

ADULT-CHILD DISCOURSE: THE CONVERSATIONAL RELEVANCE OF PAUSES

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The present investigation examined 2 to 3 year old children's responses to pauses compared to their responses to other classes of adult behavior within child initiated request sequences. The results indicated that the children responded differentially to neutral and negative adult responses. However, only some children made a similar distinction between long pauses, inter-utterance pauses greater than one second, and short pauses, inter-utterance pauses of one second or less. The data contributes to our understanding of the young child's responses to pauses and highlights the need for empirical validation of discourse segmentation procedures.

Researchers investigating child language development have devised various coding systems to describe the communicative behaviors they observe. These systems include a wide range of categories which exhibit differential dependence upon adult perceptions and interpretations. As Ochs (1979) has suggested, the effects of adult biases on the transcription and coding of children's interactive behaviors are often subtle and difficult to discern.

For example, researchers have distinguished between long and short inter-utterance pauses and frequently have interpreted a long pause as a "no response" on the part of a conversational partner (DeLong 1974; Mueller 1972; Garvey and Hogan 1973; Garvey 1975; Gallagher 1977; Wellman and Lempers 1977; Keenan 1974; Keenan and Klein 1975). The interpretation of a long pause as a conversational turn has important implications for the experimenter's interpretation of the first speaker's next utterance and the segmentation of these utterances into turn units. In these cases pause length would determine whether a child's utterances are categorized as a sequence of contiguous single utterance turns separated by "no responses" or as a single multi-utterance turn. The latter is consistent with the segmentation that has been used by Cherry and Lewis (1976).

Acknowledging the conversational relevance of long pauses is consistent with adult intuitions that reflect their own facility with language. However, it is

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not clear whether children in the early stages of language acquisition perceive these pauses as turns. Garvey and Berninger (1981) have provided evidence of a "notice missing response" in the peer dialogue of 3-5½ year old children. Their data suggest that nursery school children are sensitive to the conversational relevance of timing relationships within dialogue. It is not clear, however, if the children's ability to decode the turn exchange relevance of pauses was acquired as their ability to respond became elaborated.

If children younger than three years interpreted pauses similarly, they would be under considerable pressure to respond to adult speech not only because adults expect it, as Steffensen (1978) suggests, but because they perceive pauses as a type of response. The young child's conversational task, therefore, would involve meeting the conversational pressure to respond with very limited language structural resources.

It would enhance the accuracy of characterizations of young children's communicative competence to determine whether they, like older children and adults, treat long pauses in a conversationally distinctive manner. The purpose of the present study was to examine 2 to 3 year old children's responses to pauses compared to their responses to other classes of adult conversational behavior within child initiated request sequences. Request sequences were chosen for study since they provided a clearly identifiable speech act context for exploring distinctive conversational patterns.

Method

Subjects

The subjects were 7 children, 6 boys and 1 girl, aged 22-36 months. Their MLU ranged from 1.21 to 3.15 and the upper bound of their utterances ranged from 3 to 10 morphemes (Brown's 1973 criteria). The children had normal otologic histories and no obvious organic anomalies (see table 1).

Procedure

One hour of spontaneous conversation with an adult unacquainted with the purpose of the study was collected from each of six of the children. One child was recorded for two hours, one hour at age 22 months and one hour at age 35 months. This yielded a total sample of 8 hours.

The children were taped in their homes using a Sony TC 105 tape recorder. Throughout the taping, detailed context notes were made of child initiated request sequences. A common set of small and large age appropriate toys was provided.

Table 1

The chronological age (CA), sex, mean length of utterance (MLU) and upper bound of utterance length (UB) for the subjects.

Child	CA (months)	Sex	MLU	UB
1	23	F	1.40	3
2	26	M	1.92	5
3	24	M	2.50	6
4a	22	M	1.85	5
4b	35	M	3.15	7
5	28	M	1.21	4
6	26	M	2.72	7
7	36	M	3.12	10

Scoring categories

All of the tapes were transcribed including context notes and child-initiated direct or indirect sincere request sequences were identified. Insincere requests, those soliciting information known to the child, were not analyzed because they represented a potentially different set of constraints on the child's behavior. An example of an insincere request was a child asking "Where my money?" after putting plastic coins in his pocket.

All child-initiated sincere verbal requests were segmented into discourse units containing potentially three contiguous speaker turns: the child's request utterance, a subsequent adult response or inter-utterance pause, and the child's next utterance. Child requests which received adult compliance were not included in subsequent analyses due to the strong bias that they would not evolve into a sequence (Wootton 1981). Child initiated request sequences were scored according to the following categories.

Child request utterances

Request subtypes included requests for action or for permission, requests for information or for confirmation, and requests for attention. Requests for clarification, a dependent speech act (Garvey 1975; Gallagher 1977), were excluded from these analyses of child-initiated request sequences because they represent a circumscribed and qualitatively different conversational event, conversational repair.

Child requests for action or for permission solicited the performance of an act, by the adult or by the child, respectively. Direct requests for action were in the imperative sentence form, for example (* indicates example):

Child: * Read book! [gives adult a book]

Adult: Are you ready for me to read?

Child: Read book!

Indirect requests for action included declarative sentence forms, for example:

Child: * I want more cookies.

Adult: You want what? [standing next to a box of cookies]

Child: Want more cookie.

and in question forms, for examples:

Child: You wanna read me?

Adult: [1.5 sec pause]

Child: You wanna read me book?

Direct requests for permission were in the yes-no question form, for example:

Child: * Can we have another one? [picking up a race car]

Adult: You've got more cars to race?

Child: More.

Indirect requests for permission were declarative in form, for example:

Child: * I wanna hold it.

Adult: No - no more cookies. [holding box of cookies]

Child: Allgone cookie.

or imperative in form, for example:

Adult: [putting small cars in a large truck]

Child: Let me do it.

Adult: [2.0 sec pause; continuing to put cars in truck]

Child: Let me. [moves toward adult]

Child requests for information or confirmation solicited information from the adult that was either unknown to the child or of which the child was unsure. All of these requests were direct in form. Direct requests for information were in the *wh*-sentence forms, for example:

Child: * Where's my (baseball) bat? [standing next to adult]

Adult: I don't know.

Child: Where's my bat? [walks toward toy box]

Direct requests for confirmation were in the yes-no sentence form, for example:

Child: * He's going back home? [looking out a window at a truck pulling away from the curb]

Adult: [1.5 sec pause]

Child: He's going back home?

Requests for attention, also all direct in form, directed the adult to look at the child, the child's activity or another specified referent and were marked by the verbs "look", "see", and "watch" or the exclamation "hey!" The following was an example:

Child: * See. [holding up ball]

Adult: What?

Child: See my ball.

Subsequent adult responses and pauses

Verbal adult responses were scored as either negative or neutral. Negative responses were statements of non-compliance or refusal. These included explicit negative sentences containing a negative particle, for example (* indicates the example):

Child: More cookie?

Adult: *No that's all, it will be supper time pretty soon.

Child: Marshmallows?

and sentences in which the negative intent was formulated implicitly by relating to the belief conditions underlying the request, for example:

Child: You can color it.

Adult: *I'm gonna go read the paper.

Child: No don't read the paper.

and:

Child: Want some juice.

Adult: *Not now.

Child: Want some juice.

Neutral responses did not indicate either compliance or non-compliance. Neutral responses could be in the form of statements or questions and included restatements of the child's request, for example (* indicates example):

Child: Want a cookie.

Adult: *You want a cookie.

Child: Cookie.

contingent queries, for example:

Child: Where my book?

Adult: *What?

Child: Where my book?

and semantically unrelated utterances, for example:

Child: You better read.

Adult: *You know what you never did for me ... you never played your xylophone.

Child: You better read me!

Inter-utterance pause lengths of greater than one second were considered sufficient to permit an adult response and therefore were considered as examples of what could be perceived as a "no response". Inter-utterance pause lengths of one second or less were considered insufficient to permit an adult response and were regarded as examples of "no opportunity to respond". Considering pause durations of longer than one second as distinctive is consistent with previous literature (Garvey and Berninger 1981; Garvey and BenDebba 1974; and Blank et al. 1979). Pause lengths were determined using a stop watch and were reported in 0.5 second intervals.

Subsequent child utterances

Each child utterance following a pause of one second or less, a pause of more than one second, a neutral adult response, or a negative adult response was compared to the initial request and scored as a repetition, a revision, or an abandonment.

Subsequent child utterances were scored as repetitions if the second child utterance was an exact repetition of the first position utterance as in the following example (* indicates example):

Child: Can I play it for awhile? [standing next to a record player]

Adult: [3 sec pause]

Child: * Can I play it for awhile?

The child's second utterance was scored as a revision if it differed from his first utterance but maintained the same sentence type, as in the following example (* indicates examples):

Child: Where's a bat go? [points toward closet]

Adult: [pauses 1.5 sec; continues sitting and holding ball]

Child: * Where's my bat?

or varied in sentence type, as in the following example:

Child: Let's have another book. [holding book]
Adult: [pause 2.5 sec; continues to push truck]
Child: * Can we have another one? [holding book]

If the child's second utterance did not pursue his initial request, it was scored as an abandonment, as in the following example:

Child: [pulls at window on toy garage; looks at adult] Off!
Adult: Let's play with the truck.
Child: * Me! [reaches for truck]

Reliability

Approximately 10% of the tapes were transcribed and scored by an independent observer. Transcription reliability with the experimenters was 90% and scoring reliability was 92%. The reliability for scoring inter-utterance pause lengths between the experimenters and the observer was 96%.

Results

A total of 638 request sequences were scored. The mean across the samples was 80 with a range of 45–103. The data were converted to proportional frequencies and the children's individual profiles were compared. The percentage frequencies of request subtypes varied across children (see table 2). Pause lengths greater than one second ranged from 1.5–16.0 seconds.

The percentage frequencies of the children's request repetition, revision, and abandonment following neutral and negative adult responses and following pauses of less than and pauses of greater than one second are reported in tables 3 and 4. The subscript 'a' for Subject 4 indicates that these data represent his responses at 22 months of age, and the subscript 'b' represents his responses at 35 months of age. The inclusion of Subject 4's data permitted a longitudinal comparison with the cross sectional data obtained from the other subjects, whose ages ranged across this period of development, 22–36 months.

The data regarding the frequency with which the children abandoned their initial request presented in table 3 indicate that all of the children and Subject 4 at both ages responded differentially to neutral adult responses compared to negative adult responses. A paired comparison *t*-test examining the data from all of the subjects and Subject 4 at time 'a' only indicated that the proportional frequency of abandonment decreased significantly following neutral adult

Table 2

The percentage frequencies of request subtypes for each child.

Child	Action/ permission (%)	Information/ confirmation (%)	Attention (%)
1	67	23	10
2	99	1	0
3	78	18	4
4a	92	4	4
4b	71	14	15
5	69	4	27
6	22	75	3
7	52	45	3

responses compared to negative adult responses ($t = 10.71$, $df = 6$, $p < 0.01$) (see fig. 1). All of the children, even the youngest and those at the early language development stages responded to the adult's neutral statements as if they reflected a higher probability than the adult's negative response that the children's requests could be ultimately granted.

The frequency of abandonment following inter-utterance pauses of greater than one second compared to the frequency following neutral adult responses presented in tables 3 and 4 indicated that all of the children responded differentially to these two types of adult response. A paired comparison t -test of the data from all of the children and Subject 4 at time 'a' only indicated that the proportional frequency of abandonment decreased significantly following inter-utterance pauses greater than one second compared to neutral adult responses ($t = 5.70$, $df = 6$, $p < 0.01$) (see fig. 2). The children responded to

Table 3

The percentage frequencies of request repetition (Rep), revision (Rev), and abandonment (Ab) following neutral and negative adult responses for each child.

Child	Neutral			Negative			Total (<i>N</i>)
	Rep (%)	Rev (%)	Ab (%)	Rep (%)	Rev (%)	Ab (%)	
1	4	56	40	0	18	82	36
2	9	48	43	0	21	79	37
3	15	46	39	17	0	83	19
4a	24	62	14	6	50	44	103
4b	0	69	31	0	0	100	26
5	5	50	45	0	10	90	32
6	7	23	70	0	8	92	55
7	3	65	32	7	32	61	68

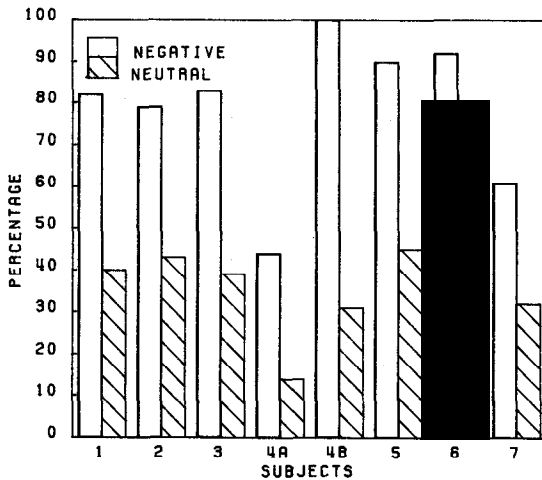


Fig. 1. The percentage frequencies of request abandonment following neutral adult responses compared to negative adult responses for each child.

pauses of greater than one second as though they reflected an even higher probability than neutral statements that their requests could be ultimately granted.

The data regarding the frequency of the children's request revisions indicated that three of the children and Subject 4 at 35 months of age responded differentially to inter-utterance pauses of one second or less compared to pauses of greater than one second. A paired comparison *t*-test examining the

Table 4

The percentage frequencies of request repetition (Rep), revision (Rev), and abandonment (Ab) following a pause less than one second and following a pause greater than one second for each child.

Child	< 1 second			> 1 second			Total (N)
	Rep (%)	Rev (%)	Ab (%)	Rep (%)	Rev (%)	Ab (%)	
1	8	92	0	0	100	0	21
2	41	57	2	40	60	0	34
3	38	62	0	28	67	5	26
4a	33	67	0	25	75	0	13
4b	27	50	23	0	80	20	32
5	60	40	0	18	64	18	58
6	38	53	8	18	73	9	48
7	33	60	7	7	80	13	30

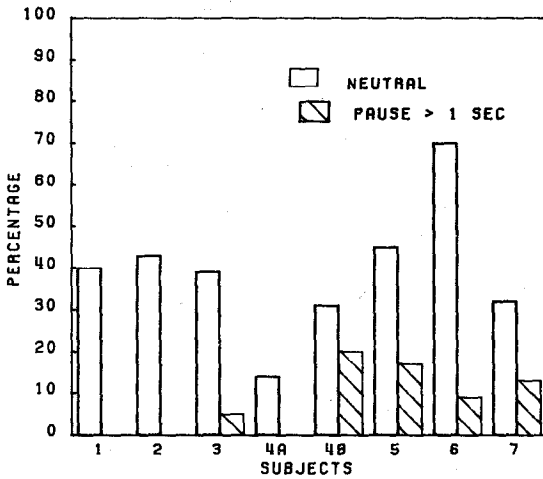


Fig. 2. The percentage frequencies of request abandonment following pauses greater than one second compared to neutral adult responses for each child.

data of Subjects 5, 6, and 7 indicated that the frequency of revision of their initial requests decreased significantly following short pauses compared to long pauses ($t = 16.0, df = 3, p < 0.01$) (see fig. 3). These children responded as though longer pauses were a type of “no response” on the part of their adult partner that was conversationally distinctive from the short pauses. Subject 4’s data at time ‘b’ were consistent with this trend.

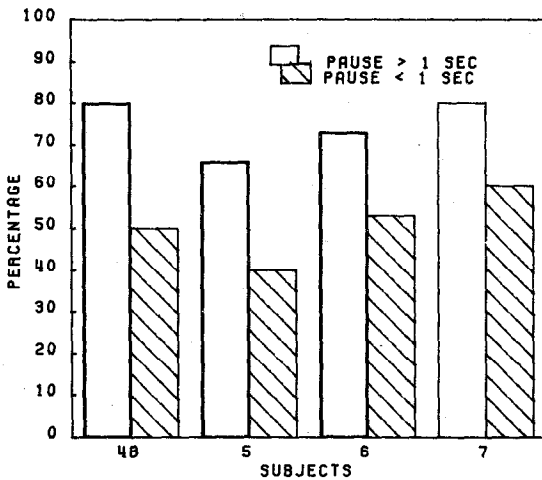


Fig. 3. The percentage frequencies of revisions following pauses of one second or less compared to pauses greater than one second for three subjects and Subject 4 at 35 months of age.

Three of the children and Subject 4 at 22 months of age, however, did not respond differentially to inter-utterance pauses of one second or less compared to pauses lasting longer than one second. The proportional frequency of revisions of their initial requests remained essentially the same (see fig. 4). These data clarify that the higher frequency of revision responses following pauses greater than one second for Subjects 4b, 5, 6, and 7 were not artifacts of their inability to re-produce their original request because of memory limitations. In other words, revision did not occur with a higher frequency following long pauses compared to short pauses because the children were less able to remember their original request. Had that been the case this effect would have been observed in the younger, less language structurally developed children (Subjects 1, 2, 3, 4a) with equivalent or even greater magnitude since their memory limitations were probably greater than those of the other children.

The data were also analyzed to determine whether an uncontrolled variable, the frequency of occurrence differences among the three types of requests that provided the data base for this study influenced the results obtained. Since the frequency of the three request types varied widely across subjects (see table 2) and all of the children responded differentially to negative, neutral, and pauses greater than one second, the effect of request type was not observed in these data. Furthermore, comparisons of individual subject responses within and across the two groups of children who did and did not respond differentially to long and short pauses also indicated that the variable frequency of request type could not account for the results obtained. The frequency of occurrence of requests for action, for example, could vary widely across children within a

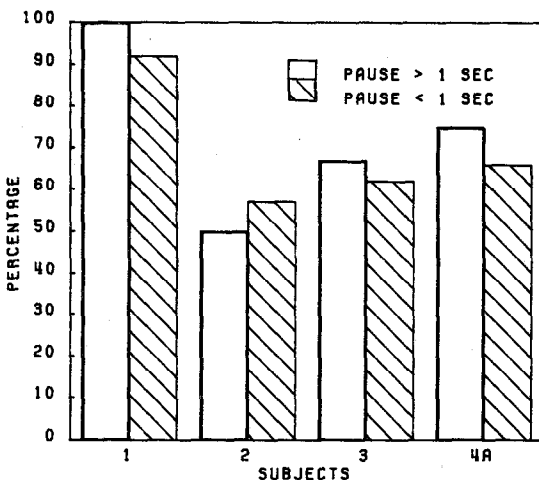


Fig. 4. The percentage frequencies of revisions following pauses of one second or less compared to pauses greater than one second for three subjects and Subject 4 at 22 months of age.

group (e.g. 22% for Subject 6 and 71% for Subject 4b, and 67% for Subject 1 and 99% for Subject 4a) or conversely be essentially equivalent across groups (e.g. 67% for Subject 1 and 69% for Subject 5, and 78% for Subject 3 and 71% for Subject 4b).

Discussion

The results of this investigation indicate that these children, approximately 2 to 3 years of age, responded differentially to neutral adult responses compared to negative adult responses. Only some of them, however, made a similar distinction between long pauses (inter-utterance pauses of greater than one second) and short pauses (inter-utterance pauses of one second or less). The behavior of this latter group of children suggests that they perceive long pauses as a distinct response class that has conversational relevance. The description of long pauses in these cases as "no responses" on the part of the child's conversational partner is indicated by both the child's behavior and the adult's perception of the event.

The children who responded differentially to long pauses compared to short pauses tended to be older and to have longer MLU values than those who did not respond differentially. This trend was supported by the longitudinal data of Subject 4. There was overlap, however, among the children for both age and MLU. Since the variability observed across this relatively small number of children probably would be increased in larger groups of children, the language researcher should proceed cautiously. Investigators attempting to characterize the conversational interactions of children within this age range should not interpret long pauses as "no responses" unless there is evidence within the child's own sample that such pauses elicit a differential response. With patterns such as those exhibited by Subjects 5, 6, and 7 and Subject 4 at time 'b', long pauses could be characterized appropriately as "no responses" with the corresponding segmentation procedures that this implies. This would not be appropriate, however, for Subjects 1, 2, and 3 and Subject 4 at time 'a'. The data as a whole suggest that factors in addition to age and stage of language structural acquisition, such as discourse history and social experience, may influence the child's interpretation of the conversational relevance of pauses.

It is interesting to note that Wootton's (1981) analysis of adult behavior relative to the eventual outcomes of the child initiated request sequences of older children, aged 3;10-4;2 years, is consistent with the data reported in this study. Wootton observed that parents sometimes employed "delay tactics" as responses to child requests which the children perceived as indications that the parents had not "made up their minds". Although there were some scoring category differences between the two studies, Wootton included among those "delay tactics" utterances that would be defined as neutral responses in this

study. He also observed inter-utterance pauses that were longer following non-initial parental compliance.

The behavior of the children in this study was, therefore, functionally appropriate, relative to later conversational development. For all of the children their distinctions between negative and neutral responses and for some children, their distinctions between long and short pauses were functionally appropriate. Wootton has clarified that as children become older these classes of adult response behavior are incorporated into distinct parental strategies for the management of granting and rejections.

In summary, the data from this investigation contributes to our understanding of the young child's responses to pauses and highlights the need for the empirical validation of discourse segmentation procedures.

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