

## Conflict Resolution Patterns of Preschool Children With and Without Developmental Delays in Heterogeneous Playgroups

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The conflict resolution patterns of preschool-age mildly developmentally delayed children were compared to those of older and younger groups of typically developing children matched on the basis of chronological age or developmental level. Children participated in short-term heterogeneous playgroups consisting of representatives from all three developmental status groups. Naturally occurring conflicts with peers in the form of extended directive episodes were assessed in terms of their frequency, purpose, strategies, and the way conflicts were resolved. Results revealed that mildly delayed children exhibit a more negative and less adaptive interaction style, even in comparison to typically developing children similar in developmental level. Special problems were apparent when younger typically developing and mildly delayed children engaged in conflict episodes, whereas typically developing older children were able to adjust and interact appropriately irrespective of their companions' developmental status. In addition, typically developing older children elicited a pattern in which other children were less demanding and negative, but more responsive, positive, and adaptive. The implications of developmental differences between younger and older typically developing children and the unique problems in conflict situations were discussed.

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Young children frequently find themselves in group settings containing play partners with diverse abilities, skills, and interests. Not only do contemporary daycare and preschool settings contain children differing in chronological age, but they often include children with disabilities as well. Analyses of the peer relationships and friendships that are formed among children in these heterogeneous settings consistently reveal that children tend to cluster in groups similar in developmental ability or status (Goldman, 1981; Guralnick & Groom, 1987, 1988).

Available evidence suggests that this clustering corresponds to a large extent with similarities and differences in children's level of peer-related social competence (Rubin, Lynch, Coplan, Rose-Krasnor, & Booth, 1994). Moreover, the proportion of children able to establish reciprocal friendships increases with chronological age (and associated social competence) over the preschool years (Guralnick & Groom, 1988; Parker, Rubin, Price, & DeRosier, 1995). However, children with developmental (cognitive) delays are at a particular disadvantage in heterogeneous settings, particularly those containing substantial proportions of typically developing children, as children with delays exhibit peer interaction difficulties beyond that which would be expected based on their developmental levels (Guralnick & Groom, 1985, 1987; Guralnick & Weinhouse, 1984). This peer interaction deficit, apparent even in children with mild developmental delays, may well account for their limited friendships and their relatively high level of isolation from typically developing children observed in heterogeneous settings (Guralnick & Groom, 1987, 1988).

The extent to which young children appropriately and successfully resolve conflicts with peers is a central aspect of this emerging social competence (Dodge, Pettit, McClaskey, & Brown, 1986; Guralnick, 1992). Of importance, conflict resolution strategies have been implicated as factors governing whether previously unacquainted children are likely to form a relationship (Gottman, 1983). As such, the role of conflicts and their resolution may well be critical in understanding the dynamics of the relationships formed by children with and without delays in heterogeneous group settings.

Opportunities to develop conflict resolution skills during social interactions with peers occur frequently in early childhood. Specifically, disputes over possessions and territory are common occurrences for toddlers (Hay & Ross, 1982). Disagreements over claims, ideas, rules, and general social control become more prominent during the preschool period, but these complement rather than replace conflict over possessions and territory (see Dawe, 1934; Eisenberg & Garvey, 1981; Genishi & DiPaolo, 1982; Killen & Turiel, 1991; Laursen & Hartup, 1989). The extent to which conflicts occur is highly situationally dependent, with estimates ranging from 2-20 conflicts per hour (Hartup, Laursen, Stewart, & Eastonson, 1988; Shantz, 1987). In general, conflicts tend to be brief, rarely exceeding 10-15 turns (Eisenberg & Garvey, 1981; Laursen & Hartup, 1989).

Once engaged in conflict, even young children participate in a dynamic process of social exchange utilizing a diverse array of strategies to achieve some form of resolution (see Shantz, 1987). The most sophisticated of these strategies are conciliatory in nature; ones that consider the perspective of their companions, such as justifying a request,

compromising by accepting a counter proposal, or providing new information that might influence the views of their companion. Simple insistence, although less sophisticated, is also a prominent strategy as is flat rejection of a request. However, threats and insults occur infrequently, as does aggression.

Analyses of conflicts arising in dyadic and group situations for young children have revealed that, despite evidence of the availability of a range of strategies described above, simple insistence, consisting of a repeated or paraphrased utterance without any substantive modification of the initial statement that precipitated the conflict, occurs most frequently, but typically does not result in the successful termination of an episode at that point (Eisenberg & Garvey, 1981; Laursen & Hartup, 1989). Offering alternative proposals, providing reasons, or other conciliatory-type strategies tend to work well but occur much less often. Interestingly, few consistent developmental trends have been observed across the preschool period (e.g., Laursen & Hartup, 1989).

Although there has been considerable interest in the conflict resolution strategies of typically developing children, virtually no research has focused on young children with disabilities. Yet the peer interaction deficit noted above observed for preschool-age children with developmental (cognitive) delays may well involve their ability to resolve conflicts. If that is the case, an understanding of the conflict resolution patterns of children with developmental disabilities provides an essential framework for developing appropriate intervention programs to improve their peer-related social competence and enhance their participation with peers in heterogeneous settings.

In the only available study involving preschool-age children with developmental disabilities, comparisons with a typically developing sample of children similar in chronological age revealed only minor differences in the frequency and source (e.g., possessions, territory) of conflicts, the strategies children employed before conflict termination, and the eventual outcome (i.e., degree of equality) of the conflict (Lieber, 1994). However, the group of children with disabilities was highly heterogeneous (consisting of children with delays in speech and language, cerebral palsy, and mild mental retardation) and differed in developmental level, ethnicity, and gender from the typically developing comparison sample.

Accordingly, in the present investigation, the first issue addressed was whether patterns of conflict differed as a consequence of children's developmental status, with a particular focus on children with developmental delays. Three groups of preschool children were involved; a mildly (cognitively) delayed group and two groups of typically developing children. Of importance, one group of typically developing children was matched on the basis of chronological age to the group of mildly delayed children, the other on developmental level (younger typically developing children). Matching of children also occurred on the basis of other relevant child and family characteristics. By matching children with mild developmental delays to typically developing children separately in terms of chronological age and developmental level, it is possible to determine whether conflict patterns of children with mild delays are consistent with their developmental levels or reflect characteristics related to their disability status (i.e., children with delays).

To evaluate the conflict patterns of each of the groups as they interacted in heterogeneous settings, short-term playgroups were formed involving children from all three developmental

status groups. As such, the primary question was directed toward identifying patterns of conflict occurring in this particular context for each group. Conflict episodes were identified from videotaped records obtained during peer-related social interactions of heterogeneous playgroups formed in a previous study (Guralnick & Groom, 1987, 1988) containing children from all three developmental status groups (mildly delayed children, chronological-age-matched typically developing children, and developmental-level-matched typically developing children). As described below, analyses of these videotaped records for this study yielded assessments of numerous features of conflicts, including their frequency, purpose, the specific strategies employed throughout each episode, the adaptiveness of those strategies, and how conflicts were resolved.

An additional purpose of this investigation was to determine if the developmental status of a child's companion during a conflict affects the nature of conflicts and their resolution. For an appropriate resolution to occur, proper adjustments must be made in accordance with the cognitive and linguistic levels of one's companion. Indeed, preschool-age typically developing children clearly are capable of making general adjustments during the course of social-communicative exchanges when interacting with children differing in chronological age (e.g., Masur, 1978; Sachs & Devin, 1976; Shatz & Gelman, 1973), as adjustments in complexity, redundancy, functional use (e.g., questions, directives), and other aspects of communication have been observed. Moreover, this ability of typically developing children extends to companions with developmental delays, despite the additional challenges of reconciling discrepancies between a companion's chronological age and developmental abilities (Guralnick & Paul-Brown, 1977, 1980, 1986). In fact, in a dyadic tutorial situation in which children continue to seek compliance from one another following initial failure to do so (a form of conflict referred to as directive episodes), typically developing children adjust their strategies appropriately throughout the episodes (Guralnick & Paul-Brown, 1984). For example, typically developing children use a combination of strategies (e.g., repeat plus motivate) more often when attempting to gain compliance from children with developmental delays than from other typically developing children. However, no information on conflict resolution patterns in relation to a companion's developmental status is available for typically developing children in naturalistic social settings. This issue will be addressed in the investigation reported here.

The experimental design selected for this study, consisting of three matched groups of children, also permitted related issues of the adjustments children with mild developmental delays may make to the developmental status of their companions to be examined within the conflict paradigm. Specifically, it has been demonstrated that mildly delayed preschool children adjust general features of their social-communicative interactions (e.g., syntactic complexity, frequency of behavior requests) to children with disabilities in a manner similar to that of typically developing children (Guralnick & Paul-Brown, 1986, 1989). However, the extent to which adjustments by mildly delayed children occur during conflict situations in which considerable social tension is created, a circumstance likely to enhance sensitivity to developmental status (see Hazen & Black, 1989), remains to be determined and will be examined in this study.

Similarly, the present design provides the opportunity to compare differences that may occur between younger (3-year-old) and older (4-year-old) typically developing children, although as noted above, few developmental differences in conflict situations have been

found across the preschool period (Shantz, 1987). During free-play interactions, despite the fact that substantial differences in cognitive and linguistic development exist between these two groups of typically developing children, they nevertheless appear to make similar overall adjustments in relation to a companion's developmental status during free play interactions (Guralnick & Paul-Brown, 1989). Moreover, results from social interaction studies of mixed-age groups have failed to yield patterns consistent enough to suggest specific hypotheses regarding comparisons between younger and older preschool-age children (see Bailey, McWilliam, Ware, & Burchinal, 1993).

Finally, we examined whether the conflict resolution patterns observed for children from the different developmental status groups who initiated conflicts were similar when these same children found themselves as companions, i.e., the child who initially failed to comply with a directive of the initiating child. Whether differences among developmental status groups are similar when a child is in the initiator as well as the companion role has not been investigated previously, but can provide valuable information with regard to the generality of children's patterns of conflict resolution.

## Method

### *Directive Episodes*

The analyses reported in this study were based on videotaped records of a previous investigation of the peer interactions of preschool-age children with and without developmental delays participating in short-term, heterogeneous playgroups (Guralnick & Groom, 1987). For the current study, utterances of all children occurring during free play were transcribed and a series of *directive episodes* were identified (see below).

As conceptualized here, a directive episode was considered to be a commonly occurring form of conflict, similar to adversative episodes described by Eisenberg and Garvey (1981), requiring some type of resolution. Directive episodes consisted of at least three components: (1) an initial request in the form of a directive statement by a child (initiator) seeking goods or services from a companion (i.e., a fully intelligible verbal utterance consisting of a request to initiate, change, or stop a companion's action or activity where verbal or behavioral compliance was expected); (2) failure to achieve compliance to that request (includes noncompliance, partial compliance, no response, or an unrelated response); and (3) at least one additional follow-up attempt by the initiator designed to achieve compliance to the initial request. This latter requirement ensured that the initial request was important to the initiator child. Once an episode occurred (episodes were required to maintain the initiating topic or purpose), it was then tracked across all initiator child-companion turns. For each episode, specific strategies used by the initiator child were coded until some resolution of the episode was achieved. In addition, information was obtained with regard to the characteristics of the initial directive request, the primary purpose of each episode, the intelligibility of utterances, and how episodes were resolved. Finally, the strategies companions used during each directive episode also were coded (see section on Measures below for details).

### *Participants*

Three groups of preschool-age boys differing in developmental status were recruited to participate in a series of heterogeneous playgroups. Specific chronological age (CA) and

intelligence test (IQ) score ranges for inclusion in the study were established for each of the three groups. Intelligence test scores were based on individual administrations of the Stanford-Binet Intelligence Scale (Terman & Merrill, 1973). For the typically developing older group, the CA range was established at 48-60 months and the IQ range from 90-125. For the typically developing younger group, established ranges were 30-42 months for CA and 90-125 for IQ. Both typically developing groups were recruited from public and private nursery schools through advertisements and direct contact with administrators and teachers.

The third group consisted of mildly developmentally delayed children recruited from the rosters of community-based service programs. Our sample appeared to be highly representative of this population, as all mildly delayed children were served by a limited number of service providers, and a relatively low (15%) refusal rate was obtained. For this group, CA range was matched to the typically developing older group (48-60 months), but with IQs ranging between 55-80. Etiologies of the delays for the mildly delayed group were frequently unknown (50%), but included children whose delays were attributed to chromosomal abnormalities, perinatal stress, and postnatal trauma.

Corresponding mental age (MA) ranges for the typically developing older, typically developing younger, and mildly delayed groups were 49-79, 32-60, and 32-54 months, respectively. As a consequence of this process, it was possible to achieve for the delayed children both a CA match (with typically developing older children) and an MA match (with typically developing younger children). Similarly, typically developing older and typically developing younger children were matched on IQ. Children also were matched on an occupation-based measure derived from the Siegel Prestige Scale (Hauser & Featherman, 1977) as recommended by Mueller and Parcel (1981) which served as an index of socioeconomic status (SES). The Preschool Language Scale (Zimmerman, Steiner, & Pond, 1979) also was administered prior to the beginning of the study. Other criteria for participation were that children were unacquainted with one another, had no prior experience in programs containing primarily typically developing children (referred to as mainstreamed programs), had no siblings with disabilities, and exhibited no major sensory, motor, or behavioral impairments.

Available children meeting the criteria described above were assigned on a random basis to eight playgroups, although on rare occasions typically developing younger children at the extreme of the MA range were excluded to ensure appropriate matches (see Table 1). As expected, language age differed significantly ( $p < .001$ ) among the groups (typically developing older > typically developing younger > mildly delayed), but no significant difference was obtained for the measure of SES ( $p > .05$ ). Statistical analysis also confirmed that appropriate matches had been achieved for CA, MA, and IQ. Each 8-child playgroup consisted of three children from the typically developing older group, three from the typically developing younger group, and two from the mildly delayed group. Although each of the eight playgroups was not identical, the established ranges as part of the inclusion criteria and the sampling procedures minimized across-playgroup variability. Within each of the three groups of children, mean differences across playgroups averaged less than 2 months for both CA and MA, and IQs varied by less than an average of 6 points. Additional details for this sample can be found in Guralnick and Groom (1987).

Table 1.

## Characteristics of the Sample for Each Group Across Playgroups

	DEVELOPMENTAL STATUS GROUP					
	Typically Developing Older (N = 24)		Typically Developing Younger (N = 24)		Mildly Delayed (N = 16)	
	M	SD	M	SD	M	SD
Chronological age (mos.)	53.75	(3.31)	36.54	(2.72)	52.25	(3.28)
Mental age (mos.)	65.50	(5.08)	44.83	(5.31)	43.25	(3.61)
Intelligence quotient <sup>a</sup>	110.83	(8.25)	106.50	(8.62)	71.56	(6.42)
Language age (mos.)	62.76	(4.20)	47.23	(5.33)	41.70	(4.96)
Socioeconomic status <sup>b</sup>	49.15	(14.88)	47.25	(10.12)	39.98	(16.37)

<sup>a</sup>Based on the Stanford-Binet Intelligence Scale (Terman & Merrill, 1973).

<sup>b</sup>Based on the Siegel Prestige Scale (Hauser & Featherman, 1977).

### Playgroup Setting and Procedures

Each playgroup operated two hours per day, 5 days per week, for a minimum of 4 weeks (20 sessions). A university-based laboratory preschool classroom supervised by a teacher and graduate student served as the setting for the playgroups. Parents typically brought their children to the playgroup and were paid \$100 plus transportation expenses. Children participated in activities typical of preschool programs, including circle time, music, art, snacks, and story. In addition a 50-minute free-play period was scheduled most days. During this time, children had access to all toys and equipment in the classroom and could move to separate areas for housekeeping, blocks, puzzles, games, etc. Although teachers generally encouraged social and play activities among the children in other activities, during free-play periods the staff limited their interactions to providing assistance to children when necessary.

Children's social and play interactions were videotaped from an adjacent observation room through a one-way mirror. The child being recorded at the time wore a specially designed lightweight vest equipped with a radiotelemetry microphone and wireless transmitter (HME model WM225A) secured in a hidden pocket in the back of the vest. In this way, both a visual and auditory record of each child's interactions could be obtained without imposing any restrictions on the normal flow of activities.

Across the 4-week period, each child was observed for a total of 100 minutes during free play. Recordings commenced on the third day of the playgroup and were divided into segments of 10 consecutive minutes for each of 10 recording periods per child. The order of recording

children in the playgroup was randomized within blocks of 8 10-minute segments, and no child was observed more than once per day (usually every other day).

### *Playgroup Transcription and Transcription Reliability*

All verbal utterances were transcribed verbatim using standard conventions for transcription (Bloom & Lahey, 1978; Schiefelbusch, 1963). A verbal utterance was defined as a unit of spoken language marked either by a pause of one second or more (Garvey & Hogan, 1973), by a change in intonation signaling its completion, or the expectation of a response from the child being addressed. Relevant context cues were recorded to aid in interpretation of utterances (e.g., gesture, tone of voice, objects used, type of activity). In addition, nonverbal utterances that consisted of distinct communicative acts were recorded. Most often, nonverbal utterances were in the form of a response such as performing an action requested or responding nonverbally to a question. Complete guidelines and examples for transcription and reliability may be obtained by writing the first author.

Reliability estimates were obtained throughout the transcription process (25% of sessions) following a period of training, with sessions randomly selected but balanced across all sessions and subjects for each playgroup. For transcription reliability, percentage agreement for utterance boundaries was 91.8% (range 89.6%-99%) and 95% (range 92.4%-97.9%) for utterance termination markers. Exact word agreement for verbal utterances occurred in 84.2% of the instances (range 80.2%-92.5%). Agreement as to the identity of the initiator and companion children for each utterance was 96.5% (range 95.7%-97.2%) and 86.1% (range 78.7%-93.2%), respectively. Reliability for intelligibility of utterances was also high, 99.6% (range 98.9%-100%). The final transcripts used for identification of directive episodes and subsequent analyses were based on decisions resulting from discussion after reviewing sections of the tapes where disagreements occurred.

### *Measures*

Four types of measures were obtained for each directive episode. First, the initial directive provided the basis for coding the *primary purpose* of the directive episode. Based on previous work (Guralnick & Paul-Brown, 1984; Rubin & Borwick, 1984), four mutually exclusive and exhaustive categories were selected: (1) seek object--gain possession of toy or object from companion; (2) direct action in play--directions or suggestions related to the play interaction not instructional in nature; (3) provide instruction--assist companion to comply by providing instructions often divided into small units and presented sequentially (e.g., give me that one; now the other); and (4) other--typically included requests to stop or prevent an action or requests for assistance (this category occurred infrequently). Second, the *initial directive type* of the initiator child was classified as either unmitigated or mitigated. Mitigated directives consisted of requests which were softened or made more polite, and typically allowed the companion some flexibility in responding (see Table 2). In contrast, unmitigated directives were explicit requests (e.g., Don't do that!; Give it to me!) in which the desired action by the companion was apparent and was not characterized by any of the mitigating forms noted in Table 2.

Within each directive episode, the unit of analysis consisted of a turn. Each turn was composed of either single or multiple verbal or nonverbal utterances. A turn continued until the child holding the floor signaled that a response from the child being addressed was



Table 2.

Overview of Main Measures Assessed for Each Directive Episode

INITIAL DIRECTIVE TYPE	INITIATOR/COMPANION INTERACTIVE STRATEGIES	PRIMARY PURPOSE OF EPISODE	EPISODE RESOLUTION
Unmitigated Directive  Mitigated Directive Politeness Reason Conditional Request Give, Offer, Share Need or Want Request Assistance Permission Request Joint Request Soft Tone	No Apparent Consequence Unrelated or Digression Insist-Positive Mitigate or Minimize Threat Provide Instruction Unmitigated Directive-Companion Mitigated Directive-Companion Refuse with No Reason Provide Reason for Noncompliance Postpone Counter-Compromise Conditional Accept Proposal Reject Proposal Compliance or Concurrence with Directive Request Reason for Prior Directive Request Reason for Noncompliance Information-Seeking Request Concurrence-Seeking Request Request Clarification Provide Reason for Prior Directive Informative Response Concurrence with Concurrence-Seeking Request Provide Clarification Initiates Information Insult	Seek Object  Direct Action in Play  Provide Instruction  Other	Full and Complete Compliance  Modified Compliance  Switch Topic  Self-Solution

expected (i.e., through content or pausing by speaker) or through interruption by the other child.

Based on the turn as the unit, a third set of measures was obtained focused on the *interactive strategies* of both the initiator and companion children. For each turn following the initial directive, a series of mutually exclusive and exhaustive strategies was coded. If more than one strategy appeared in a turn, multiple codes were recorded. From the perspective of the initiator child, strategies were defined as efforts to achieve compliance to requests, to better enable the companion to comprehend the request or its basis, or to assist or encourage the companion to carry out the request. Strategies such as insisting (either positive or negative), mitigating a prior directive, providing instruction, or providing a reason for a prior directive were included, as were highly negative strategies such as threats or insults (see Table 2). From the perspective of the companion, refusing to comply with no reason, providing a reason for noncompliance, postponing, or making a counter proposal or compromise were all possible strategies. Depending upon the interactions occurring between the children, these and other strategies (see Table 2 for entire list) could be adopted by either the initiator or companion (with two exceptions noted in the Table). A detailed coding manual providing definitions and examples can be obtained by writing the first author.

Turns within each episode were then tracked until the fourth measure, *episode resolution*, occurred. Resolution of an episode was evaluated in relation to the initial directive and was divided into four categories: (1) full and complete compliance; (2) modified compliance (e.g., initiator child accepts postponement, counter-compromise, or conditional suggestions); (3) switch topic (fail to maintain continuity); and (4) self-solution (e.g., initiator child carries out requested action).

### Reliability

Prior to coding measures used for analysis, a group of observers participated in an 8-10 week training process using videotapes from pilot playgroups. Following this training period, based on a set of pre-coded videotapes, observers were required to achieve a minimum percentage agreement for identifying directive episodes and the initial directive type (mitigated vs. unmitigated) of 80%, and meet the minimum criterion of .80 based on Cohen's kappa for each of the three remaining sets of measures described in the previous section (see Table 2). For those coding the main set of analyses, mean reliability was as follows: directive episodes (95.2%; kappa = .65); initial directive type (85.4%; kappa = .81); primary purpose (kappa = .92); interactive strategies (kappa = .94); and episode resolution (kappa = .92).

Reliability was obtained throughout the course of the study by having two observers independently code 25% of the videotapes in common for each of the eight playgroups. Following this procedure, mean reliability continued to be high: directive episodes (81.9%; kappa = .65); initial directive type (96.5%; kappa = .91); primary purpose (kappa = .90); interactive strategies (kappa = .87); and episode resolution (kappa = .83).

## Results

### Data Analysis

Analysis of the transcripts yielded a total of 958 conflict episodes. Episodes were obtained for each child (ten 10-minute sessions) when he was the focus of a particular session

(target child) and when initiating an episode when other children were the focus of the session ( $r = .69$ ,  $p < .001$  for number of episodes identified for children in target and nontarget sessions). The mean number of episodes per child varied across groups (typically developing older = 20.12; typically developing younger = 12.71; mildly delayed = 10.62). Most, but not all, children initiated conflict episodes with companions representing each of the three developmental status groups.

Following the approaches taken by Laursen and Hartup (1989), Eisenberg and Garvey (1981), and Lieber (1994) among others, we chose to pool data across individuals within each developmental status group. A legitimate concern with respect to pooling data is the generalizability of results to the three populations of preschool children (see Bakeman & Gottman, 1986). However, the extensive sampling carried out in this study (6400 minutes of recording), and the substantial number of conflicts identified, suggest the existence of a representative overall sample.

Accordingly, a series of tests for the significance of difference between two proportions ( $z$  statistic, two-tailed) was carried out as the primary approach to data analysis (Fleiss, 1981). In the first set of analyses, data were summed across companions interacted with to determine if children in the three developmental status groups who initiated conflicts differed in terms of intelligibility, primary purpose of the episode, initial directive type, episode resolution, and the types of strategies employed to resolve conflicts. The second set of analyses addressed the effects of the developmental status of the companion on the strategy selection of the initiators of conflicts from each of the three groups. In the final set of analyses, the distribution of strategies selected by children within each developmental status group was analyzed when children were in the role of companions rather than initiators.

#### *Intelligibility, Primary Purpose of Episode, Initial Directive Type, and Resolution*

For each measure, separate proportions tests were carried out for all three possible comparisons (typically developing older vs typically developing younger; typically developing older vs mildly delayed; typically developing younger vs mildly delayed) irrespective of the developmental status of the companion involved in the conflict episode. The intelligibility of utterances was high overall (95%), although typically developing older children had a higher proportion of intelligible utterances than either typically developing younger ( $p < .05$ ) or mildly delayed ( $p < .001$ ).

As seen in Table 3, the primary sources of conflicts for the directive episodes were when children were providing instruction (e.g., instructions to carry out a task—"change him into a robot") or seeking an object from the companion. The "other" category is not shown in the table. Comparisons across groups for each primary purpose revealed differences only for the provide instruction category. Proportions tests revealed that this category was a source of conflict to a greater extent for children in the typically developing older and mildly delayed than in the typically developing younger groups (typically developing older vs. typically developing younger,  $p < .001$ ; mildly delayed vs typically developing younger,  $p < .05$ ). With respect to mitigation of the initial directive, typically developing younger children had a significantly higher proportion than either of the other two groups (typically developing younger vs typically developing older,  $p < .05$ ; typically developing younger vs mildly delayed,  $p < .01$ ). The only differences for the type of episode resolution were found for the switch topic category. In this case, both mildly delayed and typically developing younger children

Table 3.

Proportions of the Three Developmental Status Initiator Groups  
for Each of the Main Measures Summed Across Companions

MEASURES	DEVELOPMENTAL STATUS INITIATOR GROUP			SIGNIFICANT GROUP DIFFERENCES
	TYPICALLY DEVELOPING OLDER (TDo)	TYPICALLY DEVELOPING YOUNGER (TDy)	MILDLY DELAYED (Mi)	
<b>PRIMARY PURPOSE</b>				
Preparation for Play	.180	.236	.171	--
Seek Object	.313	.377	.341	--
Provide Instruction	.437	.311	.412	TDo, Mi > TDy
<b>TYPE OF INITIAL DIRECTIVE</b>				
Mitigated	.414	.505	.353	TDy > TDo, Mi
<b>EPISODE RESOLUTION</b>				
Full and Complete	.329	.269	.271	--
Modified Compliance	.178	.161	.129	--
Switch in Topic	.414	.489	.524	Mi, TDy > TDo
<b>STRATEGIES</b>				
Insist Positive	.273	.356	.317	TDy > TDo
Insist Negative	.363	.328	.408	Mi > TDy
Provide Reason	.062	.032	.032	TDo > TDy, Mi
Mitigate or Minimize	.041	.049	.027	TDy > Mi
<b>ADAPTIVENESS</b>				
Nonadaptive	.478	.401	.515	Mi, TDo > TDy
Moderately Adaptive	.418	.508	.414	TDy > TDo, Mi
Highly Adaptive	.104	.091	.070	TDo > Mi

switched topics to a greater extent than the typically developing older group (mildly delayed vs typically developing older,  $p < .05$ ; typically developing younger vs typically developing older,  $p < .05$ ).

### Strategies

Table 3 presents the four strategies used most frequently across all three groups by children initiating directive episodes (omitting no apparent consequence). As expected from

previous studies, insisting strategies, both positive ( $N = 862$  occurrences) and negative ( $N = 1010$ ), occurred most often. Comparisons across developmental status groups revealed that a greater proportion of insist positive strategies occurred for typically developing younger than typically developing older children ( $p < .001$ ), but no differences were obtained involving the mildly delayed group. A different pattern emerged for insist negative. In this case, the mildly delayed group had a higher proportion than the developmentally matched younger typically developing (typically developing younger) group ( $p < .01$ ), although typically developing older did not differ from either group. However, typically developing older children did provide a reason ( $N = 131$ ) to a greater extent than did the children in either the typically developing younger ( $p < .01$ ) or mildly delayed ( $p < .05$ ) groups. Interestingly, the typically developing younger group used a greater proportion of strategies designed to mitigate or minimize a previous directive ( $N = 115$ ) (e.g., use of "please," or adding a tag question) than did the mildly delayed group ( $p < .05$ ), although none of the other comparisons reached significance.

*Adaptiveness.* To examine more closely the appropriateness of the strategies used by initiators of conflicts, each strategy was assigned an adaptiveness score indicating the extent to which the strategy was conciliatory (similar to Eisenberg & Garvey, 1981). Highly adaptive strategies considered the companion's interests and consisted of providing a reason for noncompliance, counter-compromise, conditional, accept proposal, request reason for prior directive, request reason for noncompliance, provide reason for prior directive, and concurrence with concurrence-seeking request. Each of these strategies was assigned a score of 3. Moderately adaptive strategies were those that were not classified as negative, maintained connectedness with the companion, and were often informational in nature. Strategies considered moderately adaptive were insist positive, mitigate or minimize, postpone, compliance or concurrence with directive, information seeking request, concurrence-seeking request, request clarification, informative response, provide clarification, and initiates information. Moderately adaptive strategies were assigned a score of 2. Finally, strategies considered to be nonadaptive were those that contained a negative, rejecting, or distracting component or one that would not likely maintain connectedness. Strategies classified as nonadaptive consisted of unrelated or digression, insist negative, threat, refusal with no reason, reject proposal, no concurrence with concurrence seeking request, no apparent consequence, and insult. The nonadaptive strategies were assigned a score of 1. The category "can't tell" was not included in the adaptiveness classification.

As seen in Table 3, both mildly delayed and typically developing older groups had a higher proportion of strategies that were nonadaptive than did the typically developing younger group (mildly delayed vs. typically developing younger,  $p < .001$ ; typically developing older vs. typically developing younger,  $p < .001$ ). The pattern for moderately adaptive strategies revealed that the typically developing younger group had a higher proportion than either the typically developing older ( $p < .001$ ) or mildly delayed groups ( $p < .001$ ). However, the typically developing older children used a significantly higher proportion of highly adaptive strategies than did the mildly delayed group ( $p < .05$ ), although no other comparisons were significant. Accordingly, these analyses suggest that the most consistent pattern can be found for the mildly delayed group. Specifically, mildly delayed children, in conjunction with one of the other groups, had the highest proportion of strategies that were nonadaptive and the lowest proportions of moderately and highly adaptive strategies.

### *Effects of Companions' Developmental Status*

The second set of analyses examined whether the developmental status of the companion affected each initiator groups' interactions for each of the measures. Analyses were carried out only for those measures in which group differences were obtained in the previous analyses (see Table 3) in order to minimize the number of statistical comparisons. Although some information may be lost, the absence of any "main effects" given the substantial developmental status differences among initiator groups suggests the existence of a measure with limited psychological meaning in this context.

Because of the unequal number of episodes directed to each companion group by initiator groups, a proportional distribution measure was created for these comparisons. This proportional distribution measure indicated how children in each initiator group distributed the categories for each measure separately for each companion group. For example, for the primary purpose categories, the total number of episodes directed to other typically developing older companions served as the base rate for typically developing older initiators. Following this, the distribution of proportions for the typically developing older initiators across the four primary purposes was determined (summing to 1.00). This procedure was then repeated for the typically developing older-initiator and typically developing younger-companion groups and the typically developing older-initiator and mildly delayed-companion groups. The same procedure was then followed for the typically developing younger and mildly delayed initiator groups.

For the primary purpose measure, significant results were obtained for provide instruction. As seen in Table 4, when typically developing older children were the initiators, the purpose of the episode when interacting with both mildly delayed and typically developing younger companion children was proportionally greater in comparison to interactions with the typically developing older companion group (mildly delayed vs. typically developing older,  $p < .001$ ; typically developing younger vs typically developing older,  $p < .001$ ). The identical pattern was obtained for the typically developing younger initiator group (mildly delayed vs typically developing older,  $p < .01$ ; typically developing younger vs typically developing older,  $p < .05$ ). However, no differences were obtained for the mildly delayed initiator group as a function of companion. Accordingly, typically developing older companions were least often the recipients of instructions as the source of the conflict by both younger and older typically developing children.

A similar pattern (see Table 4) in which the typically developing older companion group produced a unique influence was obtained for the type of initial directive (mitigation). In this instance, both typically developing older and typically developing younger initiator groups mitigated their initial directive proportionally more often to typically developing older companions than to either typically developing younger ( $p < .01$ , both tests) or mildly delayed companions ( $p < .01$ , both tests). Once again, no differences were found for the mildly delayed initiator group.

For episode resolution, analyses were carried out only for switch topic (not included in Table 4). For this category, the only significant effect was obtained for the typically developing younger initiator group. Specifically, typically developing younger initiators switched topics proportionally more often to typically developing older companions than to typically developing younger companions ( $p < .05$ ).

Table 4.

Proportions Directed to the Three Developmental Status Companion Groups by Initiator Groups for Each Measure

MEASURE AND DEVELOPMENTAL STATUS INITIATOR GROUP	DEVELOPMENTAL STATUS COMPANION GROUP			SIGNIFICANT GROUP DIFFERENCES
	TYPICALLY DEVELOPING OLDER (TDo)	TYPICALLY DEVELOPING YOUNGER (TDy)	MILDLY DELAYED (Mi)	
Purpose: Provide Instruction				
TDo	.297	.486	.558	Mi, TDy > TDo
TDy	.204	.331	.417	Mi, TDy > TDo
Mi	.302	.420	.500	--
Initial Directive: Mitigated				
TDo	.514	.374	.333	TDo > TDy, Mi
TDy	.641	.424	.452	TDo > TDy, Mi
Mi	.465	.321	.304	--
Strategy: Insist Positive				
TDo	.328	.260	.226	TDo > TDy, Mi
TDy	.424	.369	.269	TDo, TDy > Mi
Mi	.472	.295	.256	TDo > TDy, Mi
Strategy: Insist Negative				
TDo	.210	.419	.479	Mi, TDy > TDo
TDy	.242	.287	.463	Mi > TDy, TDo
Mi	.245	.444	.456	Mi, TDy > TDo
Adaptiveness: Nonadaptive				
TDo	.309	.548	.578	Mi, TDy > TDo
TDy	.314	.376	.516	Mi > TDy, TDo
Mi	.353	.541	.578	Mi, TDy > TDo
Adaptiveness: Moderately Adaptive				
TDo	.555	.363	.335	TDo > TDy, Mi
TDy	.576	.520	.426	TDo, TDy > Mi
Mi	.578	.384	.355	TDo > TDy, Mi
Adaptiveness: Highly Adaptive				
TDo	.136	.089	.086	TDo > TDy, Mi
TDy	.110	.105	.058	TDo, TDy > Mi
Mi	.069	.074	.066	--

*Strategies.* For the two most prominent strategies, insist positive and negative, developmental status of the companion exerted considerable influence over initiator groups' strategies occurring during the episodes. For insist positive, the typically developing older initiator group directed a proportionally greater number of these strategies to the typically developing older companion group than to the typically developing younger ( $p < .01$ ) or mildly delayed ( $p < .01$ ) companion groups. The mildly delayed initiator group produced precisely the same pattern ( $p < .01$ , both tests), whereas the typically developing younger initiator group addressed proportionally more insist positives to typically developing older than mildly delayed companions ( $p < .001$ ) and to typically developing younger than mildly delayed companions ( $p < .01$ ). These patterns reflect the fact that, overall, typically developing older children were the recipients of a greater proportion of insist positives than the other two companion groups, whereas the mildly delayed children had that strategy directed to them proportionally least often (see Table 4).

The opposite pattern was obtained for the insist negative strategy. In this case, both typically developing older and mildly delayed initiator groups addressed a proportionally smaller number of insist negative strategies to the typically developing older companion group compared to both typically developing younger and mildly delayed companion groups ( $p < .001$ , all four tests). However, the typically developing younger initiator group interacted differently with the mildly delayed companion group in comparison to the other two groups. Analyses indicated that the mildly delayed companion group received proportionally more insist negatives than either the typically developing younger ( $p < .001$ ) or the typically developing older ( $p < .001$ ) companion groups (see Table 4).

For the two less frequently utilized strategies, provide reason for prior directive and mitigate or minimize, the results were more ambiguous. For provide reason, differences were found only for the typically developing younger initiator group. For this group, the typically developing older companion group had this strategy directed to them proportionally less often than either of the other two companion groups ( $p < .01$ , both tests). For the mitigate or minimize strategy, differences were obtained only for the typically developing older initiator group. In this case, the typically developing younger companion group had this strategy directed to them proportionally less often than either the typically developing older ( $p < .05$ ) or mildly delayed ( $p < .05$ ) companion groups. None of the other comparisons reached statistical significance, but interpretation was further complicated by the relatively small number of cases in comparison to the insist strategies. Consequently those measures have not been included in Table 4.

*Adaptiveness.* In the final set of analyses in this section, the influence of a companion's developmental status on the adaptiveness of strategies for each initiator group was examined. For strategies that were nonadaptive, for both typically developing older and mildly delayed initiator groups, the typically developing older companion group was interacted with differently. Specifically, proportionally fewer strategies that were nonadaptive were directed to them in comparison to mildly delayed ( $p < .001$ , both tests) and typically developing younger ( $p < .01$ , both tests) companion groups. For the typically developing younger initiator group, the mildly delayed companion group received proportionally more strategies that were nonadaptive in comparison to both the typically developing younger ( $p < .001$ ) and typically developing older ( $p < .001$ ) companion groups. Accordingly, in general, the typically developing older companion group received the smallest proportion of strategies that were



nonadaptive, whereas the pattern for the mildly delayed companion group was to receive proportionally more strategies that were nonadaptive, overall, but especially from typically developing younger children (see Table 4).

For moderately adaptive strategies, the mildly delayed companion group was similarly differentiated from the other two groups by typically developing younger initiators. Both typically developing older ( $p < .001$ ) and typically developing younger ( $p < .05$ ) companion groups received a proportionally larger number of moderately adaptive strategies than the mildly delayed companion group. For the typically developing older and mildly delayed initiator groups, however, the typically developing older companion group had proportionally more moderately adaptive strategies addressed to them than either the typically developing younger ( $p < .01$ , for both initiator groups) or mildly delayed ( $p < .001$ , for both initiator groups) companion group (see Table 4).

Finally, highly adaptive strategies occurred least frequently, presenting a similar though less consistent pattern than found in previous analyses. For the typically developing older initiator group, the typically developing older companions had proportionally more highly adaptive strategies directed to them than either the typically developing younger ( $p < .05$ ) or mildly delayed ( $p < .05$ ) companion groups. For the typically developing younger initiator group, the mildly delayed companion group received proportionally fewer highly adaptive strategies than either the typically developing older ( $p < .05$ ) or typically developing younger ( $p < .05$ ) companion groups. The mildly delayed initiator group used highly adaptive strategies least often, and their proportional distribution was not influenced by the developmental status of the companion group (see Table 4). Once again, however, from an overall perspective, mildly delayed children received proportionally the least number of highly adaptive strategies from initiator groups.

### *Conflict Resolution Patterns of Companions*

In the following analyses, comparisons were carried out across developmental status groups when children were in the role of companions rather than initiators of the directive episodes. Although involved in a conflict, their role as the object of the initial directive may yield a different pattern of strategies, adaptiveness, and adjustments in relation to the developmental status of the initiator of the conflict. These issues are examined next.

*Strategies.* In contrast to the role of initiator, the four most frequently occurring strategies as companions were no apparent consequence, refusal with no reason, comply/concur with directive, and provide reason for noncompliance. Comparisons across developmental status groups (proportions tests, two-tailed) revealed a number of differences for three of the four strategies (no differences were found for comply/concur with directive). For no apparent consequence, the proportion of use was higher for the mildly delayed group than either the typically developing older ( $p < .001$ ) or typically developing younger ( $p < .001$ ) groups (see Table 5). In contrast, refuse with no reason yielded differences in the order typically developing younger > mildly delayed > typically developing older (typically developing younger vs mildly delayed,  $p < .01$ ; typically developing younger vs typically developing older,  $p < .001$ ; mildly delayed vs typically developing older,  $p < .05$ ). Analyses for provide reason for noncompliance also yielded differences among the three groups but in the order typically developing older > typically developing younger > mildly delayed (typically

developing younger vs mildly delayed,  $p < .001$ ; typically developing younger vs typically developing older,  $p < .05$ ; mildly delayed vs typically developing older,  $p < .001$ ). Accordingly, as companions in a conflict, mildly delayed children were least responsive and provided

Table 5.

Proportions for the Three Developmental Status Companion Groups  
for Selected Strategies Summed Across Initiators

MEASURES	DEVELOPMENTAL STATUS COMPANION GROUP			SIGNIFICANT GROUP DIFFERENCES
	TYPICALLY DEVELOPING OLDER (TDo)	TYPICALLY DEVELOPING YOUNGER (TDy)	MILDLY DELAYED (Mi)	
<b>Strategies</b>				
No Apparent Consequence	.401	.379	.475	Mi > TDo, TDy
Refuse With No Reason	.225	.312	.264	TDy > Mi > TDo
Provide Reason for Noncompliance	.054	.035	.010	TDo > TDy > Mi
<b>Adaptiveness</b>				
Nonadaptive	.675	.746	.775	Mi, TDy > TDo
Moderately Adaptive	.222	.193	.176	TDo > Mi
Highly Adaptive	.104	.061	.049	TDo > TDy, Mi

fewest reasons for their noncompliance, even in comparison to a developmentally matched group of children (typically developing younger). However, the typically developing younger companions did refuse with no reason to a greater extent than the mildly delayed group (see Table 5).

**Adaptiveness.** Adaptiveness analyses, including all strategies, revealed a number of interesting patterns.<sup>1</sup> Specifically, both mildly delayed and typically developing younger comparison groups had a higher proportion of nonadaptive strategies than did the typically developing older companion group (typically developing younger vs typically developing older,  $p < .001$ ; mildly delayed vs typically developing older,  $p < .001$ ). Comparisons for moderately adaptive strategies revealed only a higher proportion for typically developing older than mildly delayed ( $p < .01$ ). The typically developing older group also had the highest proportion of highly adaptive strategies (typically developing older vs typically developing younger,  $p < .001$ ; typically developing older vs mildly delayed,  $p < .001$ ). Most

<sup>1</sup> The unique companion only strategies were classified as follows: unmitigated directive = 1; mitigated directive = 2.

evident in these analyses was the greater adaptiveness of the typically developing older group (least nonadaptive; most highly adaptive), but with no differences occurring between typically developing younger and mildly delayed companion groups (see Table 5).

*Adjustments to Initiator Groups by Companions.* Analogous to previous analyses, the influence of the initiator groups' developmental status on the companion groups' use of strategies was examined for all measures that significantly differentiated among the companion groups when summing across initiators (see Table 5). For no apparent consequence, the typically developing older companion children had a higher proportion when interacting with both mildly delayed and typically developing younger initiator groups than when interacting with typically developing older initiators (mildly delayed vs typically developing older,  $p < .001$ ; typically developing younger vs typically developing older,  $p < .01$ ). Typically developing younger companions again interacted differently with mildly delayed children, even when the latter were initiators. Specifically, the mildly delayed initiator group had a higher proportion of the no consequence strategy addressed to them than either typically developing younger ( $p < .05$ ) or typically developing older ( $p < .01$ ) initiators by typically developing younger companions. Mildly delayed companions did not distinguish among initiator groups (see Table 6).

The refuse with no reason strategy revealed differences for both typically developing older and mildly delayed companion groups. For typically developing older companions, typically developing younger initiators received a higher proportion than typically developing older initiators ( $p < .01$ ). For mildly delayed companions, typically developing younger initiators were interacted with differently, receiving a higher proportion of refusals without a reason than either mildly delayed ( $p < .05$ ) or typically developing older ( $p < .01$ ). For provide reason for noncompliance both typically developing older and typically developing younger companion groups produced the same pattern. For both groups typically developing older initiators received a higher proportion than mildly delayed initiators ( $p < .05$ , both tests).

The influences of the developmental status of initiator groups on the adaptiveness of companion groups followed a pattern similar to that when roles were reversed. Specifically, typically developing older companions had a smaller proportion of nonadaptive strategies when interacting with other typically developing older initiators than children from either mildly delayed or typically developing younger initiator groups (typically developing older vs mildly delayed,  $p < .001$ ; typically developing older vs typically developing younger,  $p < .01$ ). In contrast, typically developing younger companions used a higher proportion of nonadaptive strategies when interacting with mildly delayed than either typically developing older or typically developing younger initiators (mildly delayed vs typically developing older =  $p < .001$ ; mildly delayed vs typically developing younger,  $p < .01$ ). No differences were obtained for mildly delayed companions across initiator groups. Once again, the patterns for typically developing younger and mildly delayed companion groups reflect the unique difficulties experienced when children from these two developmental status groups interact with one another.

Analyses for moderately and highly adaptive strategies also followed a pattern similar to the initiator analyses. For typically developing older companions, a greater proportion of moderately adaptive strategies were addressed to typically developing older initiators than

Table 6.

Proportions Directed to the Three Developmental Status Initiator Groups by Companion Group for Each Measure

MEASURES AND DEVELOPMENTAL STATUS COMPANION GROUP	DEVELOPMENTAL STATUS INITIATOR GROUP			SIGNIFICANT GROUP DIFFERENCES
	TYPICALLY DEVELOPING OLDER (TDo)	TYPICALLY DEVELOPING YOUNGER (TDy)	MILDLY DELAYED (Mi)	
Strategy: No Apparent Consequence				
TDo	.345	.441	.535	Mi, TDy > TDo
TDy	.349	.370	.457	Mi > TDy, TDo
Mi	.498	.450	.464	--
Strategy: Refusal With No Reason				
TDo	.198	.270	.215	TDy > TDo
TDy	.310	.317	.310	--
Mi	.233	.325	.236	TDy > Mi, TDo
Strategy: Provide Reason for Noncompliance				
TDo	.067	.047	.021	TDo > Mi
TDy	.041	.039	.016	TDo > Mi
Mi	.008	.008	.018	--
Adaptiveness: Nonadaptive				
TDo	.595	.751	.806	Mi, TDy > TDo
TDy	.717	.729	.834	Mi > TDy, TDo
Mi	.765	.805	.750	--
Adaptiveness: Moderately Adaptive				
TDo	.285	.149	.151	TDo > Mi, TDy
TDy	.216	.200	.130	TDo, TDy > Mi
Mi	.188	.161	.175	--
Adaptiveness: Highly Adaptive				
TDo	.120	.101	.043	TDo, TDy > Mi
TDy	.066	.071	.037	--
Mi	.048	.034	.075	Mi > TDy

to either typically developing younger ( $p < .001$ ) or mildly delayed initiators ( $p < .01$ ). The typically developing younger companion group again interacted differently with mildly delayed children, producing a lower proportion of moderately adaptive strategies to that group in comparison to both typically developing older ( $p < .01$ ) and typically developing younger ( $p < .05$ ) initiator groups. No differences were obtained for the mildly delayed companions for moderately adaptive strategies. Finally, for the highly adaptive strategies, the mildly delayed initiator group received a smaller proportion than either the typically developing older ( $p < .01$ ) or typically developing younger ( $p < .05$ ) initiator groups from typically developing older companions. Interestingly, perhaps again reflecting the difficulties between mildly delayed and typically developing younger children, the mildly delayed companion group directed a higher proportion of highly adaptive strategies to other mildly delayed initiators than to typically developing younger initiators ( $p < .05$ ). However, the typically developing younger companion group did not distinguish among initiator groups for highly adaptive strategies.

### Discussion

This study examined the peer-related conflict resolution patterns of young children differing in developmental status when participating in heterogeneous playgroups. Of note, this study also constituted the first systematic analysis of conflicts for young children with developmental delays utilizing appropriately matched groups. In addition, analyses of children from all three developmental status groups in the roles of initiators as well as companions in conflicts provided information relevant to the generality of the findings. Due to the pooling of subjects within each of the three developmental status groups and the numerous statistical comparisons that were carried out, this discussion will emphasize only those outcomes that resulted in consistent patterns of findings.

For the first question (i.e., conflict patterns of each group occurring within heterogeneous playgroups irrespective of the companion's developmental status), comparisons among the three developmental status initiator groups revealed relatively few differences for the measures of primary purpose, type of initial directive, and the resolution of episodes. Most conflicts were the result of providing instruction during play and attempting to obtain an object from a companion (the source of nearly 75% of conflicts), with the initial directive that precipitated conflicts being mitigated approximately 40% of the time. The three groups of children were, for the most part, equally effective in obtaining various forms of resolution to the conflicts.

Overall, and in accord with previous findings (e.g., Eisenberg & Garvey, 1981), the primary strategies all groups of children used to resolve conflicts were insisting, both positive and negative. More sophisticated strategies, such as providing a reason or mitigating or minimizing a previous directive, occurred on less than 10% of the occasions. However, two consistent patterns did distinguish the two developmentally matched groups (i.e., typically developing younger and mildly delayed children). First, typically developing younger children appeared to adopt a more deferential approach. This is reflected in their more frequent use of the mitigate or minimize strategy during conflict episodes as initiators, the fact that a greater proportion of directives that initiated their conflicts were mitigated, and that they provided instruction least often as the primary purpose of the episode.

The second consistent pattern observed was the unusually difficult interactive style of the mildly delayed group. In support of this difference in styles between the two developmentally matched initiator groups, typically developing younger children had a higher proportion of insist positives than the typically developing older group whereas mildly delayed children had a higher proportion of insist negatives than the typically developing younger children. Similarly, mildly delayed initiators distinguished themselves as having the highest proportion of strategies that were considered nonadaptive and the lowest proportion of moderately and highly adaptive strategies. Even when mildly delayed children were companions rather than initiators of the conflict, they were much less responsive as indexed by the high proportion of occasions in which there was no apparent consequence to an initiator's previous turn. Although as companions, typically developing younger children refused with no reason more often than did mildly delayed children, the typically developing younger group also provided a reason more frequently. Accordingly, the overall absence for mildly delayed children of a more conciliatory approach and more negative and unresponsive style even in comparison to developmentally matched younger children suggest the existence of unique difficulties during conflicts for this group of children. This pattern is also consistent with previous analyses in which high levels of disagreements characterized the general interaction patterns of mildly delayed children (Guralnick & Paul-Brown, 1989).

Assuming that the conflict resolution style of mildly delayed children in comparison to a developmentally matched group of typically developing younger children identified in these heterogenous playgroups is robust, the question arises as to the source of these difficulties. One alternative is the difference in language between the two groups. Despite matches obtained for developmental level (as well as other relevant child and family characteristics), overall language age did differ as expected (see Miller, Chapman, & Bedrosian, 1977). Although differences in language level must remain a possibility in accounting for the conflict style found for mildly delayed children, it is an unlikely explanation for a number of reasons. First, intelligibility did not differ between the mildly delayed and typically developing younger groups during conflict episodes. Second, the most prominent strategies consisted of insist positive and negative, requiring only limited expressive language. Third, language age for the combined developmentally matched groups did not correlate, when controlling for IQ, with the combined adaptiveness score for children as initiators and companions ( $p > .05$ ). From an alternative perspective, differences in average adaptiveness, when initiators, between the two groups remained even when analysis of covariance was carried out using language age as the covariate. This suggests that nonlanguage-based factors are responsible for differences in adaptiveness during conflicts between the two developmentally matched groups. Moreover, for other samples of young children, *within* developmental status groups, language level does not correlate with more general aspects of children's social competence (Guralnick & Groom, 1985; Guralnick, Connor, Hammond, Gottman, & Kinnish, 1996).

Alternatively, the unusual conflict resolution difficulties of young children with mild developmental delays may constitute another manifestation of a more generalized peer interaction deficit discussed earlier that characterizes this group of children. Evidence for deficits in other social tasks such as peer group entry has been put forward previously (Guralnick & Groom, 1987), and many of the same difficulties associated with social-cognitive, emotional regulation, and related processes affecting children with delays may

underlie virtually all aspects of their peer-related social competence (Dodge, et al., 1986; Guralnick, 1992; Rubin & Coplan, 1992). Subsequent work evaluating important social tasks, including conflict resolution at both the behavioral (strategy) and process level may well be essential for the design of effective intervention programs (see Guralnick & Neville, 1997).

It can also be argued that differences between the mildly delayed and developmentally matched typically developing groups can be attributed to differences in social status and friendships. Children characterized as differing in social status or friendships may well experience different interaction patterns during conflicts. For example, overall, friend pairs use more conciliatory strategies (e.g., compromising or disengaging rather than standing firm), engage in lower intensity conflicts, and establish more equitable solutions (see Hartup et al., 1988; Vespo & Caplan, 1993). As revealed by previous work with this sample, mildly delayed children were least accepted, most rejected, and had the fewest friendships when compared to the other two typically developing groups (Guralnick & Groom, 1987, 1988). Perhaps the most likely sequence of events is that lower levels of peer-related social competence exhibited by the mildly delayed children, including their unusual difficulties in conflict resolution, were at least *initially* responsible for their lower social status and relative social isolation. Such difficult behavioral patterns have been shown to be associated clearly with peer rejection in similar playgroup studies (Coie & Kupersmidt, 1983; Dodge, 1983). Then, during the course of the playgroups, lower social acceptance, limited friendships, and negative reputational factors (Hymel, Wagner, & Butler, 1990) may have helped to maintain the difficult conflict resolution style of children with mild developmental delays that had already been established. More detailed analyses of the timing of behavioral patterns and social status formation are needed to examine this issue.

Whether children with mild developmental delays would exhibit these problematic conflict resolution patterns in homogeneous rather than heterogeneous group settings is an important but unanswered question. However, in a recent investigation of similar-age preschool children with and without developmental delays, comparisons between homogeneous (either all typically developing children or all mildly delayed children) and heterogeneous (both groups) settings did not yield differences for mildly delayed children in terms of their social status as reflected by peer sociometric ratings or friendships formed (Guralnick, Connor, et al., 1996; Guralnick, Gottman, & Hammond, 1996). In many respects, due primarily to the presence of typically developing children similar in chronological age, heterogeneous settings provide an initially more responsive and socially interactive environment for children with developmental delays (see Guralnick, Connor, et al., 1996), perhaps being supportive of more adaptive conflict resolution patterns than settings containing only other mildly delayed children. Findings related to the second question addressed in this study are relevant to this issue and are discussed next.

The second major issue examined in this study concerned the extent and nature of adjustments children make in relation to the developmental status of the child with whom they are engaged in conflict. One pattern observed was the adjustments that occurred when children interacted with the typically developing older group. Specifically, in the role of companion, the typically developing older group was given instructions least often, initial directives were mitigated most frequently, and typically developing older children received the highest proportion of insist positives but the smallest proportion of insist negatives.

Overall, typically developing older companions had the smallest proportion of strategies that were nonadaptive directed toward them and received the highest proportions of moderately and highly adaptive strategies.

A similar pattern was observed for the adjustments of companions directed to the three developmental status initiator groups. Specifically, children were most responsive to typically developing older initiators as indicated by the lower proportion of no apparent consequence. In addition, typically developing older initiators were the beneficiaries of more adaptive exchanges with peers during conflicts, i.e., typically developing older children received the lowest proportion of nonadaptive strategies and generally higher proportions of moderately and highly adaptive strategies. Although this pattern was not entirely shared by all three developmental status groups, especially the greater degree of similarity exhibited by typically developing younger children when interacting with typically developing younger and typically developing older children, it was nevertheless clear that the typically developing older group elicited a distinct interaction pattern in which other children were less demanding and negative, but more responsive, positive, and adaptive.

It is possible that these adjustments reflect an overall adaptation to the higher developmental or social status of the typically developing older children, indicated especially by the use of more mitigated directives addressed to them even in the initial phase of the conflict (see Parkhurst & Gottman, 1986). Alternatively, the adjustments may well be a reaction to the more adaptive strategies employed by the other typically developing older children (combining both initiator and companion adaptiveness) as suggested by Eisenberg and Garvey's (1981) analysis of the influence that a peer's prior strategies have on a child's subsequent strategies. A similar analysis carried out for our total sample for the three levels of adaptiveness revealed that, in fact, the level of adaptiveness of subsequent strategies of a child were influenced by the level of adaptiveness of a peer's prior strategy.<sup>2</sup>

Of importance, typically developing older children did not interact differently with typically developing younger children in comparison to children with developmental delays similar in developmental level. This was the case despite differences in interaction style and adaptiveness between mildly delayed and typically developing younger children noted earlier and the fact that other analyses have indicated that, overall, mildly delayed children have more frequent disagreements than typically developing younger children and receive the lowest peer sociometric ratings (Guralnick & Groom, 1987; Guralnick & Paul-Brown, 1989). Apparently, during a specific social task such as resolving a conflict, typically developing four-year-olds have sufficient social-communicative skills to make appropriate adjustments to their peers' diverse behavior patterns. This is consistent with and extends previous results, suggesting that preschool-age typically developing children are capable of appropriately adjusting their interaction patterns to children with significant developmental delays (Guralnick & Paul-Brown, 1984) during directive-type episodes in a tutorial context.

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<sup>2</sup> For each of the three levels of adaptiveness, a series of  $\chi^2$  analyses was conducted for each prior strategy (adaptiveness) comparing observed and expected distributions of subsequent strategies (adaptiveness). These analyses indicated that if the other child's prior strategy was nonadaptive, highly adaptive strategies occurred less often than expected (overall  $\chi^2(2)=16.37, p < .001$ ; specific comparison,  $\chi^2(1)=16.26, p < .001$ ), and that a prior highly adaptive strategy was more likely to result in a subsequent highly adaptive strategy (overall  $\chi^2(2)=169.65, p < .001$ ; specific comparison,  $\chi^2(1)=169.19, p < .001$ ) and less likely to be followed by a strategy judged nonadaptive (specific comparison,  $\chi^2(1) = 24.55, p < .01$ ).



In contrast, the pattern of adjustments by typically developing three-year-olds was quite different when comparing interactions with mildly delayed and other typically developing younger children. Specifically, in comparison to interactions with mildly delayed companions, strategies employed by typically developing younger initiators interacting with typically developing younger companions contained a greater proportion of insist positive and a considerably smaller proportion of insist negative strategies. Similar distinctions were evident for the three levels of adaptiveness, in which mildly delayed children had a larger proportion of strategies that were nonadaptive and the lowest proportion of moderately and highly adaptive strategies directed to them. This pattern also was observed when typically developing younger children were in the role of companions in that they were least responsive (no apparent consequence) and less adaptive overall to mildly delayed initiators (see nonadaptive and moderately adaptive strategies).

Apparently, conflicts between younger typically developing children and mildly delayed children, despite similarities in developmental level, create an unusually difficult situation. This is even a more remarkable finding when the overall deferential approach that characterizes the typically developing younger group described earlier (e.g., most frequent use of mitigate or minimize) is considered. Perhaps typically developing younger children are less tolerant of the behavioral differences mildly delayed children manifest in comparison to the typically developing younger children, or that younger typically developing children are not yet capable of making the necessary adjustments in conflict situations seen in their older counterparts.

Although developmental differences for typically developing children have been difficult to identify in previous studies (see Shantz, 1987), the typically developing older children did exhibit a more sophisticated array of conflict strategies, irrespective of the peer interacted with, in this investigation. Generally, typically developing older children provided reasons more frequently than either of the other groups, both as initiators and companions and, overall, had the highest proportion of strategies classified as highly adaptive. However, this was a relatively weak developmental difference in comparison to the consistent pattern that was obtained in terms of adjustments to children at similar developmental levels but who differed in developmental status (typically developing younger and mildly delayed group) as described above. Similarly, the fact that typically developing older children also interacted differently with typically developing younger (and mildly delayed children) in comparison to other typically developing older children, whereas typically developing younger children did not, at least for strategies, further suggests the existence of developmental differences in conflict situations. Consequently, it appears that important developmental differences between younger and older preschool children do exist in conflict situations, but emerge most prominently only under more challenging circumstances that require adaptations to a companion's behavioral style or developmental status.

The finding of developmental differences in relation to mildly delayed children is also relevant to the debate as to whether young children with developmental delays who are included in programs with typically developing children should be placed with younger or same-age peers (see Guralnick, Connor, & Hammond, 1995). Although many factors must be considered, in view of the difficulties experienced by the typically developing younger and mildly delayed groups, the ability of typically developing older children to make appropriate adjustments to both typically developing younger and mildly delayed peers during

conflicts, and the fact that typically developing older children elicit more positive and adaptive responses from play partners, there appears to be substantial support for placement of mildly delayed children with same-age peers.

Finally, for the most part, mildly delayed children failed to distinguish between other mildly delayed children and younger typically developing children. Two exceptions occurred when mildly delayed children were companions. In these instances mildly delayed children had a higher proportion of highly adaptive strategies when interacting with other mildly delayed children than with typically developing younger initiators, and refused without any reason typically developing younger initiators more often than other mildly delayed initiators. Once again, even these exceptions are consistent with the pattern suggesting the existence of a difficult relationship between mildly delayed and typically developing younger children.

Although the general findings of this study are strengthened by analyses that included children in the role of both initiators and companions, there are nevertheless a number of limitations that should be considered. First, this study consisted only of boys. Although sex differences have not been observed consistently (Laursen & Hartup, 1989), the possibility of differences occurring when adjustments to peers are required nevertheless remains. Similarly only one type of conflict, directive episodes, was evaluated. Future research should examine whether these results extend to other forms of conflict. Moreover, conflicts occurred in a heterogeneous playgroup setting with associated constraints as well as options to seek out specific play partners. A more controlled dyadic context may well yield a somewhat different pattern (Genishi & DiPaolo, 1982). Nevertheless, taken together, this study has identified important and consistent patterns of conflict behavior for young children with and without developmental delays as they interact in heterogeneous group settings.

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