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Peer Co-Narration: Changes in Structure of Preschoolers' Participation

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This article represents the interactional approach to the study of child narration. The analyses reveal the process of story creation by children in the roles of narrator and co-narrator. In building a narrative text alone (solo narration) or together with another child (co-narration), the child transmits new information to the peer listener about the adventures of storybook heroes. Nine hundred and sixty children ranging in age from 3 to 7 years took part in the investigation (384 in narrator and co-narrator roles and 576 in listener roles).

A modified version of Peterson and McCabe's (1983) method of narrative analysis was used. The results showed that co-constructed narratives underwent change with age in reference complexity (greater change than in solo constructed ones). Co-narrator contributions were analyzed in terms of (a) new reference content (introducing new reference situations), and (b) operations upon the partner's text (in various categories mainly confirmational and supplementary). The dominant partner in introducing new content was the initiator of the discourse, whereas the dominant one in performing text operations was the continuer. Changes across the age span were found in both types of co-narrator contribution. These results showed the changing structure of preschoolers' participation in co-narrative discourse. *(Psycholinguistics)*

The purpose of this study is to explore the pragmatic collaboration of children in the process of narrative communication. We analyze the processes of co-narration and solo narration of preschoolers. The research questions deal with the kinds of texts constructed by children independently as well as together with a peer partner, and their strategies in co-narrator roles.

CO-NARRATIVE DISCOURSE TASK FOR CHILDREN: BASIC CONSIDERATIONS

The child's ability to co-construct a text with a more competent partner (adult) is ontogenetically prior to the ability to construct a text individually. In the early period of language acquisition (one- to two-word stage), the child transmits semantic information by placing utterances in meaningful relations with those of speaking partners (Greenfield & Smith, 1976; Shugar, 1978). Over the course of development of children's language ability, syntactic and discourse skills are reorganized, enabling the child to become a competent source of information for others (Bokus, 1979; Snow & Goldfield, 1982). With the growth of skills in constructing text independently, the child's ability to build text conjointly with others does not disappear. On the contrary, such ability can be expected to increase with the growth of children's dialogue skills and to manifest itself not only in discourse with an adult but also in child–child and child–group interaction (as shown by Keenan & Klein, 1975; Shields, 1976). Children's expanding knowledge about states, objects, persons, and events in the surrounding world constitutes an increasingly articulated reference base from which to make assessments, modifications, and supplementations in respect to others' utterances. At the same time, children acquire the rules of grammar that provide the necessary devices for text construction. We would assume that attempts to "repair" the structure of a text produced by another, as noted in the "off-line" type of studies (Bower, 1978), will also be displayed in modifying and supplementing a partner's text in a co-construction task. Assuming that the cognitive representation of a text is formed "on-line," that is, during the process of hearing spoken text, rather than as the end product of text reception (Danks, 1978), the child can be expected to modify and supplement particular fragments of text produced by a partner. This would provide evidence of a process of text co-construction based on on-line formation of text representation in the minds of separate individuals participating in a discourse task.

A test of the hypotheses just stated was looked for in the pragmatics of peer collaboration in narrative text constructing. To exemplify the pragmatics of such a collaboration process, a research project was designed consisting of solo narration and co-narration tasks for children of preschool age. The following considerations supported the choice:

1. Narration is one of the earliest and most dynamically developing forms of linguistic activity in the child (Bokus, 1991a; Kemper, 1984).
2. Co-narration forms (i.e., joint construction of narrative text by two or more children) occur along with narrative monologue (solo) forms in preschool children's groups (as shown in longitudinal studies by Meng, 1987).

3. Although children's collaboration in the narrative process is mentioned in the literature (Meng, 1987; Preece, 1987; Watson-Gegeo & Boggs, 1977), the process itself has not been the target of an analysis that would show how participants achieve co-narration in the detail of their interaction.

This study is exploratory. How does a child manage the role of co-narrator in interaction with a peer partner in a similar role?

BASIC CONCEPTS: NARRATIVE TEXT AND NARRATIVE DISCOURSE, REFERENCE SITUATIONS, EVENTS AND EPISODES

The conceptual framework adopted in this article derives from Halliday and Hasan's (1976) definition of text. According to Halliday and Hasan, "a *text* is best regarded as a SEMANTIC unit, a unit not of form, but of meaning . . . A text does not CONSIST OF sentences, rather it is REALIZED BY, or encoded in, sentences" (p. 2, italics added) uttered to transmit information in social situations. These utterances are constructed within a larger organized *discourse* entity, with a beginning, an end, and an internal structure. Utterances that comprise the discourse are not only actualizations of clauses or sentences, but also of speech acts (Kurcz, 1987). The discourse structure in Halliday and Hasan's view is a higher structure than the informational structure of spoken sentences (Halliday & Hasan, 1976, pp. 324–327). One could say that text, treated as a *semantic unit of language,* is realized in the utterances of discourse that in turn is treated as the *pragmatic unit of language* (Bokus, 1991b). Accordingly, solo narration or co-narration needs to be analyzed on two planes:

1. The textual (semantic) plane, dealing with the content of referential speech. On this plane, a text can be treated as a chain of reference situations or states of reality conceived of by the speaker (here: the narrator) from the perspective of a situational subject.
2. The discursive (pragmatic) plane, dealing with the coding of referential content in the utterances of one or more discourse participants. On this plane, discourse can be treated as the activity of creating narrative text.

Reference situations are coded in discourse and are understood as the unitary elements of more or less complex structures, representing the changing course of referenced reality. In our analysis, reference situations comprising a text were distinguished according to first, the situational subject (every situation is assumed to have some subject, animate or treated as animate) and

second, the state of the situational subject as experiencer and/or as agent of action.

Reference situations are states of changing reality and so they transform from one into another, thus forming events and episodes. *Events* are situations linked chronologically or both chronologically and causally. *Episodes* are situations linked teleologically: Goal-directed activity is presented in an episode.

On the discourse plane, reference situations (unitary elements of textual chains) are more or less precisely coded in utterances. For example, the situation of a crying bear can be presented like this: *Misiaczek siedzi sam i płacze*—'A little bear is sitting all alone and (he)'s crying.'[1] *Siedzi w lesie . . . w dużym lesie*—'(He)'s sitting in the woods . . . in the big woods.' *Płacze . . . jak bardzo* (imitates crying bear)—'(He)'s crying . . . so hard' (imitates crying bear). *Łzy mu spływają po buzi*—'Tears are running down his face.' *Płacze i płacze*—'(He)'s crying and crying[2] or: *Misio płacze*—'The baby bear is crying.'

DATA AND SUBJECTS

A total of 960 children between 3 and 7 years took part in the investigation (240 at each of four age levels: 3 years 3 months to 3 years 9 months, 4 years 3 months to 4 years 9 months, 5 years 3 months to 5 years 9 months, and 6 years 3 months to 6 years 9 months). Of these, 384 children (96 at each age level) recounted to peer listeners the adventures of two boys, Jacek and Wacek, the heroes of three picture books (A, B, C). Each picture book unfolded into a series of three pictures on the same theme. Five hundred and seventy-six children (144 at each age level) performed the role of information recipients (active listeners who could ask questions when they did not understand what was said). According to the research design, the children were subsequently to prepare (with adult assistance) a puppet show about Jacek and Wacek. The experts for preparing the scenario of the show were to be the authors of the narrative texts. In their narratives, they transmitted information to their listeners about one of Jacek and Wacek's adventures, "how it started, what happened, and what took place later" (the narrative task was described in the instruction addressed to solo narrators and co-narrators).

I conducted this investigation along with several collaborators, 10 specialists in nursery school education methodics—persons known to the subjects in their schools. The study was conducted in 24 Warsaw nursery schools (40 subjects per school).

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[1]English translations of Polish narratives are close approximations.

[2]Pronouns in parentheses are not expressed in the children's text. In Polish, the verb morphological structure gives the person and number of the pronominal subject.

Research Design

The children had two narrator roles in two different conditions. In one condition, the child had the role of solo narrator and constructed a text independently for a peer listener in a child–child dyad (N → L). In the other condition, the child had the role of co-narrator with another child, and together they constructed a text for a different peer listener in a child–child–child triad ($N_1 + N_2 \rightarrow L$).

The following schema presents the research design:

Series I	Solo narration						Co-narration		
Narrators	N_1	N_2,	N_1	N_2,	N_1	N_2	$N_1 + N_2$,	$N_1 + N_2$,	$N_1 + N_2$
Narrative theme	A	B	A	C	B	C	A		B
(1-day break)									

Series II	Co-narration			Solo narration					
Narrators	$N_1 + N_2$,	$N_1 + N_2$,	$N_1 + N_2$	N_1	N_2,	N_1	N_2,	N_1	N_2
Narrative theme	C	B	A	B	C	A	C	A	B

(followed by preparation of the puppet show)

Forty-eight children at each age level were first solo narrators and subsequently co-narrators (24 girls and 24 boys). The remaining 48 children at each age level were first co-narrators and subsequently solo narrators. Each change of role was accompanied by a change of narrative theme (a different picture book about Jacek and Wacek) as well as a change of listener (a different child participant).

In both participant conditions (dyadic and triadic), the picture book was located within the perceptual field of the narrator/co-narrators alone. As our previous investigations have shown (Bokus, 1979, 1991a; Bokus & Shugar, 1979), this type of situation, as compared to one of picture perception shared by narrator and listener, had a far greater effect on activizing the cognitive–linguistic potential of the narrator.

In all cases, co-narrators were boys or girls who in their teachers' opinion liked to play together. Listeners were in half the cases of the same sex as the narrator/co-narrators and in the remaining cases of opposite sex.

BASIC RESEARCH QUESTIONS

1. What kind of narrative texts (what reference structure) do children construct independently (in the solo narrator role) and together with a peer partner (in co-narrator roles) in the respective conditions of participant discourse: dyadic (N → L) and triadic ($N_1 + N_2 \rightarrow L$)? What age-related differences can be noted across the preschool age span?

2. In what way does each co-narrator contribute to the process of constructing a joint text: (a) in terms of initiating new content (introducing new reference situations) in the textual chain, and (b) in terms of performing operations on the content already introduced by the partner?

3. What are the kinds of operations children perform on the partner's text in the process of constructing a joint text, and how do they differ across the age span studied?

METHOD OF ANALYSIS

The conceptual framework presented (reference situations, events and episodes coded in the discourse) was used in developing a method of analysis of narrative texts constructed by child narrators in solo narrator and in co-narrator roles. Reference structures were analyzed by a somewhat modified version of the method proposed by Stein and Glenn (1979) and developed by Peterson and McCabe (1983).

Children's texts created in the process of solo narration and co-narration formed chains of reference situations. Analysis of their structure revealed the following types of reference situation chains:

1. <u>Series of separate reference situations</u> with the same subjects (see Example 1; "descriptive sequences" according to Peterson & McCabe, 1983).

Example 1 Solo Narration

N (3 years 7 months)	L (3 years 9 months)
Jacek i Wacek rzucają piłką . . . 'Jacek and Wacek are throwing the ball . . .' *Do siebie rzucają.* '(They)'re throwing (it) to each other.' *I Jacuś . . . I Jacuś wyciąga Wacka z wody.* 'And Jacek . . . And Jacek is pulling Wacek out of the water.' *I . . . i Jacek . . . Jacek i Wacek bawią się w gotowanie . . .* 'And . . . and Jacek . . . Jacek and Wacek are playing cooking . . .'	(watches the narrator, holds cutout drawings of the heroes in his hands)

2. <u>Events</u>, that is, reference situation sequences ordered according to temporal (see Example 2a) and/or causal (Example 2b) relations (action sequences and reactive sequences).

Example 2a Solo Narration

N (4 years 3 months)	L (4 years 4 months)
Jacek i Wacek . . . 'Jacek and Wacek' *Jacek i . . . nie! . . .* 'Jacek and . . . no! . . .' *Wacek i Jacek zobaczyli, co mały miś płakał.* 'Wacek and Jacek saw the little bear crying.' *Potem miś przestał płakać.* 'Then the bear stopped crying.' *I zaczął znowu płakanie.* 'And (he) started to cry again.' *I przestał.* 'And (he) stopped.'	(watches the narrator)
	I co dalej? 'Then what?'
I poszedł do domu. 'And (he) went home.'	

Example 2b Co-Narration

N₁ (3 years 8 months)	N₂ (3 years 7 months)	L (3 years 8 months)
On, on (pointing to the cutout drawing of Jacek held by L) *jest Maja* (name of TV story bee). 'That one, that one (pointing to the cutout drawing of Jacek held by L) is Maja' (name of TV story bee). (pretends to cry)		(holds figure of Jacek in right hand and that of Wacek in left, watches the co-narrators)

Jak płacze . . .
'(He)'s crying so
hard . . .'

On płacze, bo spadł.
'He's crying 'cause
(he) fell down.'

(nods head)

Lecioł i spadł.
'(He) flew and (he)
fell down.'
*Leciał i źle machał
skrzydełkami i spadł
. . .*
'(He) flew, and (he)
waved (his) wings
wrong and (he) fell
down . . .'

(comes closer and
looks at the book)

3. Abbreviated episodes (Example 3a), in which the aim of the agent is
   mentioned but the action plan must be inferred; and incomplete episodes
   (Example 3b), containing all the components of a complete episode with
   the exception of consequence.

Example 3a Solo Narration

N (5 years 4 months)	L (5 years 7 months)
Jacek i Wacek grali w piłkę.	(looks around the room)
'Jacek and Wacek were playing ball.'	
Jacek . . . Jacek . . . nie! . . .	
'Jacek . . . Jacek . . . no! . . .'	
Wacek wpadł do wody . . . z piłką.	
'Wacek fell into the water . . . with the ball.'	
I Jacek wyciągnął Wacka z . . . z wody.	
'And Jacek pulled Wacek out . . . out of the water.'	

Example 3b Co-Narration

N₁ (4 years 3 months)	N₂ (4 years 4 months)	L (4 years 4 months)

*Jacek rzucał sobie
. . .*

(watches the
co-narrators)

'Jacek was throwing
(the ball) . . .'
*Jacek i Wacek
rzucali sobie piłką
. . .*
'Jacek and Wacek
were throwing the
ball to each other. . .'
W piłkę grali . . .
'(They) were playing
ball . . .'

W piłkę grali.
'(They) were playing
ball.'
*A ślimaczek patrzył,
jak grali.*
'And the little snail
was watching them
play.'

*No, i piłka wpadła im
do wody.*
'Uhhuh, and their
ball fell into the
water.'

No.
'Uhhuh.'

*I Jacek, nie . . .
Wacek chciał ją
wyjąć.*
'And Jacek, no . . .
Wacek wanted to get
it out.'

No.
'Uhhuh.'

*I poleciał zobaczyć,
czy ona daleko
popłynęła i . . . w
którą stronę . . .*
'And (he) flew off to
see if it floated far
away and . . . and
which side . . .'

No właśnie.
'Uhhuh, that's right.'

> *I co?*
> 'And then what?'

*A następnego dnia
dzieci się bawiły w
domu w dom.*
'And the next day
the children stayed
home and played
house.'

> *I koniec.*
> 'And that's the end.'

4. Complete episodes, containing three or four possible components of the agent's behavioral structure: external circumstances, goal-motivating state, action steps (instrumental and goal actions), and consequence (Example 4). Consequence is the component necessary for establishing the episode as complete.

Example 4 Solo Narration

N (5 years 8 months)	L (5 years 4 months)
Jacek i Wacek . . . nie! . . . 'Jacek and Wacek . . . no! . . .' *Jacek i Wacek pewnego dnia chcieli się zabawić w motylka i . . . i fruwać.* 'One day Jacek and Wacek wanted to play butterfly and . . . and fly.' *To zrobili sobie skrzydełka.* 'So (they) made wings.'	
	I co? 'Then what?'
I Jacek przebrał się w motylka. 'And Jacek dressed up like a butterfly.' *I zaczął w skrzydełka machać i fruwał.* 'And (he) began to wave his wings and was flying.' *Fruwał, jak duży motyl.* '(He) was flying like a big butterfly.'	

5. Complex episodes, which are elaborations of complete episodes, for example, by an embedded reactive sequence (Example 5).

Example 5 Co-Narration

N₁ (6 years 7 months)	N₂ (6 years 9 months)	L (6 years 4 months)
		(listens attentively)
Pewnego dnia . . . pewnego dnia uderzył się misiaczek w łapkę. 'One day . . . one day the baby bear banged his paw.'		
	No . . . 'Uhhuh . . .'	
I . . . (pretends to cry) 'And . . .' (pretends to cry)		
	I on płakał w łapkę . . . baaardzo płakał . . . 'And he cried about his paw . . . (he) cried soooo hard . . .'	
Tak, że usłyszeli to Jacek i Wacek. 'So that Jacek and Wacek heard it.'		
	Mhm . . . 'Mhm . . .'	(looks around the room and then watches the co-narrators)
Wyszli zza krzaczczcz . . . '(They) came out from behind the buuu . . .'		
	Zza krzaków. 'From behind the bushes.'	

Zza krzaków.
'From behind the
bushes.'
No i zacieszali misia.
'And so (they)
cheered up the bear.'

No . . . i . . .
misiaczek przestał
płakać w łapkę.
'So . . . and . . . the
little bear stopped
crying about his
paw.'

I co jeszcze?
'And what else?'

I wszystko się dobrze
skończyło.
'And everything
ended up okay.'

6. <u>Interactive episodes,</u> in which the actions of at least two subjects (each
   having his or her own goal) influence one another (as in Peterson &
   McCabe, 1983).

Example 6 Co-Narration

N$_1$ (6 years 7
months)   N$_2$ (6 years 8
                 months)   L (6 years 9 months)

Jacek i Wacek poszli
do lasu, aby się
pobawić na łące.
'Jacek and Wacek
went to the woods to
play in the meadow.'
A tu patrzą—idzie
niedźwiedź,
niedźwiadek malutki
. . .
'And here (they)
see—a bear is going
along, a tiny bear
. . .'

Malutki . . .
'Tiny one . . .'

Schowali się za
krzaczek, bo się
trochę wystraszyli.
'(They) hid behind
the bushes 'cos (they)
were a little bit
scared.'
Ale potem zobaczyli,
że niedźwiadek nagle
usiadł i zaczął
płakać.
'But then (they) saw
that the bear
suddenly sat down
and started crying.'

Bo niedźwiadek ich
zobaczył i chciał, żeby
mu pomogli.
' 'Cos the bear saw
them and wanted
them to help him.'

Wyszli zza krzaczka i
mówią: "Jak, misiu,
co ci się stało?
Zabłądziłeś w lesie?"
'(They) came out of
the bushes and said:
"What's the matter,
little bear, what
happened to you?
Did you get lost in
the woods?" '
A miś . . . (N$_1$
whispers something
to N$_2$) *a misio . . .*
mówi . . .
'And the bear . . .
(N$_1$ whispers
something to N$_2$) and
the bear . . . said
. . .'

Mów! (to N$_2$)
'Say it!' (to N$_2$)

"*Mhm, ja chcę do mamy!*" (crying)
' "Mhm, I want my mummy!" ' (crying)

"*Nie płacz, zaraz odnajdziemy waszą mamę*"
' "Don't cry, (we)'ll find your mummy right off" '

"*A co innego, kiedy mhm . . . chcę jeść, jeść chcę, chcę do mamy . . . pić chcę*" (crying)
' "And what else . . . when mhm . . . (I) want something to eat, (I) want something to eat, (I) want my mummy (I) want something to drink' (crying)

Potem Wacek wyjął z kieszeni czarodziejską różdżkę i powiedział: "Widzisz to, popatrz, tam jest twoja mama, tu, tu, wszędzie jest twoja mama. Chcesz do twojej mamy?"
'Then Wacek took his magic wand out of his pocket and said: "See this? Look, there's your mummy, here and here, everywhere there's your mummy.

You want to go to your mummy?" '

"*Ja chcę do mojej mamy, do mojej maaamy!*" (crying)
' "I want to go to my mummy, my muuummy" ' (crying)
No i niedźwiadek powiedział: "Ależ wy dobrzy, dacie mi mamę."
'And then the bear said: "You're so good, (you)'re giving me my mummy." '
Otarł łezki i poszli do domu.
'(He) wiped his tears and (they) went home.'

Pokażcie!
'Show me (the book)!'

(N$_1$ and N$_2$ show the book to the listener)

Reference-situation chains classified under categories 1 to 3 are treated as simple structures, whereas those classified under categories 4 to 6 are treated as more complex structures. (Three judges independently analyzed the reference structures of the narrative texts. In the analysis of solo narrated texts, 94% concordant decisions were reached; in the analysis of co-narrated texts, 92% concordant decisions were reached; and joint reanalysis of the remainder led to consensus in all cases.)

The analysis of co-narrated texts took into account which co-narrator introduced new reference situations into the textual chain. This referred both to reference situations introduced as complete and those that were supplemented in the subsequent discourse.

In the case that the co-narrator produced an utterance that dealt with a reference situation previously introduced by the partner, the purpose of the analysis was to identify the text operations performed by the child on the utterance(s). These operations concerned reference situations already introduced by the partner and served to turn these reference situations into shared ones.

Six operations were identified, as follows:

1. Verbal and/or nonverbal *confirmation* of what the partner had just said:

N₁: *Misio płacze*
'The bear is crying'

N₂: *No . . .*
'Uhhuh' (nods head)

2. Whole or partial *repetition* of the previous utterance by the partner:

N₁: *I on fruwa*
'And he's flying'

N₂: *I on fruwa*
'And he's flying'

N₁: *Potem spadł na ziemię*
'Then (he) fell down to the ground'

N₂: *Spadł*
'(He) fell down'

3. Attempts at *simultaneous speech* based on anticipation of next fragments of the ongoing utterance but not exceeding its range of content:

N₁: *Jacek i Wacek chcieli pofru . . . pofruwać, jak motylek*
'Jacek and Wacek wanted to fl . . . to fly like a butterfly'

N₂: *. . . motylek*
(simultaneously)

N₂: '. . . butterfly'
(simultaneously)

4. Nonverbal and/or verbal *negation* of the partner's previous utterance content:

N₁: *I Jacek wpadł do wody*
'And Jacek fell into the water'

N₂: *Nie, Wacek*
'No, Wacek' (pointing to the cutout drawing of Wacek held by the listener)

5. *Modification* of the partner's previous utterance form:

N₁: *I nagle on "buuum" na ziemię*
'All of a sudden he went "boom" to the ground'

N₂: *Buuum? On spadł* (with emphasis) *na ziemię . . .*
'Boom? He fell down (with emphasis) to the ground . . .'

6. *Supplementation* of the partner's previous utterance, either to add new elements to the already introduced reference situation (verbal and/or nonverbal) or to characterize elements already introduced by the partner or by self:

N₁: *Grają*
'(They)'re playing'

N₂: *W piłkę*
'Ball'
Grają w piłkę
'(They)'re playing ball'

N₁: *Czerwoną*
'A red (ball)'

(Three judges independently identified types of textual operations performed by co-narrators. Ninety-three percent concordant decisions were reached, and joint reanalysis of the remainder led to consensus in all cases.)

RESULTS

Reference Structure of Narrative Texts Produced by Solo Narrators and Co-Narrators

Analysis was performed on 570 texts, 191 produced by children in co-narrator roles and 379 produced by children in solo narrator roles. Narrative texts were comprised of reference situations organized into more or less complex chains in terms of structure (Bokus, 1991b). The following structural types were distinguished: simple structure (including series of separate reference situa-

tions with the same subjects, events, abbreviated episodes, and incomplete episodes) and complex structure (including complete episodes, complex episodes, and interactive episodes).

The complexity level of 3-year-olds' and 4-year-olds' narrative texts (measured by frequency of particular structural types—see Table 1) was similar for solo narrations and co-narrations (tests of proportions for dependent groups—respective z values: 0.331 and 0.430, ns). Five-year-olds' and 6-year-olds' narrative texts showed significant differences in structure depending on the discourse construction process. Co-narrated texts were more complex in structure than solo narrated texts (respective z values: 2.116 for 5-year-olds, $p < .05$ and 3.733 for 6-year-olds, $p < .01$).

A more detailed analysis of the 5- and 6-year-olds' texts produced in the two conditions showed that the abbreviated and incomplete episodes were supplemented and completed in the co-narration process. That is, complex referential structures were a more frequent outcome of co-narration than of solo narration (see Table 1).

Texts constructed in the co-narration process (in the triad $N_1 + N_2 \rightarrow L$) underwent change with children's age. The 3- and 4-year-olds mainly produced texts of simple structure (series of separate reference situations, events, and abbreviated/incomplete episodes), whereas the 5-year-olds and 6-year-olds mainly produced texts of a more complex structure (complete, complex, and interactive episodes), χ^2 value ≈ 36.946, $p < .001$, $C_{cor} \approx 0.573$.

Predominance of simple structures was almost the same for the 3- and 4-year-olds (65.0% and 57.78%, respectively), but predominance of complex structures was much greater for the 6-year-olds than for the 5-year-olds (92.96% and 69.77%, respectively).

Differential Contributions to the Process of Co-Narration: Introducing New Reference Situations or Performing Textual Operations

The contributions of co-narrators in the co-narration process were compared in terms of (a) introducing new reference situations, and (b) performing different kinds of operations on the partner's text. Analyses showed superiority of one co-narrator over the other as concerns the kind of contribution. These differences underwent change with children's age.

The dominant partner in introducing new reference situations into the textual chain was the co-narrator who began the discourse (N_1). N_1's superiority over N_2 in this respect is shown by the following ratio values (number of reference situations introduced by N_1 to number of reference situations introduced by N_2): 2.875:1 for the 3-year-olds, 2.550:1 for the 4-year-olds, 1.943:1 for the 5-year-olds, and 1.767:1 for the 6-year-olds. Domination in content initiation decreased progressively with age: analysis of variance (ANOVA):

TABLE 1
Simple and Complex Reference Structures of Narrative Texts Produced by Preschoolers as Solo Narrators and as Co-Narrators

Reference Structures	3-Year-Olds				4-Year-Olds				5-Year-Olds				6-Year-Olds			
	Solo Narration		Co-Narration		Solo Narration		Co-Narration		Solo Narration		Co-Narration		Solo Narration		Co-Narration	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Simple	55	62.50	26	65.00	54	60.00	26	57.78	41	45.05	13	30.23	25	28.09	3	7.14
Series of separate reference situations	19	21.59	7	17.50	9	10.00	4	8.89	5	5.49	2	4.65	2	2.25	1	2.38
Events	24	27.27	13	32.50	33	36.67	17	37.78	16	17.58	6	13.95	5	5.62	2	4.76
Abbreviated/incomplete episodes	12	13.64	6	15.00	12	13.33	5	11.11	20	21.98	5	11.63	18	20.22	0	
Complex	33	37.50	14	35.00	36	40.00	19	42.22	50	54.95	30	69.77	64	71.91	39	92.86
Complete episodes	20	22.73	8	20.00	17	18.89	6	13.33	32	35.17	16	37.21	21	23.60	16	38.10
Complex episodes	13	14.77	6	15.00	19	21.11	12	26.67	18	19.78	14	32.56	39	43.82	20	47.62
Interactive episodes	0		0		0		1	2.22	0		0		4	4.49	3	7.14
Total	88[a]	100.00	40[b]	100.00	90	100.00	45	100.00	91	100.00	43	100.00	89	100.00	42	100.00

Note. The table does not include cases where the products of solo narration or co-narration were more than one text.
[a] There were five cases in which children did not produce a narrative text. [b] There was one case in which children did not produce a narrative text.

$F = 3.047, p < .03$, but the discourse initiator remained the dominant partner in all age groups.

On the other hand, the co-narrator who performed the greater number of textual operations was the discourse continuer (N_2). N_2's superiority over N_1 in this respect also underwent change with age: ANOVA: $F = 6.038, p < .01$, resulting in near equilibrium in this type of activity in older children. The respective ratio values (number of textual operations performed by N_1 to number of textual operations performed by N_2) are: 0.504:1 for the 3-year-olds, 0.821:1 for the 4-year-olds, 1.070:1 for the 5-year-olds, and 1.033:1 for the 6-year-olds.

Changes in the distribution of textual operations turned out to be related to the type of operations performed.

Types of Textual Operations Performed by Co-Narrators

From an analysis of the operations performed on the partner's text by co-narrator, 3- and 4-year-olds tended to perform operations that did not add any new information. Rather, they were nonverbal and verbal confirmations of the partner's previous utterance, repetitions in total or in part of the previous utterance, and even attempts to accompany the partner's utterance, resulting sometimes in a near simultaneous production of the same text. The respective values were 63.25% for the 3-year-olds and 66.96% for the 4-year-olds. On the other hand, the 5- and 6-year-olds tended to perform operations on the partner's text that supplemented various kinds of information, such as by deictic pointing, verbalization of the partner's gestures, textual additions of elements in the reference situation given in the text, and their characterizations. For the 5-year-olds, the confirmational type and the supplementary type of operation occurred with equal frequency (42.75% and 46.18%, respectively), whereas for the 6-year-olds, the latter type dominated over the former (61.22% in comparison with 29.80%).

Operations negating utterance content and modifying utterance form were relatively the least frequent across the four age groups (14.96%, 9.91%, 11.07%, 8.98%). Figure 1 shows the frequency of the particular types of textual operations performed by the children as co-narrators across the age span studied.

From the more detailed analysis of the textual operation preferences of the children, a striking increase was found in attempts at simultaneous production among the 4-year-olds over the 3-year-olds, as shown by the frequencies 23.42% for the former and 7.69% for the latter ($z = 5.252, p < .01$). This higher level of attempts to speak and think in unison is maintained in the 5-year-olds (22.90%) and then drops in the 6-year-olds. This type of operation (which might take an unvoiced form in the older children) could presumably facilitate the growth of supplementations found in the two older age groups.
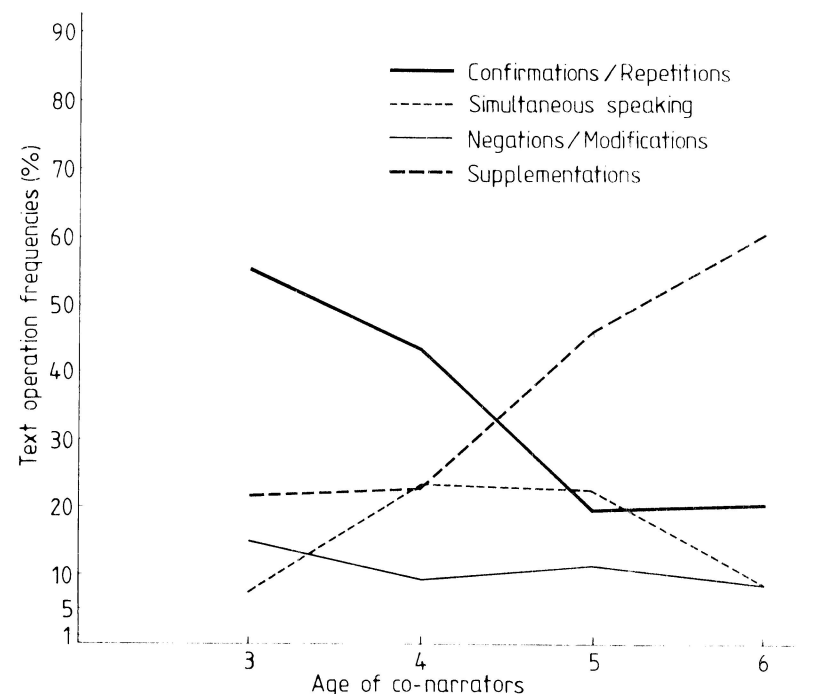

FIGURE 1   Textual operations performed by preschoolers as co-narrators.

DISCUSSION: STRUCTURAL CHANGES IN PRESCHOOLERS' PARTICIPATION IN CO-NARRATIVE DISCOURSE

The kinds of analysis usually performed on narrative discourse deal primarily with production of solo narration. They have revealed a growing narrational competence in children (e.g., increased complexity of the episodic structure of the narrative; see Peterson & McCabe, 1983), but they have not shown the spectrum of children's communicative potentialities we have found in the analyses of co-narration (Bokus, 1991b).

The results showed that co-constructed narratives underwent change with age in reference complexity (more markedly than in solo constructed ones). The dominant partner in introducing new content was the initiator of the discourse, whereas the dominant one in performance of textual operations was the continuer. Superiority of one co-narrator over the other in both types of contributions diminished with age. Changes across the age span were found in dominant and nondominant contribution types for both co-narrators.

What we find most striking is that across the preschool age span basic changes occur in the structure of children's participation in co-narrative dis-

course (Shugar, Bokus, & Kmita, 1988; Shugar & Kmita, 1990), changes that testify to the development of communicative competence in young children. In our view, *participation structure* is the form of realization of a given participant structure (see Philips, 1972) in the making of actual discourse. This study explored the collaborative process on the basis of a symmetrical (peer) participant structure. In symmetrical structures, peer participants share reversible roles that allow for confrontation as well as for cooperation (Shugar, 1988). In this study, child participants exchanged roles in a co-narration play task resulting in constantly changing forms of cooperation. Such changes are not governed by preset guidelines as in adult guided discourse but are the outcome of children's spontaneous activity.

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