and child outcome in both behavioral and academic domains.

The consideration of both gender and misbehavior in the prediction of attention is a strength of this study. This eliminates confusion caused by the gender/misbehavior confound. Additionally, the observation and analysis of specific types of attention revealed important differences among the many types of attention teachers show to children. Finally, despite the relatively small groups, the consideration of child ethnicity found some interesting differences and highlighted the importance of considering ethnicity in future work.

Some of the results of this study throw doubt on commonly accepted wisdom about classroom attention. Patterns of attention disbursement may have changed since the original research in this area was done in the 1970's and early 1980's. The most crucial differences are that total attention was not found to vary either with gender or misbehavior, and that some specific types of attention were received more often by girls, rather than by boys. It may be that today's teachers have different ideas about gender, or that they are being trained differently, and thus are less likely to favor boys than the teachers of the '70's and '80's. Despite this, research still indicates that boys receive more academic assistance than girls, regardless of need. Consideration of specific types of attention will aid researchers in determining which types of attention are most crucial to children's success. Future research should consider the implications of discrepant patterns of teacher attention, focusing on the outcomes associated with high levels of attention, and the possibility for remediation of inequitable attention patterns through teacher training.

Table 1

Means and Standard Deviations of Misbehavior and Attention

	Mean	Standard Deviation
Misbehavior	6.2	7.8
Total Attention	14.0	9.6
Positive Interactions	7.7	7.9
Physical Warmth	1.3	2.7
Rewards	0.25	0.74
Teaching	2.0	4.0
Praise	1.1	1.6
Commands	4.6	3.7

Note. Unstandardized data are reported; numbers represent the percentage of intervals in which each variable occurred.

Table 2

Correlations Among Specific Types of Attention

	Int	PW	Rew	Tchg	Praise	Com
Positive Interactions (Int)	.	.38**	.34**	.15	.22**	-.02
Physical Warmth (PW)		.	.24	-.04	.10	.02
Rewards (Rew)			.	-.05	.33**	-.06
Teaching (Tchg)				.	.22**	.29**
Praise					.	.16
Commands (Com)						.

** . Correlation is significant at the .01 level (2-tailed).

Table 3

Gender Differences in the Frequency of Specific Types of Teacher Attention

Type of Attention	Boys			Girls		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
Positive Interactions	78	-.15	.92	75	.15	.95
Physical Warmth	78	-.04	.92	75	.04	.97
Rewards	29	-.26	.74	31	.24	1.05
Teaching	78	.13	1.02	75	-.13	.85
Praise	78	-.0003	.95	75	.0003	.94
Commands	78	.16	.99	75	-.17	.86

Note. Rewards have a smaller n because they were never observed in several classrooms, which were therefore not included. All t-tests are 2-tailed.

Table 4

Correlations Between Child Misbehavior and Specific Types of Teacher Attention

Type of Attention	<u>n</u>	<u>r</u>	<u>p</u>
Positive Interaction	153	-.07	.390
Physical Warmth	153	-.001	.991
Rewards	60	.10	.432
Teaching	153	.11	.167
Praise	153	-.007	.928
Commands	153	.31	.000

Note. For each individual type of attention, children were excluded from the analysis if that type of attention was never coded in their classroom.

Table 5

Specific Types of Attention Regressed on Gender and Misbehavior

Type of Attention	<u>Gender</u>			<u>Misbehavior</u>			<u>R²</u>
	<u>b</u>	<u>SE</u>	<u>p</u>	<u>b</u>	<u>SE</u>	<u>p</u>	
Positive Interactions	.29	.16	.069	-.02	.09	.796	.027
Physical Warmth	.10	.16	.553	.15	.09	.862	.002
Rewards	.71	.25	.007	.27	.14	.057	.130
Praise	-.004	.16	.979	-.008	.09	.925	.000
Teaching	-.21	.16	.184	.08	.09	.365	.024
Commands	-.17	.15	.271	.29	.08	.001	.106

Table 6

Demographic Characteristics of Participants Grouped by Ethnicity

Ethnicity	<u>n</u>	Girls	Boys	Mean Age	% Low SES
Puerto Rican	48	25	23	4.46	97.9
Caucasian	48	25	23	4.51	16.7
African-American	47	17	30	4.39	100.0

Note. SES categorization is based on classification of each child's preschool center as high or low SES.

Table 7

Multiple Regressions of Total Attention on Gender and Misbehavior for Separate Ethnic Groups

Ethnicity	Gender			Misbehavior			R^2
	<u>b</u>	<u>SE</u>	<u>p</u>	<u>b</u>	<u>SE</u>	<u>p</u>	
Puerto Rican	.42	.31	.189	.045	.19	.812	.042
Caucasian	-.00047	.31	.999	.016	.16	.920	.000
African-American	-.027	.28	.926	.18	.14	.209	.036

Table 8

Gender Differences on Specific Types of Attention for Separate Ethnic Groups

Ethnic Group and Type of Attention	Boys			Girls			t	df	p
	n	M	SD	n	M	SD			
PUERTO RICAN									
Positive Interactions	23	-.31	.83	25	.37	1.07	-2.43	46	.019
Physical Warmth	23	-.15	.72	25	.025	.92	-.75	46	.457
Rewards	11	-.52	.18	10	.22	1.13	-2.14	19	.046
Teaching	23	.082	.90	25	-.14	.78	.89	46	.376
Praise	23	.17	1.03	25	-.098	.88	.98	46	.332
Commands	23	.058	1.00	25	-.31	.77	1.42	46	.162
CAUCASIAN									
Positive Interactions	23	-.16	.91	25	.094	1.06	-.90	46	.375
Physical Warmth	23	-.052	.88	25	.15	1.09	-.69	46	.493
Rewards	10	-.33	.74	11	.33	1.13	-1.57	19	.133
Teaching	23	.15	1.15	25	-.12	.94	.89	46	.378

Table 8 (continued)

Ethnic Group and Type of Attention	Boys			Girls			t	df	p
	n	M	SD	n	M	SD			
CAUCASIAN (continued)									
Praise	23	.050	.87	25	.049	1.07	-.16	46	.876
Commands	23	.23	.96	25	-.11	.87	1.29	46	.203
AFRICAN-AMERICAN									
Positive Interactions	30	-.064	.98	17	.025	.67	-.33	45	.741
Physical Warmth	30	.094	1.09	17	-.14	.92	.75	45	.456
Rewards	7	.27	1.09	6	.32	.99	-.087	11	.932
Teaching	30	.18	1.05	17	-.12	.82	1.006	45	.320
Praise	30	-.085	.97	17	.029	.88	-.40	45	.691
Commands	30	.23	1.06	17	.030	.91	.64	45	.525

Note. Rewards have a smaller n because they were never observed in several classrooms, which were therefore not included. All t-tests are 2-tailed.

APPENDIX

TEACHER-CHILD INTERACTION CODING MANUAL

Format

- 30 second intervals.
- You will follow 2 target children at the same time to capture teacher interactions with individual children. When either or both children are on camera (as defined below) you will code any relevant teacher-child interactions. The child **must be on camera** as defined below, but you may only hear the teacher. You can fast-forward when neither of your target children are on camera as long as you scan for them. You must distinguish between the main teachers and the other staff as indicated on the coding sheet. Again, if a teacher is off-camera during an interaction and you are unsure which teacher it is, code in the other staff category. If the teacher is off-camera and you **are** sure of which teacher it is (only by hearing), you should code it in the appropriate column (Teacher A, Teacher B, etc.).
- Your target child's interactions with the teacher will be coded. *One-on-one interactions* with the teacher and *group interactions* with the teacher will be coded as interactions that influence a child. If an interaction (command, praise, etc.) is directed to the *whole class in general*, do **not** code it when following target children. The whole class may be all but a few kids (e g., all in story-time and teacher is praising class for listening but 2 kids are in time out outside the circle). If the interaction is directed toward some subset of the class, regardless of the number of children in the group (for instance, a table of kids coloring, all the children in the block area, several kids who are misbehaving), then code it *if your target child is involved in the interaction*. Just because an interaction occurs at the table at which the child is seated does not mean the child is involved. Decide if the child is actually part of the interaction—is his/her behavior being praised, is the teacher participating in the child's play, etc.

Interval Codes

Not on Camera (NOC)

- If the child is off camera or completely blocked from view for the entire interval, circle NOC.
- If the most you can see of that child during the interval is a small portion of his/her body (hand, foot, tip of head), such that you can imagine many possibilities for what the child is doing (but you can't be sure of any), code NOC. It could be that you only see the child's head, for instance, but you *can* tell if the child is interacting with a teacher or misbehaving; in this case the child is on camera.
- If you can only hear the interaction and cannot see the child at all, code NOC and do **not** code the interaction. You can fast-forward when your target child is not on camera as long as you scan for him/her.
- Nothing can be coded when the target child is NOC, but teacher-child interactions may be coded when the *teacher* is off-camera. If a teacher is off-camera during an interaction and you are unsure which teacher it is, code in the other staff category. If the teacher is off-

camera and you **are** sure of which teacher it is (only by hearing), you should code it in the appropriate column (Teacher A, Teacher B, etc.).

Child Misbehavior (MisB)

- Any misbehavior demonstrated by child. This includes aggressive, hostile, defiant, disruptive, or non-compliant acts (e.g., hitting, pushing, verbal aggression, name-calling, grabbing a toy, ignoring teacher commands, disrupting an activity, violating spoken or unspoken classroom rules). Aggressive misbehavior may be directed towards a child or teacher.
- Misbehavior is behavior a child did get in trouble for or COULD get in trouble for. A teacher responding to a child's misbehavior may help you identify misbehavior, but **MisB** does not require a reaction from others to be coded. You need to code misbehavior when it is responded to by teachers and when it is missed by teachers.
- If a teacher disciplines a child for a misbehavior that was not visible on the tape, do not code **MisB** (because you can't be sure of the misbehavior), but code the discipline response.
- Non-compliance over several intervals:
 - If a child is non-compliant with a teacher's command, code **MisB** for the non-compliance in that interval.
 - If the non-compliance continues, determine if what the child is doing would be considered misbehavior in and of itself (without the teacher's command). If so, continue to code **MisB** in all the intervals in which the child displays this behavior. If the behavior would not be considered misbehavior if the teacher hadn't given the command, then code **MisB** only once.
 - Examples of behavior that would be considered continual misbehavior are sitting in a chair during circle time, refusing to clean up toys, and leaving circle time without permission. Behaviors that would get coded only once for non-compliance could be sitting with legs out when the teacher said to sit Indian-style or dancing during free play when the teacher said to stop.
 - To determine whether you should code **MisB** just once or continually, ask yourself the following:
 - Is this behavior a violation of a spoken or unspoken classroom rule?
 - Are others disturbed or disrupted by this behavior?
 - Is the teacher disciplining or expressing disapproval for the behavior?
 - Are other children behaving similarly? (if many children are non-compliant and none of them get disciplined for it, then it's probably not a continual misbehavior)

Commands (Com)

- A command is a verbal statement given with the intention of directing the child's behavior. It tells the child to do something, not to do something, or to stop doing something. It may be a statement of rules or an explanation of acceptable behavior. A command may not directly tell the child to change behavior, but the intent to change existing behavior is implied. Example: When a child is hitting a child with a plastic shovel, the teacher says,

“Shovels are for digging.” To decide if a statement is a command, ask yourself, “Is the teacher trying to tell the child that he/she should change his/her behavior in some way?”

- Do not code the teacher answering a child’s question or giving child permission to do something as a command (e.g., Child asks for cupcake and teacher says, “No you cannot have one” or child asks to go to art table and teacher says, “You can go now.”) If the child is *doing* what he/she asked permission to do (reaching for cupcake), and the teacher says “No, you cannot have one,” then this would be coded as a command. It is a direct attempt to get the child to change behavior. If the teacher is making a suggestion it should not be coded as a command (e.g., Why don’t we make a block tower?; You could go play with Sam). If the teacher is explaining how to do something to the child, do not count it as a command, consider it part of teaching.
- **The “name” command:** A child’s name could be a command if its purpose is to change the child’s behavior. For instance, when a child is misbehaving, and a teacher says his/her name, that is often shorthand for “Jimmy, stop that.” Only code the name as a command when it is being used to direct or change behavior, NOT when it is a method for gaining the child’s attention before issuing a command.
- More than one command may be given to a child during an interval (commands for different behaviors may be given or a command may be repeated if it has not been followed). Code commands separately (even if they are repeat commands) if the child has been given 5 seconds to change behavior between commands. If the command statement includes a string of statements given all at once to change a child’s behavior, these statements should be coded as a single command.

Code commands for each of the following:

- **Specific vs. General (s/g/?)**
 - A specific command makes it clear what the child is being asked to do. It describes in detail the behavior required. Examples: Go wash your hands now; Stop splashing water on the floor, Be quiet, Keep your hands to yourself. This kind of command paints a clear picture in the child’s head of what to do.
 - A general command is vague and could leave the child confused about what action is expected. Examples: Don’t do that. John! Settle down. Show me you’re ready. Be good.
 - Ask yourself, “*Is it absolutely clear from the teacher’s words what the child is being asked to do?*”
 - If the command is given in a string of statements and part of the command is specific, then code the whole command as specific.
 - Use the ? when you cannot hear well enough to make this determination.
 - Name commands (when the teacher just calls the child’s name to change behavior) are considered to be general.
- **Positive vs. Negative (+/-/?)**
 - Code whether the child is being told what to do or what not to do. Examples of positive (to do) commands: Clean up your toys; Use your indoor voice; Be gentle. Examples of negative (not to do) commands: Stop biting Ramona; Don’t do that; Quit bothering me.
 - If the command is given in a string of statements and part of the command is positive, code the whole command as positive.

- Use the ? when you cannot hear well enough to determine if the command is positive or negative or the command is so indirect that it is truly neither.
- Name commands (when the teacher just calls the child's name) are coded with a ? because they do not tell the child what to do or what not to do.

Note: For both the specific/general distinction and the to do/not to do distinction, if you are unclear about your classification, please make it to the best of your ability and then write down the command statement verbatim on a question form so that we can use this information to aid training.

- **Successful/Unsuccessful (s/u/?)**
 - If the child changes his/her behavior as requested within 5 seconds of the command being issued, then code the command as successful. The command would be coded as successful even if after 5 seconds, the child begins the inappropriate behavior again. If the child makes an effort to follow the command within the 5 seconds, even if he/she has not finished the instructed task, code as successful. If the child does not follow the command in 5 sec, code it as unsuccessful.
 - If it is unclear if it was successful because you cannot see the outcome, code it as unclear (?).
 - If the teacher does not wait 5 seconds before repeating the command, consider that command part of the original command string and start counting 5 sec once this repeat command is issued.
 - If a child does not follow the command within 5 seconds and then the teacher reissues the command, code the commands separately.
 - Name commands (when the teacher just calls the child's name) are coded as successful, unsuccessful, or ? based on your interpretation of what command was implied in the calling of the child's name.

When to Rate Overreactivity and Laxness

Discipline (D)

- When you rate the overreactivity and laxness of a teacher's discipline response, circle "D" to indicate that it was a discipline situation (that is, it followed a child misbehavior, regardless of whether you actually *saw* that misbehavior).
- **Defining a discipline episode:**
 - You should use these dimensions to rate the *entire* discipline episode. This episode may last for more than one interval; just rate it in the interval in which it ends. A discipline episode is defined as a teacher's response to a child's misbehavior and all subsequent misbehaviors until the situation is resolved.
 - A discipline episode has ended when the teacher stops disciplining the child (commanding, lecturing, etc.) and the child has stopped misbehaving. If the child is not misbehaving (that is, is behaving appropriately or is off-camera) for 15 seconds, the discipline situation is over. Rate overreactivity and laxness in the interval in which the discipline episode *ends* (that is, at the time you *began* counting 15 seconds to check for child misbehavior).
 - If the camera pans or the child moves so that you can no longer see the child for a period of 15 seconds, you must rate the overreactivity and laxness of the

discipline, regardless of the teacher or child's behavior at the time. Thus, if there is a **total** of 15 uninterrupted seconds in which the child does not misbehave *and/or* he/she is off-camera, the discipline episode has ended.

- If a child has stopped misbehaving for a period of at least 15 seconds and then misbehaves again, this is considered a new discipline episode.
- **Whose behavior do you rate?**
 - If a teacher can be seen on camera and witnessed child misbehavior, rate the teacher's discipline response for overreactivity and laxness. Witnessing a misbehavior means the teacher was aware of the misbehavior. If you believe there is a reasonable chance the teacher did not see or hear the misbehavior, do not rate the teacher for overreactivity or laxness.
 - If 2 or more teachers witness a misbehavior, code as follows. If neither teacher responds to the misbehavior, code overreactivity and laxness for both. If both teachers respond at the same time, code overreactivity and laxness for both. If only one teacher responds, code overreactivity and laxness for that teacher only.
 - If a teacher responds from off-camera (that is, you can only hear—not see—the discipline response), code the teacher on overreactivity and laxness. If you are unsure of which teacher it is, code as other staff.
 - If a teacher disciplines a child for a misbehavior that was not visible on the tape, do not code **MisB** (because you can't be sure of the misbehavior), but do code the teacher's discipline response by circling D and coding for overreactivity and laxness.
- **What behavior do you rate?**
 - Following a child's misbehavior, pay careful attention to the teacher's response so that you can rate laxness and overreactivity. Be on the lookout for warning of consequences and administering consequences.
 - Some possible consequences of misbehavior are commands, reprimands, loss of privilege(s), time-out, physical or verbal aggression, giving the child attention, ignoring, or logical consequences (e.g., you pour water on the floor, then you clean it up). Additionally, a teacher may ignore minor misbehavior so as not to give the child attention, and/or she may praise children who are behaving appropriately to encourage a child to stop misbehaving.
 - Be aware that if a command is used as a consequence, you need to code it in the command section AS WELL AS coding the laxness and overreactivity of the *entire discipline response*. (You do **not** code that individual command for overreactivity or laxness).

Stand-alone Commands (C)

- Circle C and rate overreactivity and laxness (as described below) for commands given during the interval that were not part of a discipline response to child misbehavior (an example of a stand-alone command might be “John, it is time for you to clean up”). If commands were given as part of a discipline response, they should be considered within your overreactivity and laxness rating for the entire discipline episode (e.g., Teacher has already asked him to clean up and he has not done it, “John, I said you need to clean up now.”)

Negative Interaction (N)

- If a negative interaction occurs between a teacher and child that is *not* a discipline response or a command, code the teacher for *overreactivity only*. Examples: a teacher criticizing a child (“Don’t mess up like you did last time,” etc.), giving a child a nasty look, throwing a toy at or near a child, being physically aggressive toward a child, etc. The child or the teacher may have “started” the negative interaction. If the teacher has a negative interaction with a child within a discipline interaction, rate the complete discipline episode for overreactivity and laxness. (Do not rate the negative interaction separately).

Rating Overreactivity and Laxness

- There are 2 dimensions of discipline effectiveness. Use a 1 to 7 scale with 1 representing the most effective discipline (little to no overreactivity/laxness) and 7 representing the least effective discipline (highest level of dimensions seen on the tapes). When coding, start your rating at 4 (average level) and then move up or down the scale based on the teacher’s response.
- These dimensions are NOT opposites. A teacher could be high on both dimensions or low on both.
- Use your question sheet to guide your ratings of overreactivity and laxness.

Overreactivity (Ovr)

- This is a measure of how irritated, angry, frustrated, or annoyed the teacher seems to be. Focus on rating **HOW** the teacher is interacting with the child. The opposite of overactive is calm, firm, and business-like. Reprimands and commands can be very firm without being overreactive. Do not penalize a teacher for being firm. If a teacher criticizes or insults a child in a mean or sarcastic manner, this would be considered overreactive. It is important to watch for signs of overreactivity carefully and use the full scale to express levels of overreactivity because teachers may be guarded as a result of being taped. Even borderline instances of irritation should be noted.
- Overreactivity also involves having unreasonable expectations for the child. Discipline responses that are out of proportion with the child’s misbehavior and commands that place unreasonable demands on the child produce higher overreactivity ratings.
- Overreactivity is rated for discipline responses, commands, and any other negative interactions (criticism, put-downs, meanness, aggression toward child, etc.).

Laxness (Lax)

- Laxness refers to teachers not enforcing rules, not following through on requests or directives, and coaxing or begging children to behave rather than using firm, clear directives. The opposite of laxness is firm, consistent discipline or commands that the teacher follows through on. Focus on **WHAT** the teacher does to change the child’s behavior.
- There are 2 components to laxness. Enforcing/following through is the most important. Higher scores on this dimension occur if teachers do not enforce rules and commands. Lower scores represent firm, immediate follow through. The longer a teacher waits to enforce a rule, the higher the laxness score. (e.g., 5-10 seconds may be mild, 15-20 moderate, 20-30 severe). If a child misbehaves without consequences, a teacher should get

- an elevated laxness score if ignoring is inappropriate given the misbehavior. If the teacher gives a command and walks away before seeing if it is followed, this may indicate laxness.
- The second part of laxness is based on how firm commands are. Wimpy, coaxing, questioning, begging commands receive high scores. Good business-like commands receive a low score. Tone and inflection are important. Raising one's voice at the end of a command or tags on the end (e.g., okay?, alright?) take away from the power and add to laxness. Wordy explanations add to laxness. Direct commands that are clear and to the point expressed in a firm, business-like tone are best. When commands are given right away, they are more effective and less lax.
 - Laxness is rated for discipline responses (which may include commands) and commands that are not given in response to misbehavior.

Teaching Behavior (Tchg)

- Use this category if teaching behavior is directed towards the target child. This includes questions from the teacher (e.g., What sound does a cow make?), informational statements (e.g., Cows make a moo sound), demonstrating/helping behavior (e.g., Here is how you do that), or requests for the child to take a turn (e.g., Now you find a circle).
- Ask yourself, is the teacher trying to expand the child's knowledge or skills by what he/she is saying or doing? Teaching behavior includes both providing new information and providing a child with an opportunity to demonstrate information they already have. Be alert to teaching behavior in all different environments, including group time, free play, snack time, etc. The teacher may be teaching by asking a child questions about numbers, helping a child through the steps of making a collage, teaching a child how to tie his shoe, telling a child about different kinds of weather, etc.
- Just reading the words in a book is *not* considered teaching behavior; in order to fit this code, the teacher must make an *explicit* effort to teach something (e.g., asking questions about story). Just singing a song and doing body motions is not considered teaching behavior unless the teacher is *explicitly* teaching the child how to do it. Incidental social teaching ("You need to apologize for hurting Johnny's feelings.") is not considered teaching behavior. Remember to consider if teaching a skill/fact/etc. is the primary goal of the interaction. Giving directions on how to complete a project, perform an activity, etc. ("First you draw a straight line...") is a form of teaching behavior. Don't forget that teaching may involve the teacher offering information needed and/or helping the child to come up with the answers himself/herself.

Unengaged (UE)—a subcode of teaching

- If the child loses interest or seems off-task during the teaching activity *through the majority of the teaching behavior for that interval*, code as unengaged. If the child leaves the area of the activity before the activity has finished, code as unengaged.
- Responding to teacher's questions, asking related questions, making eye contact, watching what is happening, and staying focused on activity at hand are indicators of engagement.

Praise (Pr)

- This code is used when a teacher expresses a favorable judgement about a behavior or product of the child. This could be a verbal or nonverbal expression. When determining if the teacher is praising the child, remember that praise must follow a behavior that the

teacher wants to promote. Praise would only be coded multiple times in the same interval if the child were praised for separate behaviors. Stringing of 2 or more praise statements for the same behavior would not be coded separately.

- If the praise is sarcastic or includes put-downs, do not code it as praise. Examples: “You’re playing so nice now—not like you usually do,” “I like the way you’re cleaning. We usually have to tell you ten times,” “Good work, but I wish you had washed your hands also.” This would be considered a negative interaction and coded for overreactivity.
- Indicate if the praise is **specific or general (s/g/?)**:
 - **Specific:** Praise is coded as specific if it is clear *from the statement* what the teacher is admiring about the child’s behavior. It should answer the question, “What did the child do to deserve praise?” The teacher is labeling the behavior that he/she wants to have repeated in the future. Examples: What a great picture you drew. You did an excellent job cleaning up the blocks! I like the way you shared with Rachel. You are sitting so nicely. I’m pleased that you said thank you. You were so patient, slap me five! You really stuck with that project, John. I like it when you ...
 - **General:** General praise is less clear, more indirect, and leaves the child less certain of what he/she did to warrant positive feedback. Examples: Good job! Giving child a thumbs up sign. Good boy! Fine. Terrific. Thank you. Slap me five! Although you may know the behavior the child is being praised for, the praise should be coded according to the statement(s) used to reinforce the behavior. Ask yourself what the teacher is praising, and if it could be for a number of different qualities, behaviors, etc. then that is a clue that it is general (e.g., Super! is general because it could be for being a good helper, sharing with others, waiting for a turn, etc.).
 - **A special case:** The comment “that’s right!” after a child answers a question would be considered praise if the teacher delivers it in a positive, reinforcing manner. This praise is specific because it is praising the child for the correctness of the response.
 - If the praise includes a string of praise statements, code the praise as specific if any of the individual statements are specific.
 - The question mark code should only be used for praise when you cannot hear the full praise statement, so you are unsure if it was specific or general.

Rewards (Rew)

- This code is used when the teacher gives the target child a tangible reward or privilege (sticker, coupon, a special game to play, etc.) after the completion of an appropriate behavior. Physical contact/affection (hugs, pats on the back, etc.) are considered praise (when offered to reinforce behavior) or interactions (if given just for affection), NOT rewards. If the teacher gives the child praise and a reward to reinforce the same behavior, use both codes. We want to know all the ways that a child’s behavior is being reinforced.

Interaction (Int)

- This code is used when a teacher interacts with a child in a positive way that does not fit the definitions of praise, rewards, or teaching behavior. An interaction is defined as a verbal or physical exchange between two or more people. This may include a teacher playing with the child(ren), encouraging or comforting a child,

- giving a compliment, having a conversation with a child, actively listening to a child, etc. This code is not used for incidental involvement that is short-lived or impersonal in nature (zipping a child's jacket, bringing a cup to a child, etc.) unless the interaction involves further involvement (e.g., a pleasant conversation, etc.).
- Playing as an interaction is not merely observing kids playing. The teacher should be a *participant* in play with the child during the interval by getting involved in the activity or helping kids to become more involved (e.g., helping build a tower, "eating" a pretend meal made by kids, asking questions about the "family" the kids are acting out in the playhouse, being an audience for a child's puppet show, playing hide and seek, asking a child about his/her drawing, etc.) Remember, this code also applies when a teacher asks questions about a child's game or activity that contribute to the child's engagement in play.
 - An interaction would also be coded when the teacher says or does something to convey encouragement, support, comfort, a compliment, or other positive feelings for a child. It may be verbal, physical, or both. Examples: "You can do it." "Your new shirt is cool!," a pat on the back which isn't in response to good behavior, mussing up the child's hair in an affectionate way, etc. A pleasant conversation between teacher and child (for example, talking about their weekends) would also fit this code, as long as the conversation is not just incidental.
 - Either the teacher or the child may initiate an interaction. If the child initiates, it is only coded as an interaction if the teacher responds positively. For instance, if the child hugs the teacher and the teacher hugs back it is an interaction. If the child tells the teacher about his/her weekend and the teacher does not listen actively and shrugs off the child's comment, it is not an interaction. If the teacher initiates an interaction that fits this code, and the child is not receptive, still code it as **Int** if the teacher's actions were appropriate and fit this code.
 - If an interaction consists of praise or rewards, code the praise or reward *instead of* the interaction. Praise and rewards are specific types of interaction that occur in response to appropriate behavior. If an interaction fits the definition of teaching behavior, code teaching behavior instead. Remember, Int could be coded with these other codes if separate instances of positive interactions and one of the codes mentioned above occur in the same interval (e.g., teacher praises child and then starts to play with child or teacher involved in teaching behavior and then no longer teaching, but encouraging child).
 - This code does not include negative interactions between teacher and child. If a teacher has a negative interaction with a child (e.g., criticism, meanness, put-downs, etc.), circle **N** and code it for overreactivity.

Physical Warmth

- Indicate if the interaction involves physical warmth by circling the **P** next to the Int code. Physical warmth includes any affectionate physical contact that the teacher directs towards the child.

*Special Note: If **Int** and **MisB** occur in the same interval, indicate the order in which they occurred by writing "1" next to the one that came first, and "2" next to the one that came second.*

Proactive Strategies (Pro)

- Use this code to indicate when the teacher does or says something designed to prevent possible classroom problems.
- Possible examples include warning the children that a transition is coming soon (“You have 2 more minutes before cleanup time.”), using creative strategies to make a potentially unpleasant task more fun (for instance, a game or song about cleaning up), and talking to a child about his or her options to prevent misbehavior (“I see Johnny has been waiting for that marker for a long time. What could you do to be a good friend to Johnny?”).
- Pay particular attention whenever a teacher moves a child. If it’s not reactive (in response to misbehavior), it’s likely to be proactive.
- Think of *proactivity* as the opposite of *reactivity*; it is the actions a teacher takes *before* a possible problem situation to make a problem less likely.

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