

CONVERSATIONAL CONTINGENCY AND TOPIC MANAGEMENT IN MANDARIN CHILD LANGUAGE

This monograph presents an investigation of the acquisition of Mandarin Chinese from a discourse-pragmatic perspective, focusing on two main conversational skills. The first concerns the child's ability to show conversational contingency, and the second concerns the child's ability to manage discourse topics. Conversational contingency refers to the child's ability to establish utterance-to-utterance relevancy relationships; topic management refers to the child's ability to initiate and maintain discourse topics in conversation. These abilities are essential for participating in conversational interaction and for constructing coherent discourse. Two- to four- year-old children's conversations with their parents are investigated quantitatively and qualitatively in the study. The findings reveal not only a complex picture of contingency relations and topic organizations in parent-child interaction but also interesting developmental patterns. The results are discussed in relation to the development of conversational skills, the parental roles in language acquisition, and the state of mind in conversation.

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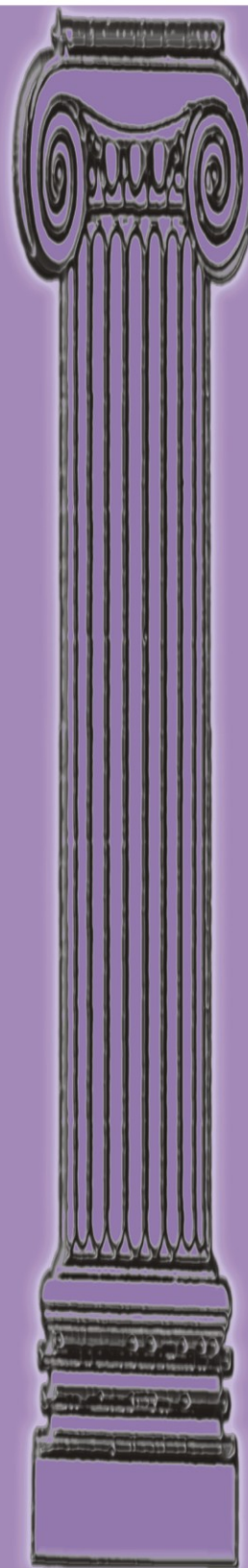
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台灣語言學期刊專書系列

主編：何萬順，徐嘉慧

台灣語言學期刊設立專書系列的主要目的在於提供台灣的語言學學者一個可以將其學術專書經由專家匿名審查並且於國內外公開發行的正式出版管道。專書的主題必須在語言學學門的領域之內，主題與台灣有密切關係者尤其歡迎。專書系列與期刊一致，僅接受英文文稿，格式亦為相同。

Taiwan Journal of Linguistics Monograph Series No. 1

**Conversational Contingency and Topic Management
in Mandarin Child Language**

Chiung-chih Huang (黃瓊之)



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TRANSCRIPTION SYMBOLS

%act:	Action
.	Period
?	Question
!	Exclamation
+...	Trailing off
+/.	Interruption
+^	Quick uptake
#	Pause between words
:-	Previous word lengthened
+,	Self-completion
[=!]	Paralinguistic material
[%]	Action
[=]	Explanation
["]	Quotation mark
[>]	Overlap follows
[<]	Overlap precedes
[/]	Retracing without correction
[//]	Retracing with correction
xxx / xx	Unintelligible speech
0	Action without speech

GLOSS ABBREVIATIONS

AUX	auxiliary
BA	<i>ba</i>
CL	classifier
COMP	comparative
DEM	demonstrative
DUR	durative aspect (<i>zai</i>)
CRS	currently relevant state (<i>le</i>)
CSC	complex stative construction (<i>de</i>)
EXP	experiential aspect (<i>guo</i>)
NOM	nominalizer (<i>de</i>)
PAR	particle
PFV	perfective aspect (<i>le</i>)
PL	plural
Q	question
RVC	resultative verb compound
1sg	first personal singular pronoun
1pl	first personal plural pronoun
2sg	second personal singular pronoun
2pl	second personal plural pronoun
3sg	third personal singular pronoun

CHAPTER I INTRODUCTION

1.1 BACKGROUND

The development of children's communicative competence has received much attention in recent years. In order to become competent speakers, children must acquire the phonological, semantic, morphological, and syntactic aspects of language. In addition, children also need to acquire the discourse-pragmatic aspect of language. That is, children need to learn the appropriate use of language for effective communication. However, compared to the other aspects, the discourse-pragmatic aspect of language acquisition has been much less studied in child language research. In Mandarin child language acquisition research, only a few studies have touched upon the acquisition of discourse-pragmatic competence (e.g., Hsu, 1996, Chang, 1998; Hsu, 2000; Huang, 2004).

The purpose of this present study is to investigate the acquisition of Mandarin Chinese from a discourse-pragmatic perspective, focusing on two main conversational skills. The first concerns the child's ability to show conversational contingency, and the second concerns the child's ability to manage discourse topics.

Conversational contingency refers to the child's ability to establish utterance-to-utterance relevancy relationships. As suggested by Bloom (1991), '(a) major goal of language acquisition is for the child to be able to take something from what someone else says and form a contingent message that converts simple turn taking into discourse' (p.434). Thus, the child's being able to form a contingent utterance after an interlocutor's preceding utterance is fundamental for developing the skills of constructing coherent conversation.

Topic management refers to the child's ability to initiate and maintain discourse topics in conversation (Ochs & Schieffelin, 1979; McTear, 1985; Ninio & Snow, 1996). The ability to initiate and maintain

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discourse topics involves complex cognitive, linguistic as well as conversational skills. Cognitively, the child needs to be able to understand topic relations in conversation. Linguistically, the child needs to be able to employ linguistic means to express such topic relations. Conversationally, the child needs to be able to assess the interlocutors' perspectives and knowledge concerning the topics.

Thus, while conversational contingency concerns the relatedness in adjacent conversational utterances, topic management involves both the local relevance and the global concern of the topic (Foster, 1982. 1990). The child's ability to supply contingent utterances is fundamental in the child's learning to participate in conversation, and the ability to manage discourse topics is crucial for further development of constructing coherent extended discourse.

1.2 CONVERSATIONAL CONTINGENCY

Early contingency relations in child language are often observed in adjacency pairs such as question-answer sequences in adult-child interaction. As suggested by Shatz and McCloskey (1984), question-answer sequences are rich sources of contingent response data for both adults and children. Shatz and McCloskey's study analyzed early contingent responding to questions in child language. It was found that one-year-olds were able to differentiate questions from nonquestions, or even yes/no questions from wh- questions, and they adjusted their responses according to the distinctions. However, the child responses were often semantically and pragmatically inappropriate. For example, they may say 'no' while performing the action requested by a question-directive, or they may answer most wh-questions as though they were 'where' questions. In other words, while one-year-olds were sensitive to question forms, they did not have the capacity to respond conventionally or appropriately. As for two-year-olds, the children showed more semantic sophistication in various response forms. While they also took one form of wh- questions as another, they rarely responded with 'no' while doing so. In addition, their yes/no responses were no longer restricted to yes/no questions; they began to use yes/no responses to respond to declaratives.

In addition to responses to questions, the use of repetition is another important way for children to relate their utterances to prior

utterances of other speakers. The extraordinarily repetitive nature of child discourse at the early stages of language acquisition has been noted by many researchers. Such repetition has often been referred to as 'imitation'. However, some researchers have made a distinction between imitation and repetition, and suggested that children's repetition may serve different communicative purposes, with imitation as one of them (Ochs Keenan, 1977; Casby, 1986, Greenfield & Savage-Rumbaugh, 1993, Bennett-Kastor, 1994). In other words, not all repetitions are imitations. From a pragmatic perspective, Casby (1986) examined the communicative functions of repetition in the speech data of a child from the age of 2;1 to the age of 3;1. The author classified the functions of repetition into different categories, including requests, statements, performative plays, imitations, and conversational devices. The results demonstrated that while a relatively high frequency of utterances in the category of imitation were observed, a large number of child repetitions could be reliably classified as serving a communicative act other than imitation. The analysis thus supported the contention that repetition may be used for a variety of communicative functions in child language; that is, repetitions were used by children to relate to prior utterances and to serve various communicative needs. In Ochs (1983), it was also demonstrated that children used the strategy of repetition to produce relevant contributions. They may repeat all or part of the preceding utterances as an attempt to respond appropriately to particular types of utterances. The children may use repetition to show various functions, including answering questions, commenting, affirming, self-informing, querying, and imitating. The author suggested that in repeating, the child was learning to communicate. That is, the child was learning to construct utterances to meet specific communicative needs. In other words, he was learning 'communicative competence' (Hymes, 1972).

Another type of early relatedness in conversation, as shown in Ochs, Schieffelin and Platt (1979), was achieved when a single piece of information was conveyed across separate utterances and across different speakers' turns. In the sequence, each utterance provided one component of the proposition, such as the argument, predicate, and modifier. Thus, the different utterances were jointly encoding the single proposition. Foster (1982), on the other hand, studied early child interaction and found that the English-speaking children in the study began with non-verbal interaction within which they could show contingency relations in adjacency pairs. In addition, imitation was also found in

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Foster's data. Foster suggested that imitation allowed the children to perform propositional cohesion in advance of understanding how it worked. Another related study was by Bernstein (1981). In the study, Bernstein looked at the expression and organization of propositional information in child language. The analysis demonstrated various aspects related to the development of contingent propositional relations between utterances.

Bloom, Rocissano and Hood (1991) provided a detailed and systematic analysis of utterance-to-utterance relevancy relationships in children's conversation with adults. The study examined longitudinal data from four children. The children's speech samples were collected three times from approximately 21 to 36 months of age (MLU from approximately 1.32 to 4.14), within the periods of Stage 1, Stage 2 and Stage 5 as defined by Brown (1973). By examining the interactions of the four children with adults, the study analyzed the semantic and formal relations between successive adult and child utterances in order to determine to what extent, and how, the children used the information in adult utterances for formulating their own messages. The study showed that the children's utterances were largely noncontingent at Stages 1 and 2. Repeating part or all of what an adult said (imitation) was the first way in which the children were able to relate their utterances to prior adult expressions. At first they only repeated; then they both repeated and added something to the prior expression; eventually they repeated, added to, and also changed something in the prior expression. Contingent speech increased and imitation decreased developmentally. Initially contingency relations were basically contextual rather than linguistic, and contextual contingency decreased from Stage 1 to Stage 5. The authors suggested that contingency, in general, and linguistic contingency, in particular, were the major developments in the children's discourse from age 2 to age 3.

1.3 TOPIC MANAGEMENT

Researchers have proposed different definitions of the term *topic*. Some researchers associate *topic* with the description of sentence structure, as in the distinction between the *topic* and the *comment* in a sentence (e.g., Hockett, 1958). In this distinction, 'the speaker announces a topic and then says something about it' (p. 201). Such a sentential topic

is regarded as a grammatical term, and is expressed by a noun phrase. It is generally agreed that in Mandarin Chinese, sentences are mainly expressed in the topic-comment structure, as opposed to the subject-predicate structure. Thus, Mandarin Chinese is considered as a topic-prominent language (Li & Thompson, 1981). However, several researchers have treated topic as a discourse concept. Keenan and Schieffelin (1976) used the term *discourse topic* to emphasize that 'discourse topic is not a simple NP, but a proposition (about which some claim is made or elicited)' (p. 380). van Dijk (1980) further suggested that a fully developed discourse topic includes not just a single proposition, but a sequence of propositions related both to each other and to a macroproposition. In Brown and Yule (1983), on the other hand, a discourse topic was defined as the general notion of 'what is being talked about in a conversation' (p. 71). This notion has also been shared by other researchers, such as Andersen (1999) and Chafe (1993). In studies of Mandarin Chinese, Tsao (1979, 1990) suggested that the basic discourse unit in Mandarin Chinese is a 'topic chain', which he defined as a sequence of clauses that are the predicates of the same topic. Chui (2001), on the other hand, analyzed Mandarin conversational topics according to the semantic relationship between utterances, and conversational topic was characterized as a sequence of clauses about the same theme.

A number of studies have examined the manner in which topic is used in conversation. Keenan and Schieffelin (1976) examined children's and adults' conversations and proposed a model for the process of establishing a discourse topic. The model attempts to present the interactional work involved in getting a discourse topic known to a listener. According to the model, a speaker's establishment of a discourse topic involves four prerequisites, including securing the attention of the listener; articulating the utterance clearly; identifying referents in the discourse topic; and identifying semantic relations between referents. In addition, a discourse topic can be continued by topic collaboration or topic incorporation. Topic collaboration occurs when a topic matches exactly that of the immediately preceding utterance. Topic incorporation occurs when a topic integrates the claim or proposition of the previous utterance and adds additional information. A discourse topic can also be discontinued. A discontinuous discourse topic is described as occurring when a speaker introduces a new topic or re-introduces a preceding but not immediately preceding topic. Keenan and Schieffelin's model and

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classification of discourse topics have been adopted by many studies on children's acquisition of discourse topic skills (e.g., Brinton & Fujiki, 1984; Foster, 1986; Wanska & Bedrosian, 1986; Kertoy & Vetter, 1995; Huang 2004).

In Brinton and Fujiki (1984), topic manipulation skills of five-year-olds, nine-year-olds and adults were examined. Following Keenan and Schieffelin's classification, the authors analyzed patterns of topic introduction, re-introduction, collaboration, and incorporation. However, a separate category of topic shading was included, in which one utterance was tangentially related to the prior one. Thus, topic shading was a form of topic incorporation within Keenan and Schieffelin's classification. The results showed several developmental trends. It was found that the number of topics introduced and re-introduced decreased with age, whereas the proportion of topics maintained, the length of topic maintenance and the number of occurrences of topic shading increased with age.

Wanska and Bedrosian (1985) investigated the topic performance of younger children, aged two to six, in mother-child interaction. In addition to children's skills in topic management, the authors were also interested in the mothers' role in the interaction. The results showed that while the children shared similar characteristics of conversational participation with their mothers, the mothers played a primary role in facilitating topic maintenance or the cohesiveness of discourse. In addition, the analysis revealed a developmental trend similar to that found in Brinton and Fujiki (1984). That is, the children demonstrated greater topic maintenance and topic shading with increasing age. In a later study, Wanska and Bedrosian (1986) provided a further analysis of the children's skill in topic performance and its relationship to communicative intent. The data were analyzed in terms of discourse types (topic initiation, topic shading, and topic maintenance), topic categories (here-and-now, fantasy and displacement), and communicative intents (informative, command, request, etc.). The following results were obtained: 1) the children initiated and shaded more fantasy topics, and their mothers initiated and shaded more displacement topics; 2) here-and-now and fantasy topics were maintained for more turns than displacement topics; 3) mothers used mainly requests to initiate, shade and maintain topics, and the children used mainly informatives to initiate/shade topics and used responses to maintain topics.

Foster (1982) showed that within the framework of a competently structured topic, utterances must be propositionally related to preceding utterances, but should also speak to the global concern of the topic. While young children may be able to do the former, they often cannot do the latter. Foster also characterized how the ability to maintain and develop a topic emerges. Three stages were identified. At Stage 1, children begin with non-verbal interaction within which they can show contingency relations in adjacency pairs. They rely heavily on routine structures to produce longer sequences. At Stage 2, they become able to take liberties with routine structures and show evidence of sequences of planned contributions. At Stage 3, children no longer need routines to maintain a topic. In a later study, Foster (1986) further reported that children gradually expand the range of things they talk about in conversation. The topics of conversation initially are limited to the children themselves; they then can talk about items in the physical environment; finally, they can refer to intangible topics.

Language acquisition researchers have long recognized the importance of contexts in the development of pragmatic behaviors (e.g., McTear & Conti-Ramsden, 1992). In Kertoy and Vetter (1995), analysis was conducted to examine the effect of conversational setting on topic continuation in mother-child dyads. Two settings were included: the play setting, in which the children were playing with their favorite toys, and the help setting, in which the children helped to prepare lunch or muffins. Topic incorporation and collaboration used by the mothers and children were analyzed. Since the help setting had a predetermined structure, it was hypothesized that the help setting would elicit a greater percentage of topic incorporation. However, the results revealed that the two settings provided different opportunities for the dyads to continue topics.

Previous research on the development of discourse topic skills has focused primarily on English or other European language speaking children. However, in Huang (2004), Mandarin-speaking children were studied. The study investigated three-year-old Mandarin-speaking children's abilities to initiate discourse topics in mother-child conversation. Analyses were conducted to examine the types of topics initiated (here-and-now topics and displacement topics) and the types of communicative intents expressed (informatives, requests, and questions). In addition, the study also examined how references and propositions were introduced in the children's topic-initiating utterances. According to the model proposed by Keenan and Schieffelin (1976), the provision of

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sufficient information about references and propositions by the speaker is a prerequisite as well as a felicity condition for successful establishment of a discourse topic. The results demonstrated that the children initiated discourse topics mainly with informatives while the mothers initiated discourse topics mainly with questions; these opposite distribution patterns were especially conspicuous in displacement topics. It was also found that the children often did not provide sufficient information about references and propositions when initiating topics; topic establishments often were co-constructed by both the child and the mother. It was suggested that the mothers' interactive styles could facilitate the children's acquisition of discourse topic skills.

1.4 AIM OF THE STUDY

The present study attempts to explore Mandarin-speaking children's skills in constructing conversational contingency and managing discourse topics. In language acquisition, children need to acquire these skills to become competent conversationalists. Two- to four- year-old children's conversational data are investigated quantitatively and qualitatively in the study in order to provide a more complete picture of Mandarin-speaking children's acquisition and use of conversational skills.

1.5 ORGANIZATION OF THE BOOK

In this chapter we have considered the background of this present research and have reviewed relevant studies. The remainder of this book will report the empirical analyses of the present study. The chapters are organized as follows: in Chapter 2, we will look at conversational contingency in children's speech. Chapter 3 reports the analysis of children's ability to initiate discourse topics in conversation. Chapter 4 is concerned with the maintenance of discourse topics. Chapter 5, on the other hand, discusses the results of the analyses and concludes the study.

CHAPTER II

CONVERSATIONAL CONTINGENCY

This chapter presents an analysis of contingency relations between child utterances and preceding adult utterances in conversation. As noted in Chapter 1, conversational contingency refers to the ability to establish relevancy relationships between adjacent conversational utterances. Such ability is fundamental for participating in conversational interaction and essential for constructing coherent discourse.

2.1 METHODS

2.1.1 The Subjects and the Data

The subjects of this study included six Mandarin-speaking children and their parents, who live in the northern part of Taiwan (Taipei or Taoyuan areas). The six children included two two-year-olds, two three-year-olds, and two four-year-olds. Two of the children were boys and four were girls. Except for one child, who was the second born child, all the other children were the oldest child or the only child in the families. As for the parents' education, one father had a high school education, and all the other parents had a college or higher education. The background information of the children is summarized in Table 2.1.

Table 2-1: Background information of the subjects

Subject Code	Age	Gender	Birth Order	Siblings	Parents' Education
DRZ	2;0	Boy	1st	None	F: Post-graduate M: Post-graduate
YLX	2;2	Girl	1st	One younger sister	F: Post-graduate M: Post-graduate
PJZ	3;4	Girl	1st	One younger sister	F: Post-graduate M: college
JWX	3;7	Boy	1st	One younger brother	F: College M: College
LRY	4;5	Girl	1st	None	F: High school M: College
GYL	4;8	Girl	2nd	One older brother	F: College M: College

As seen in the table, each child subject was identified by a subject code. Each subject code consisted of three English letters, which were the initials of the children's names.

Data collection was conducted at the children's homes. A research assistant collected the data of the two-year-olds and the three-year-olds; another research assistant collected the data of the four-year-olds. The research assistants were friends of the families. During the data collection sessions, the children and the parents did not appear to be unduly affected by the presence of the research assistants and the video camera. The parents were told to interact with their children naturally and engage the children in their usual activities. The major activities and contexts of the data collection sessions included playing with toys, reading books, telling stories and eating. While the parents knew that the researcher was interested in the children's language, they did not know what aspects of the children's speech the researcher would be looking at. Natural parent-child interactions were recorded. Among the six children, five children interacted mainly with their mothers and the other child interacted mainly with the father. Other family members also occasionally participated in the interactions. The interactions were both

audio- and video- taped to capture both the linguistic data and the contextual information. Data collection of each parent-child dyad was conducted in two one-hour sessions within a period of two weeks. Thus, a total of two hours of recording from each dyad was collected and analyzed for the study. Table 2.2 presents the information of the data.

Table 2-2: Information of the data

Subject codes	Length of data	Main speakers	Major activities and contexts
DRZ	120 minutes.	Child, Father	Playing with toys Watching TV
YLX	120 minutes	Child, Mother	Playing with toys Reading storybooks Eating
PJZ	120 minutes	Child, Mother	Playing with toys Reading storybooks Drawing
JWX	120 minutes	Child, Mother	Playing with toys Eating
LRY	120 minutes	Child, Mother	Playing with toys Telling stories
GYL	120 minutes	Child, Mother	Playing with toys Telling stories Eating

The recorded data were transcribed following the CHAT convention (MacWhinney 1994), and quantitative analyses were conducted using the CLAN program (MacWhinney 1994).

2.1.2 The Framework of Analysis

The framework of analysis used in the study was based mainly on the classification system developed by Bloom, *et al.* (1991). For the analysis, each child utterance in the data was first classified into the categories of *Non-adjacent utterances* or *Adjacent utterances*. The definitions of non-adjacent and adjacent utterances were as follows.

- (1) Non-adjacent utterances: child utterances that occurred without a

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previous adult utterance (as seen in Example 1) or with a definite pause after a previous adult utterance (as seen in Example 2).

Example 1: (2;0)

(DRZ was playing with clay.)

- 1 *DRZ: 給 爸爸-: [%cutting the clay with a knife]. ←
 gei baba -:
 give dad
 'For Daddy.'
- 2 *DRZ: 切 一 塊 給 爸爸 -:
 qie yi kuai gei baba -:
 cut one CL give dad
 'Cut a piece for Daddy.'
- 3 *FAT: 喔 切 一 塊 給 爸爸 啊?
 +^ o qie yi kuai gei baba a?
 oh cut one CL give dad PAR
 'Oh, cut a piece for me?'

Example 2: (2;0)

- 1 *FAT: 你 要 吃 飯 了 大容 [= child name].
 ni yao chi fan le Darong.
 2sg AUX eat rice CRS Darong
 'Darong, you have to eat.'
- 2 *FAT: 你 還 沒 吃 飯 呀.
 ni hai mei chi fan ya.
 2sg still not eat rice PAR
 'You haven't eaten yet.'
- 3 *DRZ: 0 [=! noise] [% handing a clay jar to FAT].
- 4 *DRZ: 這 收 起 來. ←
 zhe shou qi lai.
 DEM take rise come
 'Put it away.'

- (2) Adjacent utterances: child utterances that occurred without a definite pause after a previous adult utterance

Example 3: (3;4)

(JWX wanted to go upstairs, and he asked his mother to go with him.)

- 1 *MOT: 妳 請 阿姨 陪 妳 去 啊.
 ni qing ayi pei ni qu a.
 2sg invite aunt accompany you go PAR
 'You can ask Auntie to go with you.'
- 2 *JWX: 媽媽 陪 我 去 [% crying]. ←
 mama pei wo qu
 mother accompany 1sg go
 'Come with me, mommy.'

The identified adjacent utterances were further analyzed. Adjacent utterances were classified into three categories: *Repetitive*¹, *Contingent*, and *Non-contingent*.

- (a) Repetitive utterances: child utterances that shared the same topic with the preceding adult utterance but did not add information; that is, all or part of the preceding utterance was repeated with no change.

Example 4: (3;4)

- 1 *MOT: 這 是 什麼 形?
 zhe shi sheme xing?
 DEM be what shape
 'What's this shape?'
- 2 *MOT: 長 方 形.
 chang fang xing.
 long square shape
 '(A) rectangle.'
- 3 *PJZ: 長 方 形. ←
 chang fang xing.
 long square shape
 '(A) rectangle.'

¹ Bloom, *et al.*'s system has a similar category 'Imitative'. This study followed Ochs (1983) in adopting the term 'repetitive' rather than 'imitative' because imitation was regarded as one of the functions of repetition.

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- (b) Contingent utterances: child utterances that both shared the same topic with the preceding utterance and added information to the preceding utterance.

Example 5: (4;5)

- 1 *MOT: 喔 他們 <要> [/] 要 抓 什麼?
 o tamen <yao> [/] yao zhua sheme
 oh 3pl want want catch what
 'Oh, what do they want to catch?'
 2 *LRY: 要 抓 海鷗. ←
 yao zhua haio
 want catch sea gull
 '(They) want to catch sea gulls.'

- (c) Non-contingent utterances: child utterances that did not share the same topic as the preceding adult utterance.

Example 6: (3;7)

(The mother and the child were talking about their visit to a university campus. The child said that there were no fish there.)

- 1 *JWX: 沒 有 魚.
 mei you yu
 not exist fish
 'There were no fish.'
 2 *MOT: 沒 有 魚 嗎?
 mei you yu ma
 not exist fish Q
 'There were no fish?'
 3 *MOT: 為什麼?
 weisheme
 why
 'Why?'
 4 *JWX: 你 借 我 玩 這 個 好 不 好? ←
 ni jie wo wan zhe ge hao bu hao
 2sg lend me play DEM CL ok not ok
 'Will you lend me this to play with?'

The framework of analysis is schematized in Figure 2-1. As seen in the figure, child utterances were classified into the categories of *Non-adjacent* or *Adjacent*; adjacent utterances were further classified into the categories of *Repetitive*, *Contingent* or *Non-contingent*.

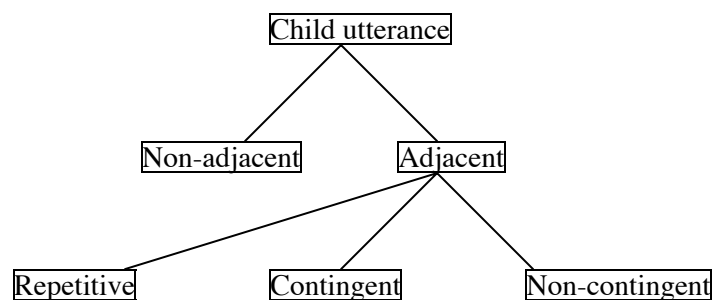


Figure 2-1: Coding system for contingency analysis

After the child utterances in the data were classified into the categories, a quantitative analysis was conducted to investigate the distributions of the different child utterances. In addition, a qualitative analysis was also conducted to examine how the different types of child utterances were used in the conversational interaction to show relevancy relationships.

2.2 RESULTS

Table 2-3 presents the total number of utterances of each child which were coded for analysis. As shown in the table, older children tended to produce more utterances than younger children during conversational interactions.

Table 2-3: The total numbers of coded utterances in children's speech

	Two-year-olds		Three-year-olds		Four-year-olds	
	DRZ	YLX	PJZ	JWX	LRY	GYL
Coded utterances	724	725	871	1184	1227	1013

2.2.1 Adjacent vs. Non-adjacent Utterances

Based on the framework of analysis, the children's utterances were first coded according to whether they were adjacent to the parents' utterances or not. The numbers and the percentages of adjacent and non-adjacent utterances are shown in Table 2-4 and Figure 2-2 according to age groups. As seen in the table and the figure, the children of all the three age groups produced more adjacent utterances than non-adjacent utterances. In other words, the children demonstrated the ability to supply utterances after the parents had said something. It appeared that the children had learned some basic turn-taking rules; they knew that conversation was reciprocal, and they needed to fulfill their roles as conversationalists (Bloom, *et al.*, 1991).

Table 2-4: The numbers and percentages of adjacent and non-adjacent utterances

	Two-year-olds	Three-year-olds	Four-year-olds
Adjacent	934 (64%)	1556 (76%)	1527 (68%)
Non-adjacent	515 (36%)	499 (24%)	713 (32%)
Total	1449 (100%)	2055 (100%)	2240 (100%)

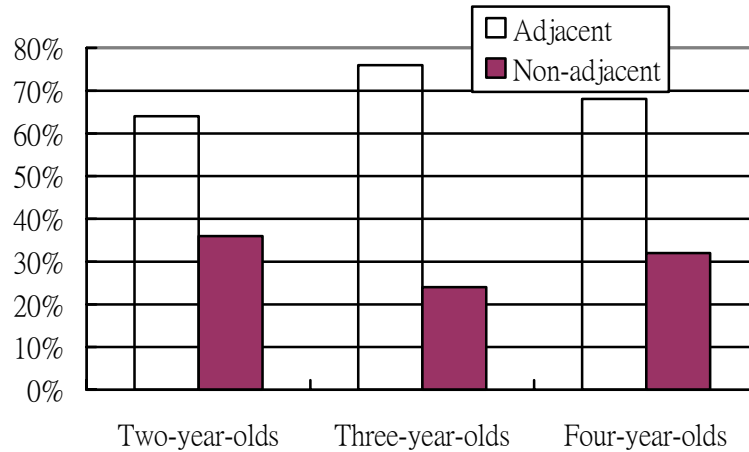


Figure 2-2: The percentages of adjacent and non-adjacent utterances

Further analysis was conducted to analyze the children's adjacent utterances. The children's adjacent utterances were classified, as referred to previously in Section 2.1.2, into the categories of *Repetitive*, *Contingent*, and *Non-contingent* in relation to the preceding adult utterances. The numbers and the percentages of the different types of utterances are shown below in Table 2-5 and Figure 2-3.

Table 2-5 The numbers and percentages of repetitive, contingent, and non-contingent utterances

	Two-year-olds	Three-year-olds	Four-year-olds
Repetitive	89 (10%)	110 (7%)	94 (6%)
Contingent	643 (69%)	1246 (80%)	1353 (89%)
Non-contingent	202 (21%)	200 (13%)	80 (5%)
Total	934 (100%)	1556 (100%)	1527 (100%)

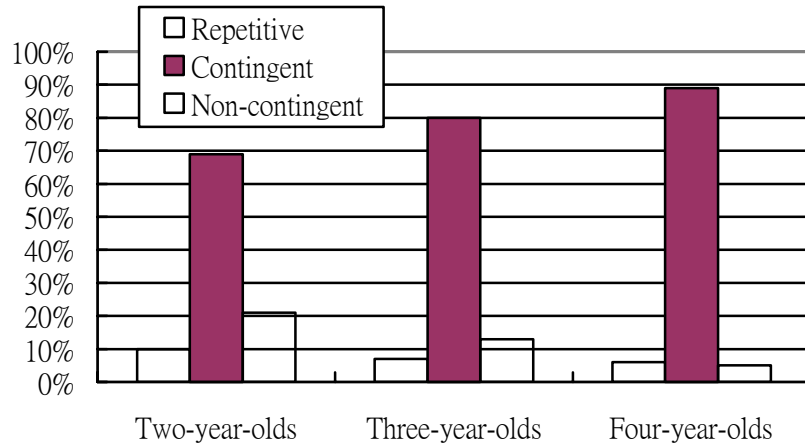


Figure 2-3 The percentages of repetitive, contingent, and non-contingent utterances

As seen in Table 2-5 and Figure 2-3, for all the three age groups, the distributions were predominantly skewed toward the category of *Contingent*. In other words, in the parent-child interactions the children demonstrated the ability to relate their utterances to the preceding adult utterances and add further information to the on-going interaction. Comparing the three age groups, we can see that older children supplied higher percentages of contingent utterances than younger children. The percentages of contingent utterances produced by the two-year-olds, the three-year-olds and the four-year-olds were 69%, 80% and 89%, respectively. In contrast, in the category of *Non-contingent*, younger children produced higher percentages of non-contingent utterances than older children. The two-year-olds produced 21% of non-contingent utterances, the three-year-olds 13%, and the four-year-olds only 5%. Statistical analysis showed that the differences across the age groups were highly significant ($\chi^2 (4) = 168.65, p < .001$). Thus, it appeared that the ability to talk contingently developed with age; older children were more capable of relating their utterances to preceding adult utterances by providing relevant new information.

As seen above, in a quantitative analysis, the children of different ages used repetitive, contingent, and non-contingent utterances in

different ways. In addition to the quantitative analysis, a qualitative analysis was also conducted to further examine how the three kinds of adjacent utterances were used by the children in the conversational interaction; the analysis aimed to reveal whether the children of different ages used repetitive, contingent and non-contingent utterances in qualitatively different ways.

2.2.2 Repetitive utterances

A qualitative analysis was conducted to examine the communicative functions of the children's repetitive utterances in constructing coherent conversation. It was found that the children used repetitions to convey various communicative functions in conversation. As will be shown below, older children's repetitive utterances served a larger variety of communicative functions than younger children's repetitions, and were also more communicatively appropriate.

2.2.2.1 Two-year-olds

The analysis revealed that the major function of the two-year-olds' repetitive utterances was to imitate preceding adult utterances. The children may imitate the parents' utterances after the parents' explicit elicitation. Such imitations often occurred in social routines, in which the parents explicitly taught the children what to say to be socially appropriate, as seen in Example 7.

Example 7: (2;0)

- | | | | | | | | | | |
|---|-------|-------------|----------------------------|----------------------------------|------|-------|------|--------|--|
| 1 | *MOT: | 跟 | 大哥哥 | 晚安. | | | | | |
| | | gen | dagege | wanan | | | | | |
| | | with | big brother | say good night | | | | | |
| | | | | 'Say good night to big brother.' | | | | | |
| 2 | *DRZ: | 大哥哥 | 晚安. | | | | | | |
| | | dagege | wanan | | | | | | |
| | | big brother | good night | | | | | | |
| | | | 'Good night, big brother.' | | | | | | |
| 3 | *MOT: | 你 | 說 | 下 | 次 | 再 | 來 | 喔 -: ! | |
| | | ni | shuo | xia | ci | zai | lai | o -: | |
| | | you | say | next | time | again | come | PAR | |

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- 4 *DRZ: ‘You say “come and see us again soon”.’
 下 次 再 來.
 xia ci zai lai
 next time again come
 ‘Come and see us again soon.’

As seen in Example 7, the mother explicitly taught DRZ what to say in Line 1 and Line 3. In Line 3, the mother further used a performative verb ‘shuo’ for elicitation. Under the mother’s instruction, DRZ imitated the mother’s utterances in Line 2 and Line 4.

Similar cases were also found in YLX’s data, as shown below.

Example 8: (2;2)

- 1 *MOT: 要 說 -: 聖誕 快樂.
 yao shuo -: shengdan kuaile
 AUX say Christmas merry
 ‘Say “Merry Christmas”.’
2 *YLX: 聖誕 快樂.
 shengdan kuaile
 Christmas merry
 ‘Merry Christmas.’

In Example 8, the mother also used the performative verb ‘shuo’ to explicitly elicit imitation from YLX. YLX then imitated the mother’s utterance in Line 2.

In addition to social routines, another situation in which such explicit instruction often occurred was in object labeling.

Example 9: (2;2)

- 1 *MOT: 這 叫 游泳鏡.
 zhe jiao youyongjing
 DEM call goggles
 ‘These are called swimming goggles’
2 *YLX: 游泳鏡.
 youyongjing
 goggles
 ‘Swimming goggles.’

Example 10: (2;2)

- 1 *MOT: 這 個 叫 菜菜.
zhe ge jiao caicai
DEM CL call vegetable (diminutive)
'This is called vegetable.'
- 2 *YLX: 菜菜.
caicai
vegetable (diminutive)
'Vegetable.'

In Example 9 and Example 10, the mother explicitly labeled the objects for the child to repeat. By imitating the mother's utterances, the child could become familiar with the names of the objects.

As seen in the above examples, the children's imitations were partial repetitions of the preceding adult utterances. Without repeating the adults' instructive expressions such as 'ni shuo' ('you say') or 'zhe jiao' ('these are called'), the children repeated the adults' utterances selectively. The children's selective repetitions not only fulfilled the children's obligations as conversational partners but also demonstrated their communicative abilities (Ochs, 1983).

In other cases, the children's imitations involved complete repetitions of the preceding adult utterances. In such cases, the parents directly demonstrated what the children were expected to say without using instructive expressions.

Example 11: (2;0)

- 1 *FAT: 九 隻 鸚鵡.
jiu zhi yingwu
nine CL parrot
'Nine parrots.'
- 2 *DRZ: 九 隻 鸚鵡.
jiu zhi yingwu
nine CL parrot
'Nine parrots.'

Example 11 occurred in a book-reading situation. Without using

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instructive expressions, the father demonstrated what he expected the child to imitate. DRZ took the turn appropriately by imitating the father's whole utterance.

Example 12 is a similar example from YLX's data. In the example the mother demonstrated what the child should say about her own age.

Example 12: (2;2)

- 1 *MOT: 我 兩 歲.
wo liang sui
1sg two year old
'I am two years old.'
- 2 *YLX: 我 兩 歲.
wo liang sui
1sg two year old
'I am two years old.'

In Example 12, the mother showed the child what to say, without using an explicit instructive expression. The child took the turn in Line 2 by imitating the mother's whole utterance. An interesting observation of the example was that the mother used the pronoun 'wo' ('I'), which in fact did not refer to the mother herself. Instead, the pronoun 'wo' referred to the child. It appeared that the mother assumed the role of the child and spoke from the child's perspective. By speaking to YLX in this way, the mother demonstrated what the child should say. Another interesting feature of the mother's utterance was that the mother enunciated each word of her utterance slowly and clearly, which also revealed the instructive and performative nature of the utterance.

As seen above, the two-year-old children may imitate preceding parental utterances when the parents explicitly elicited imitations with instructive expressions or when the parents demonstrated to the children what to say. There was still another situation in which the two-year-olds often showed imitations. That is, when the parents corrected prior child utterances, the children often would imitate the correct versions provided by the parents.

Example 13 illustrates such a situation. In the example, DRZ and his father were watching TV.

Example 13: (2;0)

- 1 *DRZ: 鴨子.
yazi
duck
'Duck.'
- 2 *FAT: 那 不 是 鴨子 啦!
na bu shi yazi la
DEM not be duck PAR
'That's not a duck.'
- 3 *FAT: 那 好像 是 -: # 白鷺鷥.
na haoxiang shi -: # bailusi
DEM seem be egret
'It's more like an egret.'
- 4 *DRZ: 白鷺鷥.
bailusi
egret
'An egret.'

In Line 1, DRZ said 'yazi' ('duck') to refer to what he saw on TV. After telling DRZ that what he saw was not a duck, the father provided the correct name of the bird 'bailusi' ('egret'). The child then imitated the father's utterance and repeated the correct name.

Example 14: (2;0)

- 1 *DRZ: 那 是 雪人 -: .
na shi xueren -:
DEM be snowman
'That's a snowman.'
- 2 *FAT: 好像 是 北極熊 耶!
haoxiang shi beijixiong ye
seem be polar bear PAR
'It's more like a polar bear.'
- 3 *DRZ: 是 北極熊.
shi beijixiong
be polar bear
'A polar bear.'

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In the Example 14, the child pointed at the TV and said ‘xueren’ (‘snowman’) to refer to what was shown on TV. The father corrected the child’s utterance and gave the correct name ‘beijixiong’ (‘polar bear’) in Line 2. The child immediately imitated the father’s utterance to learn the correct name.

As seen in the above analysis, imitation appeared to be the major function of the two-year-olds’ repetitions, and the children used imitations in various communication situations. By imitating what the parents said, the children were able to interact with the parents in coherent conversation.

2.2.2.2 Three-year-olds

In the analysis of the three-year-olds’ data, it was found that while the three-year-olds also used repetitions mostly for imitation, they further demonstrated the ability to use repetitions for other communicative functions. In other words, three-year-olds appeared to have learned to relate more functions to the forms of repetitions.

The imitation function of the three-year-olds’ repetitions can be seen in the following examples. In Example 15, the mother’s explicit elicitation and the child’s imitation occurred in a social routine. In Example 16, the mother demonstrated to the child what to say, and in Example 17, the child’s imitation followed the mother’s correction.

Example 15: (3;7)

- | | | | | |
|---|-------|-------------|-------------|---------------------------|
| 1 | *MOT: | 跟 | 奶奶 | 再見. |
| | | gen | nainai | zaijian |
| | | with | grandmother | goodbye |
| | | | | ‘Say bye-bye to grandma.’ |
| 2 | *JWX: | 奶奶 | 再見. | |
| | | nainai | zaijian | |
| | | grandmother | goodbye | |
| | | | | ‘Bye-bye grandma.’ |

Example 16: (3;4)

- | | | | | | |
|---|-------|------|-----|-------|------|
| 1 | *MOT: | 綠色 | 是 | 什麼 | 形? |
| | | luse | shi | sheme | xing |

- 2 *MOT: green be what shape
 'What's the shape of the green one?'
 什麼 形?
 sheme xing
 what shape
 'What's the shape?'
 3 *PJZ: 忘 了.
 wang le
 forget CRS
 'I've forgotten.'
 4 *MOT: 圓 形.
 yuan xing
 round shape
 'It's round.'
 5 *PJZ: 圓 形.
 yuan xing
 round shape
 'It's round.'

Example 17: (3;4)

- 1 *MOT: 這 是 什麼 這 是 什麼?
 zhe shi sheme zhe shi sheme
 DEM be what DEM be what
 'What's this? What's this?'
 2 *PJZ: 洗 衣服 的 啦 -: .
 xi yifu de la
 wash clothes NOM PAR
 'That's for washing clothes.'
 3 *MOT: 燙 衣服 的.
 tang yifu de
 iron clothes NOM
 'For ironing clothes.'
 4 *PJZ: <燙> [/] 燙 衣服 的.
 <tang> [/] tang yifu de
 iron iron clothes NOM
 'For ironing clothes.'

In addition to the function of imitation, other functions of

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repetitions were observed in the three-year-old children's data. One of these new functions was to use repetitions to acknowledge what the prior speakers had said and also to self-inform the messages.

Example 18: (3;4)

- 1 *MOT: 不 可 以 吃 這 個 太 小 了
 bu keyi chi zhe ge tai xiao le
 not can eat DEM CL too small CRS
 'Don't eat this one. It's too small.'
- 2 *PJZ: 不 可 以 吃.
 bu keyi chi
 not can eat
 'Don't eat this one.'
- 3 *MOT: 對.
 dui
 right
 'Right.'

In Line 2, PJZ repeated what the mother said in Line 1. As seen in the example, the mother's utterance in Line 1 was a warning and the mother did not expect an imitation from the child. It appeared that the child's repetition in Line 2 was used to acknowledge the mother's warning and self-inform the message, rather than a mere imitation.

Example 19 shows another case. In Example 19, the mother and the child were playing with Lego blocks, and were trying to make a model aircraft.

Example 19: (3;4)

- 1 *PJZ: 你 會 做 飛機 嗎?
 ni hui zuo feiji ma
 2sg can make airplane Q
 'Can you make an airplane?'
- 2 *MOT: <那 看> [/] 那 看 # 看 這 上 面
 <na kan> [/] na kan # kan zhe shang mian
 then see then see see DEM up side
 還 有 沒有 斜斜 的 # 我們 把
 hai you meiyou xiexie de # women ba

- still exist not exist oblique NOM 1pl BA
 它 找 出來.
 ta zhao chulai
 3sg find out
 'Have a look at the top to see if there's a pointed piece.
 Let's look for it.'
- 3 *PJZ: 斜斜 的.
 xiexie de
 oblique NOM
 'Something pointed.'
- 4 *MOT: 找 得 到 嗎?
 zhao de dao ma
 find NOM RVC Q
 'Have you found it?'

In Line 2, the mother instructed the child what to do in order to construct a model aircraft. In Line 3, the child repeated part of the mother's instruction while she was looking for a Lego block. It appeared that the child's repetition was used to acknowledge the mother's instruction and self-inform the message when doing the search.

Another new function of repetition found in the three-year-olds' data was to answer questions, as shown below.

Example 20: (3;7)

- 1 *MOT: 那 你的 錢 咧?
 na nide xian lei
 then your money Q
 'Now then, where's your money?'
- 2 *JWX: 我的 錢 沒有 了.
 wode qian meiyou le
 my money not exist CRS
 'I don't have any left.'
- 3 *MOT: 不 見 啦?
 bu jian la
 not appear PAR
 'It's gone?'
- 4 *MOT: 還是 你 本來 就 沒有?
 haishi ni benlai jiu meiyou

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- or 2sg originally just not have
 ‘Or you didn’t have any in the first place?’
- 5 *JWX: 本來 就 沒有.
 benlai jiu meiyou
 originally just not have
 ‘I didn’t have any in the first place.’
- 6 *MOT: 本來 就 沒有 喔.
 benlai jiu meiyou o
 originally just not have PAR
 ‘You didn’t have any in the first place.’

Example 21: (3;7)

- 1 *MOT: 喔 關 起來 了 啊.
 o guan qilai le a
 oh close rise come PFV PAR
 ‘Oh, it’s shut.’
- 2 *MOT: 你 這 是 電動門 嗎?
 ni zhe shi diandongmen ma
 2sg DEM be automatic door Q
 ‘Is it an automatic door?’
- 3 *JWX: 嗯# 電動門 嗯.
 en # diandongmen en.
 PAR automatic door PAR
 ‘Yes, an automatic door.’

In the above two examples, JWX’s repetitions appropriately answered the questions asked by the mother in the preceding lines. In Example 20, the mother’s question was a choice question. That is, the mother provided two choices in Line 3 and Line 4 for the child to choose between. By repeating one of the choices, JWX fulfilled his obligation to answer the mother’s question. In Example 21, on the other hand, the mother asked a different type of question: a yes/no question. While the particle ‘en’ conveyed the sense of ‘yes’, the child’s repetition of ‘diandongmen’ (‘automatic door’) in the utterance further confirmed the answer.

2.2.2.3 Four-year-olds

As noted above, the three-year-olds used repetitions for more communicative functions than the two-year-olds. The analysis showed that the four-year-olds appeared to use repetitions for an even larger variety of functions.

The following examples show how the four-year-olds used repetitions for the functions of imitating (Examples 22), acknowledging/self-informing (Examples 23), and answering (Example 24).

Example 22: (4;5)

- | | | | | |
|---|-------|-----------------|-------|-------|
| 1 | *LRY: | 這 | 是 | 什麼? |
| | | zhe | shi | sheme |
| | | DEM | be | what |
| | | 'What's this?' | | |
| 2 | *MOT: | 小 # 熊. | | |
| | | xiao # | xiong | |
| | | small | bear | |
| | | 'A small bear.' | | |
| 3 | *LRY: | 小 # 熊. | | |
| | | xiao # | xiong | |
| | | small | bear | |
| | | 'A small bear.' | | |

Example 23: (4;8)

- | | | | | | | | |
|---|-------|---------------------------|--------|-----|------|-----|--------|
| 1 | *MOT: | 十 | 加 | 十 | 就 | 是 | 二十. |
| | | shi | jia | shi | jiu | shi | ershi |
| | | ten | plus | ten | then | be | twenty |
| | | 'Ten plus ten is twenty.' | | | | | |
| 2 | *GYL: | +^ | 二十. | | | | |
| | | +^ | ershi | | | | |
| | | | twenty | | | | |
| | | 'Twenty.' | | | | | |
| 3 | *MOT: | m -: | 二十. | | | | |
| | | m -: | ershi | | | | |
| | | PAR | twenty | | | | |

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‘Twenty.’

Example 24: (4;5)

- 1 *MOT: 全部 都 被 他 吃掉 了 是 不 是
 quanbu dou bei ta chidiao le shi bu shi
 all totally BEI 3sg eat PFV yes not yes
 這 樣?
 zhe yang
 DEM way
 ‘He ate all of them. Is that right?’
- 2 *LRY: <全部 都> [//] # 也 被 他 吃掉 了.
 <quanbu dou> [//] # ye bei ta chidiao le
 all totally alsoBEI 3sg eat PFV
 ‘He ate all of them.’

In addition to the functions discussed above, other new functions were found in the four-year-olds’ data. It was found that the four-year-olds sometimes repeated part or all of the parents’ preceding utterances and then elaborated on them in their subsequent utterances.

Example 25: (4;8)

- 1 *MOT: 還 有 湯 對 不 對?
 hai you tang dui bu dui
 still exist soup right not right
 ‘There was still some soup, right?’
- 2 *GYL: 湯 -: 湯.
 tang -: tang.
 soup
 ‘Soup, soup.’
- 3 *GYL: 還 有 一 大 碗 湯 還 有 一 #
 hai you yi da wan tang hai you yi #
 still exist one big bowl soup still exist one
 小 小 碗 湯.
 xiao xiao wan tang
 small small bowl soup
 ‘There was still a big bowl of soup and a small bowl of soup.’

In Example 25, GYL repeated ‘tang’ (‘soup’) twice in Line 2. In Line 3, GYL elaborated on the repeated expression ‘tang’ and provided further information about it.

A similar case was observed in Example 26. In Line 2, LRY’s utterance ‘xiangqi’ (‘Chin chess’) was a partial repetition of the mother’s preceding utterance. In Line 3, LRY provided further information about ‘xiangqi’.

Example 26: (4;5)

- 1 *MOT: e <爸爸> [/] 爸爸 那 一 天 買 那
 e <baba> [/] baba na yi tian mai na
 PAR dad dad DEM one day buy DEM
 個 象棋 呢?
 ge xiangqi ne
 CL Chin chess Q
 ‘Where’s the Chin chess Daddy bought the other day?’
- 2 *LRY: 象棋?
 xiangqi
 Chin chess
 ‘Chin chess?’
- 3 *LRY: 為什麼 要 象棋 我 又 不 會.
 weisheme yao xiangqi wo you bu hui
 why AUX chin chess 1sg but not can
 ‘Why do I want the Chin chess when I can’t even play?’

Another new function of the four-year-olds’ repetitions was the function of ‘agreement’. It was observed that the four-year-olds used repetitions to show their agreement with what the other speakers had said in the preceding utterances.

In Example 27, GYL and the mother were playing a jigsaw puzzle. They were trying to determine whether a piece of the jigsaw was placed in the right place.

Example 27: (4;8)

- 1 *MOT: 是 不 是 這裡 啊?
 shi bu shi zheli a

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- be not be here Q
'Is it here?'
- 2 *MOT: 有 沒有 像?
you meiyou xiang
exist not exist similar
'Are they alike?'
- 3 *MOT: 不 像 不 像 不 像.
bu xiang bu xiang bu xiang
not similar not similar not similar
'(They're) not alike, not alike, not alike.'
- 4 *GYL: <不 像 不 像 不 像> [>].
<bu xiang bu xiang bu xiang> [<]
not similar not similar not similar
'(They're) not alike, not alike, not alike.'
- 5 *MOT: <不 像 不 像> [<].
<bu xiang bu xiang> [<]
not similar not similar
'(They're) not alike, not alike.'
- 6 *MOT: 不 像.
bu xiang
not similar
'(They're) not alike.'

In Line 3, the mother said 'bu xiang' ('not alike') three times to emphasize that the piece of jigsaw was not placed in the right place. GYL also repeated 'bu xiang' three times in Line 4, which appeared to show the child's agreement with what the mother had said in Line 3. An interesting observation was that the mother continued to say 'bu xiang' three more times in Line 5 and Line 6, and two of the three overlapped with GYL's utterance in Line 4.

Example 28 also demonstrates the function of agreement. In Example 28, the mother was trying to blow a balloon but found that there was a hole on the balloon.

Example 28: (4;5)

- 1 *LRY: 唉 有 破 洞.
ai you po dong
PAR exist broken hole

- 2 *MOT: 'There's a hole.'
 沒 救 了.
 mei jiu le
 without save CRS
 'It's useless.'
- 3 *LRY: 沒 救 了.
 mei jiu le
 without save CRS
 'It's useless.'
- 4 *MOT: 把 破 洞 黏 起來 <黏 起來> [>] .
 ba po dong nian qilai <nian qilai> [>]
 BA broken hole stick rise come stick rise come
 'Let's mend the hole.'
 'Let's stick something over the hole to fix it.'
- 5 *LRY: <黏 起來> [<] .
 <nian qilai> [>]
 stick rise come
 'To fix it.'

In Line 3, LRY's utterance 'mei jiu le' ('It's useless') was a repetition of the mother's utterance in Line 2. The child's repetition appeared to show her agreement with the mother's comment. We also found another child repetition in Line 5. In Line 5, LRY repeated part of the mother's utterance in Line 4, which expressed the suggestion 'nian qilai' ('fix it') twice. The child's repetition of 'nian qilai' showed the child's agreement with the mother's suggestion. Interestingly, the child's repetition in Line 5 overlapped with the mother's second 'nian qilai' in Line 4.

2.2.3 Contingent Utterances

As discussed above, contingent utterances referred to those child utterances that both shared the same topics with the preceding adult utterances and added information to the preceding utterances. We also observed that older children tended to produce higher percentages of contingent utterances than younger children. In this section, we further examined the children's contingent utterances to see how the children used the information in adult utterances for formulating their own messages. That is, we investigated whether the children of different ages

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demonstrated different semantic relations between the preceding adult speech and their own contingent speech.

2.2.3.1 Two-year-olds

In the two-year-olds' data, one of most common kinds of contingency relation was that the mother asked a question and the child gave a short yes/no answer. The questions could be of different types, such as A-not-A questions (Example 29), particle questions (Example 30), or tag questions (Example 31).

Example 29: (2;0)

- 1 *FAT: 要 不 要 玩 黏土 呀?
 yao bu yao wan niantu ya
 want not want play clay PAR
 'Do you want to play with some clay?'
 2 *DRZ: 要 嘛 - : .
 yao ma - :
 AUX PAR
 'Yes.'

Example 30: (2;0)

- 1 *FAT: 那 - : [/] 那 你 肚子 餓 嗎?
 na - : [/] na ni duzi e ma
 then then 2sg belly hungry Q
 'Then, are you hungry?'
 2 *DRZ: 不 餓 呀 .
 bu e ya
 not hungry PAR
 'I'm not hungry.'

Example 31: (2;2)

- 1 *FAT: 那 我們 等 一下 就 去 看
 na women deng yixia jiu qu kan
 then 1pl wait a while then go see
 聖誕樹 好 不 好?

- shengdanshu hao bu hao
Christmas tree ok not ok
'Then we will see the Christmas trees later, OK?'
- 2 *Y LX: 好 -: 啦.
hao -: la
ok PAR
'Alright.'

As seen above, by supplying only simple yes-no answers, the children were able to construct simple coherent dialogues with the parents.

Another common type of coherent exchanges between the two-year-olds and their parents was 'alternatives' (Bloom *et al.*, 1991). That is, in the parent-child exchanges, the child opposed the idea presented in the preceding adult utterance, as shown below.

Example 32: (2;0)

- 1 *FAT: 你 不 可以 亂 丟 啦!
ni bu keyi luan diu la
2sg not can disorderly throw PAR
'You can't throw it (=a clay jar) around!'
- 2 *DRZ: 可以 亂 丟 喔 -: .
keyi luan diu o -:
can disorderly throw PAR
'I can throw it around.'

Example 33: (2;0)
(DRZ had a clay jar in his hand)

- 1 *FAT: 打 開 來.
da kai lai
hit open come
'Open it (= a clay jar).'
- 2 *FAT: 這 要 打 開.
zhe yao da kai
DEM AUX hit open
'Open this.'
- 3 *FAT: ## 大 容 開.

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darong kai
DRZ open
'Darong, open it.'
4 *DRZ: ## 爸爸 來 [%DRZ gives FAT the clay jar].
baba lai
dad come
'Help (me), Daddy.'

Example 34: (2;2)

1 *MOT: 就是 不 能 起 來.
jiushi bu neng qi lai
just not can rise come
'Now, don't get up.'
2 *YLX: 我 要 起 來.
wo yao qi lai
1sg want rise come
'I want to get up.'
3 *MOT: 不 要.
bu yao
not AUX
'No.'
4 *YLX: 我 要 起 來.
wo yao qi lai
1sg want rise come
'I want to get up.'
5 *MOT: +^ 我 不 要 讓 你 起 來.
+^ wo bu yao rang ni qi lai
1sg not AUX let 2sg rise come
'I won't let you.'
6 *YLX: 我 要 啦.
wo yao la
1sg want PAR
'But I want to.'

Example 35: (2;2)

1 *MOT: 你 自己 玩.
ni ziji wan

- 2sg self play
 'You play yourself.'
 2 *Y LX: m -: 跟 我 玩 -: .
 m -: gen wo wan -:
 PAR with 1sg play
 'Play with me.'

As seen in the above examples, the children constructed contingent utterances by presenting alternatives to the ideas in the parents' preceding utterances. Thus, by providing alternatives, the children not only shared the same topics presented by the parents but also added additional information.

In addition to short yes/no answers and alternatives, there were cases in which the children's contingent utterances expanded on the ideas presented in the preceding adult utterances, as seen in Example 36.

Example 36: (2;0)

- 1 *FAT: 那 個 是 刀子 啦.
 na ge shi daozi la
 DEM CL be knife PAR
 'That's a knife.'
 2 *DRZ: 刀子 尖尖 的.
 daozi jianjian de.
 knife sharp NOM
 'The knife is sharp.'

In Line 1, the father referred to a knife. The child's utterance in Line 2 expanded on the father's preceding utterance by providing further description of the knife.

Example 37: (2;2)

- 1 *MOT: 快點 坐 這裡.
 kuaidian zuo zheli
 hurry sit here
 'Hurry, sit here.'
 2 *Y LX: 穿 這 個 鞋 [= the shoes on Y LX's feet] .
 chuan zhe ge xie

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wear DEM CL shoe
'Put on the shoes.'

In Example 37, the child expanded on the mother's preceding utterance by referring to the successive aspect of the situation. That is, 'putting on the shoes' was the successive aspect of 'sitting here'.

Example 38: (2;0)

- 1 *FAT: 喔 # 你 看.
 o # ni kan
 PAR 2sg look
 'Oh, look!'
- 2 *DRZ: 聖誕樹.
 shengdanshu
 Christmas tree
 'A Christmas tree.'
- 3 *FAT: 好 大 的 聖誕樹.
 hao da de shengdanshu
 so big NOM Christmas tree
 'Such a big Christmas tree.'

In Line 1, the father drew the child's attention to something on TV. The child expanded on the father's utterance by indicating that what was on TV at the time was a Christmas tree. In other words, the child's utterance further expanded on the message expressed by the father.

Example 39: (2;2)

- 1 *MOT: 這 個 是 誰?
 zhe ge shi shei
 DEM CL be who
 'Who is this?'
- 2 *MOT: 唉 -: 唷 這 個 尾巴 這麼 大.
 ai -: yo zhe ge yiba zheme da
 PAR DEM CL tail so big
 'Wow, its tail is so big.'
- 3 *YLX: 喔 好 噁 -: 心 -: 喔.
 o hao e -: xin -: o

PAR so disgusting PAR
 'Oh, it's so disgusting!'

In Example 39, the child and the mother were reading a book. In Line 2, the mother was referring to a beaver with a large tail. In Line 3, the child expanded on the mother's preceding utterance by giving a comment on the beaver.

As seen above, the two-year-olds expressed contingent relations mainly by giving simple answers to the parents' yes/no questions, and by opposing or expanding on the ideas presented in the preceding adult utterances.

2.2.3.2 Three-year-olds

The three-year-olds demonstrated similar types of contingent relations in their expressions as the two-year-olds. That is, they also related their contingent utterances to the preceding adult utterances through simple yes/no answers, alternatives and expansions. However, closer observation revealed that the two-year-olds and the three-year-olds tended to use different types of alternatives and expansions. The two-year-olds' alternatives and expansions often were semantically related to the preceding adult utterances based on situational context only; the three-year-olds' alternatives and expansions, on the other hand, may not only include utterances based on situational context, but also utterances which were related to the preceding adult utterances based on linguistic structures or devices. In other words, the two-year-olds demonstrated mainly 'contextual contingency', and the three-year-olds also showed 'linguistic contingency' (Bloom, *et al.* 1991). The following examples demonstrate the three-year-olds' contextually contingent utterances.

Example 40: (3;4)

1	*MOT:	你 還 要 不 要 玩 這 個 積 木 ?
		ni hai yao bu yao wan zhe ge jimu
		2sg still AUX not AUX play DEM CL block
		'Do you still want to play with the blocks?'
2	*PJZ:	不 要 了 .
		bu yao le

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not AUX CRS
'No.'

Example 41: (3;7)

- 1 *MOT: 你 是 小朋友 嗎?
ni shi xiaopengyou ma
2sg be kid Q
'Are you a kid?'
- 2 *JWX: 我 是 大人.
wo shi daren
1sg be adult
'I'm a grown-up.'

Example 42: (3;4)

- 1 *MOT: 剩下 的 收 回 叔叔 那
shengxia de shou hui shushu na
remain NOM collect back uncle DEM
邊 去.
bian qu
side go
'Take the ones leftover to Uncle.'
- 2 *PJZ: 我們 這 樣 就 完成 了.
women zhe yang jiu wancheng le
1pl DEM way then finish PFV
'And then we're finished.'

In the above examples, the three-year-olds used simple answers (Example 40), alternatives (Example 41), and expansions (Example 42) to show contextual contingency relations.

As for linguistic contingency, it was found that the children were able to show grammatically subordinate relations in their contingent utterances. As seen in Examples 43-46, the children added expansion to the adult utterances with clauses which were grammatically subordinate to the preceding adult clauses.

Example 43: (3;4)

- 1 *MOT: 嗯 -: 你 要 畫 在 圖畫紙 上 啊.
 en -: ni yao hua zai tuhuazhi shang a
 PAR 2sg AUX draw on drawing paper up PAR
 'You should draw it on the drawing paper.'
- 2 *PJZ: 可是 我 也 想 畫 在 這 裡.
 keshi wo ye xiang hua zai zhe li
 but 1sg also want draw on DEM place
 'But I also want to draw it here.'

Example 44: (3;4)

- 1 *MOT: 你 偷懶 啊.
 ni toulan a
 2sg dawdle PAR
 'You're dawdling.'
- 2 *PJZ: 因為 我 累累 的.
 yinwei wo leilei de
 because 1sg tired NOM
 'Because I'm tired.'

Example 45: (3;7)

- 1 *MOT: 沒有 關 起來 喔.
 meiyou guan qilai o
 not exist close rise come PAR
 'It's not been closed.'
- 2 *JWX: 嗯 -: 因為 等 一下 # 等 一下 [/] 等
 en -: yinwei deng yixia # deng yixia [/] deng
 PAR because wait a while wait a while wait
 一下 會 進 水 了.
 yixia hui jin shui le
 a while AUX enter water CRS
 'Because the water will flow in later.'

Example 46: (3;7)

- 1 *MOT: 為什麼 要 到 地上 來 玩?

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- weisheme yao dao dishang lai wan
why AUX reach ground come play
'Why should we play on the ground?'
- 2 *JWX: 因為 -: +...
yinwei -: +...
because
'Because...'
- 3 *JWX: 地上 比較 寬.
dishang bijiao kuan
ground COMP spacious
'There's more space here.'

In the above examples, the children used linguistic devices to explicitly indicate that their utterances were subordinate to the preceding adult utterances. These devices included 'keshi' ('but') (Example 43) and 'yinwei' ('because') (Examples 44, 45 and 46).

Thus, since the three-year-olds had more developed linguistic abilities, they were able to use linguistic devices to mark the contingency relations between adjacent utterances.

2.2.3.3 Four-year-olds

In the analysis of the four-year-olds' data, simple yes/no answers (Example 47), alternatives (Example 48), contextual expansions (Example 49) and linguistic expansions (Example 50) were also observed, as shown in the following examples.

Example 47: (4;8)

- 1 *MOT: 這 是 小 妹妹 對 不 對?
zhe shi xiao meimei dui bu dui
DEM be little sister right not right
'This is a little girl, right?'
- 2 *GYL: 對.
dui
right
'Right.'

Example 48: (4;5)

- 1 *MOT: 拿 畫畫 好 了 好 不 好?
na huahua hao le hao bu hao
take painting ok CRS ok not ok
‘Take the painting, OK?’
- 2 *LRY: 不 要 我 要 騎 車子.
bu yao wo yao qi chezi
not AUX 1sg want ride motor
‘No, I want to ride my car.’

Example 49: (4;8)

- 1 *MOT: 你 看 這 個 +/.
ni kan zhe ge +/.
2sg look DEM CL
‘Look at this.’
- 2 *GYL: 黃鼠狼.
huangshulang
Japanese mink
‘A Japanese mink.’

Example 50: (4;5)

- 1 *MOT: 這 一 本 上 次 講 過 了.
zhe yi ben shang ci jiang guo le
DEM one CL last time tell EXP PFV
‘This story was told last time.’
- 2 *LRY: 只是 我 還 想 聽 啊!
zhishi wo hai xiang ting a
but 1sg still want listen PAR
‘But I still want to listen to it again!’

In addition to the functions discussed above, another new function was observed in the four-year-olds’ data. In such contingency relations, the children not only added information to the prior utterances but also introduced another related topics. Such a relation was called ‘expatiation’ by Bloom, *et al.* (1991).

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Example 51: (4;8)

- 1 *GYL: <下大雨> [/] 下大雨 就是 # 淹水 -: 了.
 <xia da yu> [/] xia da yu jiushi # yanshui -: le
 fall big rain fall big rain then flood CRS
 'If it rains heavily, there'll be a flood.'
- 2 *MOT: 對啊 -: 汐止 都會淹水 喔.
 dui a -: xizhi dou hui yanshui o
 right PAR Xizhi all can flood PAR
 'Right, Xizhi can often get flooded.'
- 3 *GYL: 媽媽 +...
 mama +...
 Mother
 'Mommy.'
- 4 *GYL: 上次我 在阿媽家 有 #
 shang ci wo zai ama jia you #
 last time lsg in grandma home exist
 淹水 一次 耶.
 yanshui yi ci ye
 flood one time PAR
 'Last time I was at Grandma's home, there was a flood.'

At the beginning of the conversation in Example 51, the mother was talking about a flood in the area of Xizhi. In Line 4, we observed that GYL introduced another related topic and mentioned the flood she had experienced at her grandma's home. Thus, the child demonstrated the relation of expatiation in the example.

Example 52: (4;5)

- 1 *MOT: 為什麼 堆在一起?
 weisheme dui zai yiqi
 why pile in together
 'Why are they piled up together?'
- 2 *LRY: 因為 舊了.
 yinwei jiu le
 because old CRS
 'Because they're old.'
- 3 *MOT: 舊了 就要堆在一起 喔?

- jiu le jiu yao dui zai yiqi o
old CRS then AUX pile in together Q
'They are piled up together because they are old?'
- 4 *LRY: 然後他嘴巴壞掉了沒有了。
ranhou ta zuiba huai diao le meiyou le
then 3sg mouth bad drop PFV not exist CRS
'Then, his mouth was broken, and there was no mouth.'
- 5 *MOT: 沒有了。
meiyou le
not exist CRS
'There wasn't.'
- 6 *LRY: 都壞了。
dou huai le
all bad PFV
'It was all broken.'

In Example 52, LRY and the mother were reading a book and they looked at a picture of some toys. The mother asked LRY why the toys were piled up, and LRY answered that it was because that the toys were old. In Line 4, LRY changed the focus of the topic and referred to one of the toys --- a doll without a mouth. By doing so, the child introduced an example of an expatiation relation.

Another expatiation relation is shown in Example 53. In Example 53, LRY and the mother were playing a doctor-patient game, in which the mother was a doctor and the child was a patient with a fever.

Example 53: (4;5)

- 1 *MOT: 要多喝水
yao duo he shui
AUX more drink water
'(You should) drink more water.'
- 2 *MOT: 然後不可以常常講話
ranhou bu keyi changchang jianghua
then not can often speak
'And then you can't speak very much.'
- 3 *MOT: 講話要小聲一點喔
jianghua yao xiao sheng yidian o
speak AUX small sound a little PAR

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- 4 *MOT: (You should) lower your voice when you speak.
 然後 也 不 可以 吹 到 風 喔。
 ranhou ye bu keyi chui da feng o
 then also not can blow RVC wind PAR
 'And you shouldn't stand in the wind.'
- 5 *MOT: 好 可以 了。
 hao keyi le
 ok can PFV
 'OK. That's it.'
- 6 *LRY: 最好 要 去 有 太陽 的 地方 嗎?
 zuihao yao qu you taiyang de difang ma
 had better AUX go exist sun NOM place Q
 'It's better to go to places where there is sunshine, isn't it?'
- 7 *MOT: 對。
 dui
 right
 'Right.'

At the beginning of the conversation, the mother, who played the doctor, was giving LRY, who played the patient, some advice about how to take care of herself. In Line 3, the child switched the topic and introduced another related topic about going to places where there is sunshine.

Example 54 demonstrates another case of expatiation.

Example 54: (4;8)

- 1 *MOT: 你 也 最好 不 要 戴 眼鏡 喔 +...
 ni ye zuihao bu yao dai yanjing o +...
 2sg also had better not AUX wear glasses PAR
 'You had better not wear glasses.'
- 2 *MOT: <你 你> [/] 因為 你 眼睛 很 漂亮 +...
 <ni ni> [/] yinwei ni yanjing hen piaoliang +...
 2sg 2sg because 2sg eyes very beautiful
 'You...Because your eyes are very beautiful.'
- 3 *MOT: 喔 # 不 要 戴 眼鏡 # 喔。
 o # bu yao dai yanjing # o
 PAR not AUX wear glasses PAR

- 4 *GYL: ‘Oh, don’t wear glasses.’
 等 我 長大 才 可以 戴.
 deng wo zhangda cai keyi dai
 wait 1sg grow up only can wear
 ‘I can only wear glasses after I’ve grown up.’

In Example 54, the mother told GYL that she had better not wear glasses because she had beautiful eyes. In Line 4, GYL changed the focus and introduced a related topic about her wearing glasses when she grew up.

The four-year-olds’ contributions of expatiation in the interactions revealed the children’s more sophisticated conversational skills. In doing so, the children not only added information in the interaction but also at times led the progress of the conversation.

2.2.4 Non-contingent Utterances

As discussed above, the children’s adjacent utterances also included non-contingent utterances, i.e., child utterances that did not share the same topics as the preceding adult utterances. We also observed that younger children tended to produce higher percentages of non-contingent utterances than older children. The analysis showed that when the children’s utterances were non-contingent, the children were often not paying attention to the preceding adult utterances, as shown below.

Example 55: (2;2)

- 1 *MOT: 你 有 在 聽 媽媽 講話 嗎?
 ni you zai ting mama jianghua ma
 2sg exist DUR listen Mom speak Q
 ‘Are you listening to me?’
 2 *YLX: +^ 這 是 我的 襪子.
 +^ zhe shi wode wazi
 DEM be my sock
 ‘These are my socks.’
 3 *MOT: 嗯# 你 有 在 聽 媽媽 講話 嗎?
 en # ni you zai ting mama jianghua ma

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PAR 2sg exist DUR listen Mother speak Q
'Are you listening to me?'

In Example 55, we observed that the child's utterance in Line 2 was non-contingent to the mother's utterance in Line 1. Interestingly, the mother's utterances in Line 1 and Line 3 both indicated that the mother was aware of the child's not being attentive, and was trying to draw the child's attention. Another non-contingent case was observed in Example 56.

Example 56: (2;0)

- 1 *FAT: 你 要 不 要 吃 飯 呀?
ni yao bu yao chi fan ya
2sg want not want eat rice PAR
'Do you want to eat?'
- 2 *FAT: 大 容[% knocking on the table]?
darong
DRZ
'Darong?'
- 3 *FAT: 要 不 要 吃 飯?
yao bu yao chi fan
want not want eat rice
'Do you want to eat?'
- 4 *DRZ: 打 鼓 喔[% ran to the stereo].
da gu o
beat drum PAR
'Beat the drum.'
- 5 *DRZ: 打 鼓 [% turn on the stereo].
da gu
beat drum
'Beat the drum.'

In Example 56, the father was also aware of the child's inattentiveness. The father asked the child twice whether he wanted to eat in Line 1 and Line 3. In addition, in Line 2, the father not only called the child's name but also knocked on a table to try to draw the child's attention. In Line 4, we observed that the child's utterance was not contingent to the father's preceding utterance. The child even ran away

from the father to turn on the stereo.

Another explanation of the children's non-contingent utterances was that the children wanted to change the topics and introduce new topics. The parents often responded to such non-contingent utterances by dropping their original topics and adopting the child-initiated new topics.

Example 57: (3;4)

- 1 *MOT: 想 睡覺 啊?
 xiang shuijiao a
 want sleep Q
 'Do you feel sleepy?'
 2 *PJZ: 那 個 是 照相機.
 na ge shi zhaoxiangji
 DEM CL be camera
 'That's a camera.'
 3 *MOT: 喔 # 照相機 啊.
 o # zhaoxiangji a.
 PAR camera PAR
 'Oh, a camera.'
 4 *MOT: 那 怎麼 用?
 na zeme yong
 then how use
 'How do you use it?'

In Example 57, the mother asked PJZ whether she was sleepy. However, we observed that the child's utterance in Line 2 was not contingent. It introduced a new topic about a camera. The mother then dropped her original topic and maintained the topic initiated by the child in Lines 3 and 4.

Example 58 demonstrates another similar case, in which the child's non-contingent utterance introduced a new topic.

Example 58: (2;2)

- 1 *MOT: 海苔 有 另外 一個 名字 啊?
 haitai you lingwai yi ge mingzi a?
 dried laver has another one CL name Q
 'Does dried laver have another name?'

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- 2 *MOT: 叫 什麼?
jiao sheme?
call what
'What's it called?'
- 3 *YLX: 叔叔 家 在 哪裡?
shushu jia zai nali?
uncle home exist where
'Where's Uncle's home?'
- 4 *MOT: 叔叔 家 在 哪裡 啊?
shushu jia zai nali a?
uncle home exist where Q
'Where's Uncle's home?'
- 5 *MOT: 嗯-: 叔叔 家 要 坐 捷運.
en -: shushu jia yao zuo jieyun.
PAR uncle home AUX sit rapid transit system
'You need to take the rapid transit system to get to Uncle's home.'

As seen in the above example, the child's utterance in Line 3 was not contingent to the mother's questions asked in Line 1 and Line 2. Instead, in Line 3 the child asked an unrelated question. We observed that the mother dropped her own question and answered the child's question.

2.3 SUMMARY

This chapter has presented an analysis of conversational contingency in two- to four- year-olds' conversations with their parents. A quantitative analysis showed that all of the children produced more adjacent utterances than non-adjacent utterances. It appeared that all the children had learned some basic turn-taking rules; they knew that conversation was reciprocal, and they needed to fulfill their roles as conversationalists. It was also found that while most of the children's adjacent utterances were contingent, older children supplied relatively higher percentages of contingent utterances than younger children; in contrast, younger children produced higher percentages of non-contingent utterances than older children. Thus, it appeared that the ability to talk contingently developed with age.

A qualitative analysis showed that the two-year-olds used repetitions mainly to imitate preceding adult utterances. The three-year-olds, however, also used repetitions to answer questions or to acknowledge/self-inform what the prior speaker had said. The four-year-olds, on the other hand, used repetitions further to show agreement, or they repeated part or all of the preceding adult utterances and then elaborated on them in their subsequent utterances. Thus, older children appeared to have learned to relate more functions to the forms of repetitions. As for contingent utterances, the two-year-olds showed contingent relations mainly by giving simple answers to the parents' yes/no questions or by opposing/expanding on the ideas presented in the preceding adult utterances. The three-year-olds, on the other hand, demonstrated linguistically contingent relations; they related their utterances to the preceding adult utterances based on linguistic structures or devices. The four-year-olds demonstrated more sophisticated contingent relations; they not only added information to the prior adult utterances but also introduced other related topics. Thus, the four-year-olds appeared to show a greater variety of contingent relations. As for non-contingent utterances, it was found that non-contingent utterances often occurred when the children were not paying attention to the preceding adult utterances, or when the children wanted to change the topics and introduce new topics.

CHAPTER III TOPIC INITIATION

In Chapter II, parent-child data were examined to see how the children related their utterances to preceding adult utterances. In Chapter III and Chapter IV, we will present analyses of the parent-child data within a topic framework. The aim is to investigate how the children managed discourse topics in conversational interaction. The acquisition of topic management skills is important for children in order for them to become competent conversationalists. It is also important for children to further develop the skills of constructing extended discourse such as narratives.

Chapter III will focus on how the children initiated discourse topics while Chapter IV will focus on how discourse topics were maintained by the children after the topics had been initiated.

3.1 METHODS

3.1.1 The Subjects and the Data

The subjects and the data for the analysis of topic initiations in this Chapter were the same as those described in Chapter II for the analysis of conversational contingency (See Section 2.1.1 for details).

3.1.2 The Framework of Analysis

The transcribed data were first analyzed to identify discourse topics initiated in the conversation. The definition of a discourse topic followed Keenan and Schieffelin (1976); that is, a discourse topic is 'a proposition (or set of propositions) expressing a concern of the speaker' (p.343). The definition has been used by many child language researchers (e.g., Brinton & Fujiki, 1984; Kertoy & Vetter, 1995; Wanska & Bedrosian,

1985). In addition to topic initiations, topic initiators and the communicative intents of topic-initiating utterances were also analyzed. The definitions of the categories are as follows.

1. Topic Initiations
 - a. Topic introduction: an utterance that is not linked with preceding topics
 - b. Topic re-introduction: an utterance that re-introduces a preceding but not immediately preceding topic
2. Topic initiators
 - a. The child: topic-initiating utterances which were produced by the child
 - b. The parent: topic-initiating utterances which were produced by the parent
3. Communicative intents (Wanska & Bedrosian, 1986; Huang, 2002):
 - a. Informative: an utterance which gives information or comment in a declarative form (Corsaro, 1974; Wanska & Bedrosian, 1986), e.g., 'zhe shi wode' ('This is mine.').
 - b. Question: an utterance which asks for information in a question form, e.g., 'na shi sheme?' ('What is that?').
 - c. Request: an utterance which asks for an action to be performed in a question, declarative or imperative form, e.g., 'ba men guan qilai' ('Close the door.').

The data were coded according to the framework of analysis presented above. Quantitative analyses were employed to examine the frequency of the children's and the parents' topic initiations and their use of communicative intents. In addition, qualitative analyses were also conducted to investigate the characteristics of the children's topic initiations in the interactions. These analyses focused especially on how references and propositions were expressed in the children's topic-initiating utterances and whether the children were able to take into account the interlocutors' perspectives. As pointed out by Keenan and Schieffelin (1976), it is essential for a speaker to provide sufficient information about references and propositions when establishing discourse topics. These two components are prerequisites for topic establishment. In addition, to successfully establish discourse topics, children need to be able to make assumptions about what the addressees do and do not know (McTear, 1985). In other words, children also need

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to take into account the interlocutors' perspectives to determine the old vs. new information status from the listeners' points of view.

3.2 RESULTS

The results presented in this section consist of two main parts. The first part presents the results from the quantitative analyses, and the second part presents the results from the qualitative analyses.

3.2.1 Quantitative Analyses

For the quantitative analyses, attention was paid to the roles of the topic initiators in the interactions and the communicative intents expressed in the topic-initiating utterances.

3.2.1.1 Topic Initiators

An analysis was conducted to examine the discourse topics initiated by the children and the parents. The numbers and percentages of discourse topics initiated by the children and the parents were examined. The results are shown in Table 3-1 and Figure 3-1.

Table 3-1: The numbers and percentages of discourse topics initiated in parent-child interaction

	Two-year-olds	Three-year-olds	Four-year-olds
Child	157 (28%)	345 (33%)	353 (40%)
Parent	402 (72%)	705 (67%)	539 (60%)
Total	559 (100%)	1050 (100%)	892 (100%)

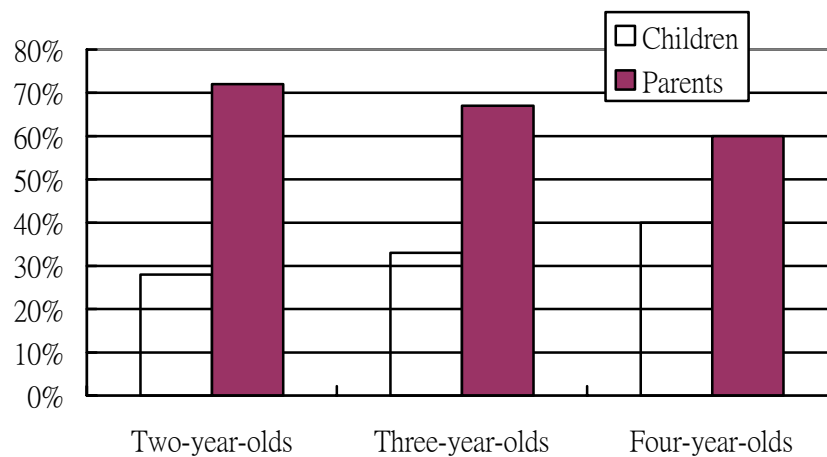


Figure 3-1: The percentages of discourse topics initiated in parent-child interaction

As seen in the table and the figure, for each age group, the parents initiated more topics than the children. In other words, in the parent-child interactions, the parents played the primary role of setting the topics for the conversation; that is, in the parent-child interaction, the children's and the parents' roles were not balanced. The parents were inclined to take on conversational responsibilities when interacting with children. The fact that the parents controlled most of the topics may reveal that the children's abilities to initiate discourse topics were still not well-developed. Thus the interaction between the children and the parents relied heavily on the parents to initiate the topics.

However, it appeared that with increasing age, the children's ability to be topic initiators also increased. As seen in the results, there appeared to be a developmental trend. We observed that among the three age groups, older children initiated a relatively higher percentage of topics in the interactions than younger children. The two-year-olds initiated 28% of the discourse topics; the three-year-olds, 33%, and the four-year-olds, 40%. The differences were statistically significant ($\chi^2 (2) = 21.58, p < .001$). Thus, it appeared that with increasing age and language ability, older children were able to contribute more actively to topic initiations.

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3.2.1.2 Communicative Intents

In addition to the analysis of topic initiators, analysis was also conducted to examine the communicative intents of the children's and the parents' topic-initiating utterances. Table 3-2 and Figure 3-2 present the numbers and percentages of the communicative intents expressed by the children in topic initiations.

Table 3-2: Communicative intents of topic initiations in children's speech

	Two-year-olds	Three-year-olds	Four-year-olds
Informative	131 (83%)	269 (78%)	263 (75%)
Questions	16 (10%)	43 (12%)	41 (12%)
Request	10 (7%)	33 (10%)	49 (13%)
Total	157 (100%)	345 (100%)	353 (100%)

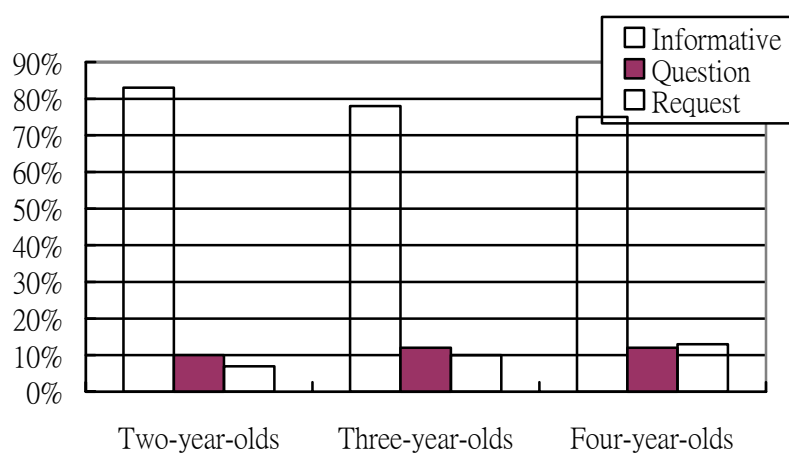


Figure 3-2: Communicative intents of topic initiations in children's speech

As seen in Table 3-2 and Figure 3-2, the communicative intents of the children's topic initiations were predominantly informatives. The percentages of informatives used by the three age groups were 83%, 78%, and 75%. While it appeared that younger children tended to use higher percentages of informatives, the differences did not reach statistical significance ($\chi^2(4) = 8.08, p > .05$).

The children's frequent use of informatives may be explained by the fact that the children's topic-initiating utterances often described what the children were doing at the time of speech or what the children were about to do. Such utterances sometimes may not in fact oblige the parents to respond. Since informatives are less explicit in eliciting responses from the listeners, it appeared that the children's strategies for topic initiations were less interactive in nature. As suggested by Wanska and Bedrosian (1986), children's use of informatives in topic initiations may reflect the children's less sophisticated conversational style. Wanska and Bedrosian also pointed out another explanation; that is, children's use of informatives may indicate their greater interest in describing objects/events than in their parents' verbal participation. Thus, we may speculate that some of the children's informatives reflected collective monologues. That is, the children talked aloud to themselves in front of the parents, but the parents served only as stimuli; the points of view of the parents were never taken into account (Piaget, 1926/1974). In other words, the children's informatives may not be intended as social. However, as the parents often treated the children's utterances as if they were communicative, the parents thus often acknowledged and accepted the children's use of informatives as initiating discourse topics. In other words, the parents tended to create a state of mutual involvement for interaction (Camaioni, 1979).

Example 1 shows that the child's topic-initiating utterance was an informative, which described what the child was doing at the time of speech. In this example, the child was sitting on the floor, and was trying to make a model house.

Example 1: (3;7)

1 *JWX: 我 做 一 個 房 子.
 wo zuo yi ge fangzi.
 I make one CL house
 'I'm making a house.'

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- 2 *MOT: 你 會 做 房子 喔?
 ni hui zuo fangzi o?
 you can make house PRT
 'You can make a house?'
- 3 *JWX 對.
 dui
 yes
 'Yes.'

In this example, the child appeared to be involved in the task in hand. In Line 1, the child was describing what he was doing. While the child's utterance did not obligate the mother to respond, the mother's utterance in Line 2 showed that she acknowledged the child's utterance as initiating a discourse topic.

Example 2, on the other hand, demonstrates that the child used an informative to indicate what she was about to do. In the example, the child and the mother were reading a picture book; the child saw a picture of some monkeys in the book, and wanted to count how many there were.

Example 2: (4;8)

- 1 *GYL: 我 數數看 有 幾 隻 猴子.
 wo shushukan you ji zhi houzi.
 I count there be how many CL monkey
 'I'll count how many monkeys there are.'
- 2 *MOT: 嗯 # 你 數數看.
 en # ni shushukan.
 PAR you count
 'You count.'
- 3 *GYL: 一 隻 # 兩 隻 # 三 隻 # 四 隻 # 五 隻.
 yi zhi # liang zhi # san zhi # si zhi # wu zhi
 one CL two CL three CL four CL five CL
 'one, two, three, four, five'

In Line 1, the child indicated what she was about to do. As seen in Line 2, the mother responded to the child's utterance and thus continued the discourse topic.

While the children used mainly informatives to initiate discourse

topics, the parents used far fewer informatives than the children, as seen in Table 3-3 and Figure 3-3.

Table 3-3: Communicative intents of topic initiations in parent's speech

	Two-year-olds' parents	Three-year-olds' parents	Four-year-olds' parents
Informative	118 (29%)	224 (32%)	221 (41%)
Questions	237 (59%)	297 (42%)	197 (37%)
Request	47 (12%)	184 (26%)	121 (22%)
Total	402 (100%)	705 (100%)	539 (100%)

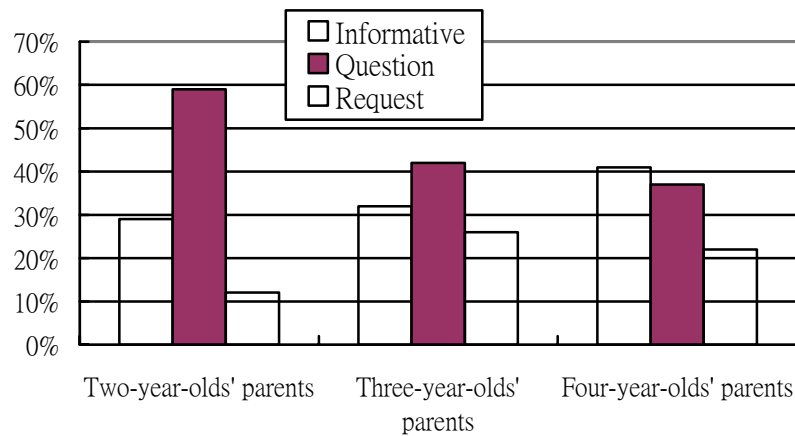


Figure 3-3: Communicative intents of topic initiations in parents' speech

In comparison with the children, the parents used questions more frequently in topic initiations. A high frequency of questions was especially conspicuous in the speech of the two-year-olds' parents. We observed that the two-year-olds' parents used questions 59% of the time in topic initiations. In the three-year-olds' and the four-year-olds' parents' speech, however, the occurrences of questions were not as predominant as in the speech of the parents of the two-year-olds. As seen in the results, the three-year-olds' parents used questions 42% of the time. The four-year-olds' parents, on the other hand, resorted to

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questions 37% of the time. The communicative intents used by the parents of the different groups were significantly different ($\chi^2(4) = 64.0$, $p < .001$).

Since questions explicitly elicited responses, the parents' frequent use of questions may reflect the parents' attempts to engage the children in conversation, especially when addressing younger children. Since younger children were less capable of participating in conversational interaction, the parents of younger children would need to employ more questions for elicitation. It appeared that the parents' use of communicative intents in topic initiations was influenced by the children's language abilities.

The data showed that the parents' use of questions were rather effective in initiating discourse topics to interact with the children, as shown in the following examples.

In Example 3, the mother was asking the child about a Lego block the child had left on the floor. By using a question, the mother explicitly demanded a response from the child and thus established the discourse topic in the interaction.

Example 3: (3;4)

- 1 *MOT: 你 還要 不 要 玩 這 個 積木?
ni hai yao bu yao wan zhe ge jimu
You still AUX not AUX play with this CL block
'Do you still want to play with this Lego block?'
- 2 *PJZ: 不 要 了.
bu yao le.
not AUX CRS
'No.'
- 3 *MOT: 不 要 了.
bu yao le.
not AUX CRS
'No.'
- 4 *MOT: 那 請 你 把 它 收好.
na qing ni ba ta shouhao.
Then please you BA 3sg put away
'Then please put it away.'

In Example 4 below, the mother was asking the child about a toy

airplane. As seen in the example, the mother used three questions at the beginning of the exchanges to involve the child in interaction.

Example 4: (3;7)

- 1 *MOT: 這 是 誰的 飛機?
zhe shi sheide feiji?
this be whose airplane
'Whose airplane is this?'
- 2 *MOT: 怎麼 會 在 我們 家 呢?
zenme hui zai women jia ne?
How come AUX in 1pl house PRT
'How come it's in our house?'
- 3 *MOT: 燦宏 哥哥 的 <是 不 是> [>]?
Canhong gege de <shi bu shi> [>]?
Canhong brother NOM yes not yes
'Is it Brother Canhong's?'
- 4 *JWX: <燦宏 哥哥> [<] 送 給 我的 啊.
<Canhong gege> [<] song gei wo de a.
Canhong brother give to 1sg NOM PAR
'Brother Canhong gave it to me.'

As seen in the examples, an important strategy the parents employed in establishing discourse topics was to draw the children's attention and demand the children's verbal participation. To achieve such interaction, questions appeared to be an effective means. By using questions, the parents not only explicitly elicited responses from the children, but also scaffolded the interaction, thus making the children's tasks in the interactions easier.

In addition to questions, the results revealed that the parents also employed informatives rather frequently to initiate discourse topics, but not as frequently as the children did. As seen above, the children's informatives were used mainly for referring to objects or describing what the children were doing or about to do. Compared with the children's informatives, the parents' informatives for topic initiations were often more interactive in nature. That is, when the parents used informatives to initiate discourse topics, the informatives often not only gave information or comment but also implicitly involved the children in the interaction, as seen in Example 5 and Example 6.

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In Example 5, the mother used an informative in Line 1 to initiate a discourse topic about playing a game.

Example 5: (4;5)

- 1 *MOT: 我 教 你 玩 一 個 遊 戲 喔.
wo jiao ni wan yi ge youxi o.
1sg teach 2sg play one CL game PAR
'I'll teach you to play a game.'
- 2 *LRY: 找 一 樣 的 <顏色> [>]
zhao yiyang de <yanse> [>]
Find the same NOM color
'Finding the same colors.'
- 3 *MOT: <對> [<].
<dui> [<].
yes
'Yes.'

In Line 1, the mother's informative expressed information in a declarative form. However, the informative also contained an offer to teach the child a game. By doing so, the mother involved the child in the immediate concern of the discourse topic. Thus, the informative had an interactive function in topic initiation.

Example 6 illustrates another case of the parents' use of informatives in topic initiations.

Example 6: (2;2)

- 1 *MOT: 我 去 拿 那 個 -: 照 片 給 妳 看.
wo qu na na ge -: zhaopian gei ni kan.
1sg go take DEM CL photo give 2sg see
'I'll go and get that photo to show you.'
- 2 *YLX: 照 片 呢?
zhaopian ne?
photo Q
'Where's the photo?'
- 3 *MOT: 照 片 馬 上 來.
zhaopian mashang lai.
photo right away come

‘It’ll be here right away.’

In Line 1, the mother’s informative also implied an offer, which implicitly involved the child in interaction.

As seen in the examples above, rather than simply describing objects or events, the parents’ informatives often effectively involved the children in interaction. Since informatives were potentially less explicit in requiring responses, the interactive nature of the parents’ informatives may reveal that the parents took into account the children’s limited ability to participate in conversation.

As mentioned above, the parents of the two-year-olds used relatively higher percentages of questions than the parents of the older children. In contrast, the parents of the four-year-olds employed informatives more frequently than the younger children. It appeared that the parents adjusted their use of communicative intents in topic initiations according to the children’s language abilities. That is, when addressing younger children, the parents tended to resort to questions for explicit elicitation; however, when addressing older children, the parents may be aware of the fact that older children relied less on explicit elicitation to participate in conversation.

In addition to questions and informatives, the parents also used a noticeable number of requests to initiate topics. As seen in Example 7, the father used requests in Line 1 and Line 2 to involve the child in the topic initiated.

Example 7: (2;0)

- | | | |
|---|-------|---------------------------------------|
| 1 | *FAT: | 這 先 把 它 收 起來. |
| | | zhe xian ba ta shou qilai. |
| | | DEM first BA 3sg put away rise come |
| | | ‘Put this (= a clay jar) away first.’ |
| 2 | *FAT: | 收 起來. |
| | | shou qilai. |
| | | put away rise come |
| | | ‘Put it away.’ |
| 3 | *DRZ: | 不 要 收 起來. |
| | | bu yao shou qilai. |
| | | not AUX put away rise come |
| | | ‘(I) don’t want to put it away.’ |

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Example 8 illustrates another case. As seen in Example 8, the mother repeated her request to obtain a response from the child.

Example 8: (4;8)

- 1 *MOT: 去 拿 衛生紙 啦.
qu na weishengzhi la.
go get tissue PRT
'Go get (some) tissues.'
- 2 *MOT: 去 拿.
qu na.
go get
'Go get (some).'
- 3 *MOT: 快點.
kuaidian.
hurry up
'Hurry up.'
- 4 *GYL: 不 要.
bu yao.
not AUX
'I don't want to.'

3.2.2 Qualitative Analyses

This section presents qualitative analyses to examine how the children initiated discourse topics in conversational interaction. The focuses include how the children provided information for the parents to identify references and propositions and how the children assessed the interlocutors' perspectives in topic initiations.

3.2.2.1 Two-year-olds

To locate referents, the two-year-olds often used deictic forms and non-verbal means. The discourse topics initiated by the two-year-olds were mostly here-and-now topics. With the contextual information, referents in the children's topic-initiating utterances were often identifiable to the parents.

Example 9: (2;0)

(DRZ was pointing at something in a toy box.)

- 1 *DRZ: 我 要 一 個 這 個.
 wo yao yi ge zhe ge.
 1sg want one CL DEM CL
 'I want one of this kind.'
- 2 *FAT: 好 了 .
 hao le
 ok PFV
 'OK.'

In Example 9, DRZ located the referent of his topic-initiating utterance by using a deictic form 'zhe' ('this') and pointing. As seen from the father's response, the father was able to identify the referent from the situational context.

Example 10: (2;2)

- 1 *YLX: 媽媽 你 講 這 個 [% taking a book] .
 mama ni jiang zhe ge
 Mother 2sg say DEM CL
 'Mommy, tell me this one.'
- 2 *MOT: 好 .
 hao
 ok
 'OK.'

A similar case was observed in Example 10. In the example, the referent in YLX's topic-initiating utterance was expressed by the deictic form 'zhe' ('this') and the child's action of taking the book. Thus, the here-and-now situation provided the resources for the mother to identify the referent and to interpret the proposition of the child's topic-initiating utterance.

However, it was found sometimes that although the referents were identifiable, the intended propositions were not immediately clear. These cases often occurred when the children's utterances were incomplete, and the utterances were presented with limited syntactic and semantic information. In such cases, the parents possibly tried to guess what the

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children were trying to say and provided responses accordingly. The parents' responses thus played a role in determining the propositions of the children's topic-initiating utterances. In other words, the discourse topics were in fact co-constructed by both the child and the parent, as seen below.

Example 11: (2;0)

- 1 *DRZ: 這 一 個 [% taking a clay duck].
zhe yi ge
DEM one CL
'This one.'
- 2 *FAT: 這 是 鴨子 呀.
zhe shi yazi ya
DEM be duck PAR
'This is a duck.'

In the example above, the child took a duck model and said 'this one'. The utterance did not express a complete proposition since only a deictic term was produced. However, as seen in the father's response in Line 2, the father's utterance 'this is a duck' expended on the child's utterance in Line 1 and thus determined the possible intended proposition of the child's utterance in Line 1. In other words, it was not only the child's utterance but also the father's response which co-constructed the discourse topic of the interaction.

Unclear propositions were also observed when the children initiated discourse topics by simply labeling the objects in the speech situations. Labeling objects appeared to be a rather common strategy when the two-year-olds initiated discourse topics. However, although in such cases the referents might be identifiable, the propositions were incomplete. Example 12 demonstrates such a case.

Example 12: (2;2)

(YLX was picking up a toy banana from a table.)

- 1 *YLX: 大 -: 香 -: 蕉 -: .
da -: xiangjiao -:
big banana
'Big banana'

- 2 *FAT: 那 是 什麼 -: ?
na shi sheme -:
DEM be what
‘What’s that?’
- 3 *FAT: 你 手 上 拿 的 +/.
ni shou shang na de +/.
2sg hand up take NOM
‘The one in your hand.’

In Line 2, YLX initiated a discourse topic by labeling a toy banana in the situational context. Although the referent was clear in the topic-initiating utterance, the proposition was not completely expressed. However, the father’s question in Line 2 and Line 3 indicated what the father thought the proposition of the child’s utterance was. Therefore, both the child’s utterance and the father’s response determined what the discourse topic of the interaction was.

In some cases, the child-initiated discourse topics were made clear after the parents’ elicitations and expansions and after several turn-takings between the parent and the child.

Example 13: (2;2)

- 1 *YLX: 嗯 我 [/] 我 -: +...
en wo [/] wo -: +...
PAR 1sg 1sg
‘Mm, I...I...’
- 2 *FAT: 你 先 唱 好 不 好 ?
ni xian chang hao bu hao
2sg first sing ok not ok
‘You sing first, OK?’
- 3 *YLX: 嗯 可是+...
en keshi +...
PAR but
‘Mm, but ...’
- 4 *MOT: 你 要 怎麼 樣 ?
ni yao zeme yang
2sg want how way
‘What do you want?’
- 5 *YLX: 我 生日 快樂 -: .

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- wo shengri kuaile -:
 1sg birthday happy
 'I, happy birthday.'
 6 *MOT: <好 啊 -: > [>] .
 <hao a -:> [>]
 ok PAR
 'OK.'
 7 *FAT: <對 -: 好> [<] .
 <dui -: hao> [<]
 right ok
 'Right, OK.'

In the example above, YLX's utterances in Line 1 and Line 3 provided only very limited information and did not express complete references and propositions. The discourse topic became clearer in Line 5 after the parents had contributed to the interaction with elicitations and expansions.

The analysis also showed that in some cases the propositions of the child-initiated discourse topics were unclear because the references in the topic-initiating utterances were insufficiently specific, as seen in Example 14.

Example 14: (2;2)

- 1 *YLX: 叔叔 在 家 裡 .
 shushu zai jia li
 uncle in home inside
 'Uncle's at home.'
 2 *MOT: 叔叔 在 家 裡 喔 ?
 shushu zai jia li o
 uncle in home inside Q
 'Uncle's at home?'
 3 *YLX: 叔叔 在 我們 家 家 裡 .
 shushu zai women jia jia li
 uncle in our home home inside
 'Uncle is in our home.'
 4 *MOT: 對 啊 +...
 dui a +...
 right PAR

‘Yes.’

In Line 1, the referent of ‘shushu’ (‘uncle’) in the utterance was not sufficiently specified so as to be identifiable. The ‘jia’ (‘home’) mentioned was interpreted as the uncle’s home. In other words, the child’s utterance in Line 1 appeared to refer to an unspecified uncle who was at home. However, after the mother initiated a repair in Line 2, the child repaired her own utterance and said that ‘Uncle is in our home’. By specifying the referent of ‘home’, the child indicated that the ‘home’ referred to was the child’s home rather than the uncle’s home. From the situational context, it was then clear that the child was talking about the research assistant who was present in the speech context and was video-taping the mother-child interaction. Therefore, after the child’s repair, the mother finally understood what the child was trying to say, as indicated in the mother’s response in Line 4 ‘dui a’ (‘Yes’).

As seen above, the parents often responded to the children’s topic-initiating utterances with questions (e.g., Example 13) or repetitions (e.g., Example 14). Example 15 is another case in which the mother responded to the child’s topic-initiating utterance with a question, as shown in Line 2. In Example 16, on the other hand, the father used a repetition in Line 2 to respond to the child’s topic initiation.

Examples 15: (2;2)

- | | | | | | |
|---|-------|-----------------------|--|--|---|
| 1 | *YLX: | 我 要 去 騎 車車 -: | wo yao qu qi cheche -: | 1sg AUX go ride motor | ‘I want to ride my car.’ |
| 2 | *MOT: | 你 要 去 哪裡 騎 車車 ? | ni yao qu nali qi cheche | 2sg AUX go where ride motor | ‘Where do you want to ride your car?’ |
| 3 | *YLX: | 我 要 去 這 邊 下 面 騎 車車 -: | wo yao qu zhe bian xia mian qi cheche -: | 1sg AUX go DEM side down side ride motor | ‘I want to go down there to ride my car.’ |
| 4 | *MOT: | +^ 要 去 下 面 騎 車車 喔 ? | +^ yao qu xia mian qi cheche o | AUX go down side ride motor Q | |

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- 5 *Y LX: ‘You want to go down there to ride your car?’
 嗯.
 en .
 PAR
 ‘Mm.’

Example 16: (2;2)

- 1 *Y LX: 啊 -: 這麼 大 張 的 -: .
 a -: zheme da zhang de -:
 PAR so big piece NOM
 ‘Wow, such a big one (= a poster)!’
 2 *FAT: 啊 這麼 大 張 的 啊 -: .
 a zheme da zhang de a -:
 PAR so big piece NOM PAR
 ‘Wow, such a big one.’
 3 *FAT: 上 面 有 什麼 ?
 shang mian you sheme
 up side exist what
 ‘What’s on top of it?’
 4 *FAT: 有 沒有 A B C [% English]?
 you meiyou A B C
 exist not exist A B C
 ‘Is there A B C?’
 5 *Y LX: A B [% English] +/.

By responding to the children’s topic-initiating utterances with questions or repetitions, the parents accepted the topics initiated by the children.

However, an interesting observation was that the parents sometimes provided such responses even when it appeared that the children’s topic-initiating utterances did not make sense, as shown below.

Example 17: (2;0)

- 1 *DRZ: 我 不 要 大 容 -: 了 -: .
 wo bu yao darong -: le -:
 1sg not want DRZ CRS
 ‘I don’t want Darong.’

- 2 *FAT: 你 不 要 大 容 啦 .
 ni bu yao darong la
 2sg not want DRZ PAR
 ‘You don’t want Darong.’

In Line 1, DRZ said that ‘I don’t want Darong (the child’s own name).’ The child’s utterance did not appear to make sense in the context. However, the father responded to the child’s utterance with a repetition to acknowledge the child’s topic, rather than asking for clarification. It appeared that what the father intended to do was to create a state of mutual involvement for interaction.

3.2.2.2 Three-year-olds

As seen in the analysis above, when the two-year-olds initiated discourse topics, they may provide limited syntactic and semantic information; the references and propositions of their topic-initiating utterances were thus unclear. As for the three-year-olds, the data showed that the three-year-olds’ topic-initiating utterances were usually syntactically more complete and semantically clearer.

Although the three-year-olds’ topic-initiating utterances provided more syntactic and semantic information than the two-year-olds’, it appeared that the three-year-olds’ topic-initiating utterances sometimes were not appropriate at the discourse-interactional level. That is, it was found that when the three-year-olds initiated discourse topics, they may not be able to take into account the new-old information distinction and the interlocutors’ perspectives.

Example 18: (3;4)

- 1 *PJZ: 嗯 # 房 子 沒 有 勒 .
 en # fangzi meiyou le
 PAR house not exist PAR
 ‘Mm, the house is gone.’
 2 *MOT: ha?
 ha?
 PAR
 ‘What?’
 3 *PJZ: 房 子 沒 了 e.

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- fangzi mei le e
house not exist CRS PAR
'The house is gone.'
- 4 *MOT: 什麼 意思 啊 # 我 看.
sheme yisi a # wo kan
what meaning PAR 1sg see
'What do you mean? Let me see.'

In Example 18, we observed that PJZ initiated a discourse topic in Line 1. However, the topic appeared to cause confusion to the mother. The mother's responses in Line 2 and Line 4 indicated that the mother was not able to interpret what the child said based on the on-going conversational interaction. The mother thus initiated repairs for clarification.

Example 19: (3;7)

- 1 *JWX: 你 要 買 什麼?
ni yao mai sheme?
2sg AUX buy what
'What do you want to buy?'
- 2 *MOT: 我 要 買 什麼+...
wo yao mai sheme +...
1sg AUX buy what
'What do I want to buy?'
- 3 *MOT: 我 不 知道 我 要 買 什麼?
wo bu zhidao wo yao mai sheme?
1sg not know 1sg AUX buy what
'I don't know what I want to buy.'

Before the conversation in Example 19 began, the child was playing with some toys. In Line 1, the child suddenly asked the mother what she wanted to buy. It appeared that the child was trying to involve the mother in a pretend play in which the child was a shopkeeper and the mother was a customer. However, such a topic initiation appeared to cause confusion to the mother, as seen in the mother's response in Line 2 and Line 3.

Example 20 : (3;7)

- 1 *JWX: 你 要 做 這 個?
 ni yao zuo zhe ge?
 2sg AUX do DEM CL
 'You want to do this?'
- 2 *MOT: 我 要 做 什麼?
 wo yao zuo sheme?
 1sg AUX do what
 'What do I want to do?'
- 3 *MOT: 我 沒有 要 做 什麼 啊.
 wo meiyou yao zuo sheme a.
 1sg not AUX do what PAR
 'I'm not trying to do anything.'

A similar case is shown in Example 20. In Line 1, the child initiated a topic and asked the mother 'You want to do this?' The mother appeared to be confused, as seen in the mother's utterances in Line 2 and Line 3.

Thus, from the analysis of the three-year-olds' data, it appeared that the children's abilities to assess the interlocutors' perspectives were still limited. They were not able to identify the new-old information status and thus initiated discourse topics which were unanchored and caused confusion.

3.2.2.3 Four-year-olds

A characteristic of the four-year-olds' initiations of discourse topics was that the four-year-olds were able to use various linguistic and interactional devices to signal the beginning of discourse topics.

These devices included a variety of particles. For instance, the children often used the pause filler 'eh' at the beginning of a topic-initiating utterance. Example 21 and Example 22 illustrate how the children used 'eh' to signal topic initiation.

Example 21: (4;5)
 (QPL: research assistant)

- 1 *LRY: eh 你 也 在 畫 啊.

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- eh ni ye zai hua a.
PAR 2sg also DUR draw PAR
'Eh, you are also drawing, aren't you?'
- 2 *QPL: 沒有 沒有 沒有.
meiyou meiyou meiyou.
not exist not exist not exist
'No, no, no.'
- 3 *LRY: 那 你 在 幹 什麼?
na ni zai gan sheme?
then 2sg DUR do what
'Then what are you doing?'
- 4 *QPL: 趕快 你 去 那邊 我在 寫字.
gankuai ni qu nabian wo zai xiezi.
hurry 2sg go there 1sg DUR write
'Hurry up. Go over there. I'm writing.'

Example 22: (4;8)

(GYL and the mother were playing with a jigsaw puzzle.)

- 1 *GYL: eh # 就 差 耳朵 e.
eh # jiu cha erduo e.
PAR only remain ear PAR
'Eh, we still need to complete the ear.'
- 2 *MOT: 是 啊?
shi a?
really Q
'Really?'
- 3 *GYL: 這 個 .
zhe ge.
DEM CL
'This one.'
- 4 *MOT: 確定?
queding?
sure
'Are you sure?'
- 5 *GYL: 你 看.
ni kan.
you look
'Look.'

- 6 *MOT: 啊 對!
a dui!
PAR yes
'Oh, yeah!'

It appeared that the particle worked as a pause filler and revealed the planning time needed at topic boundaries (Erbaugh, 1987, 1992). That is, initiating a topic may require more processing and production efforts. In addition to 'eh', other particles used by the four-year-olds for topic initiations included the particles 'wei', 'o', 'yeh' and 'wa', as seen in the following examples.

Example 23: (4;8)

- 1 *GYL: <喂> [<] 這 又 不 是 我的.
<wei> [<] zhe you bu shi wode
PAR DEM again not be my
'Hey, this is not mine.'
- 2 *GYL: 這 是 哥哥的.
zhe shi gegede.
DEM be brother's
'This is brother's.'
- 3 *MOT: 哥哥的 喔?
gegede o?
brother's Q
'Brother's?'
- 4 *MOT: 你 怎麼 知道?
ni zenme zhidao?
2sg how know
'How do you know?'

Example 24: (4;8)

- 1 *GYL: 喔 我 來 數.
o wo lai shu.
PAR 1sg come count
'Oh, let me count.'
- 2 *MOT: 好 你 數 你 數.
haw ni shu ni shu.

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- OK 2sg count 2sg count
 'OK. Go ahead.'
- 3 *GYL: 一 二 三 四 五 六 七
 yi er san si wu liu qi
 one two three four five six seven
 八 九 十 十一 十二.
 ba jiu shi shiyi shier.
 eight nine ten eleven twelve
 'One, two, three, four, five, six, seven, eight, nine, ten,
 eleven, twelve.'

Example 25: (4;5)

- 1 *LRY: 耶 -: 吹 蠟燭 了.
 yeh -: chui lazhu le.
 PAR blow candle CRS
 'Yeah! I am gonna blow out the candles.'
- 2 *MOT: 耶 吹 蠟燭 了.
 yeh chui lazhu le.
 PAR blow candle PAR
 'Yeah! Blow out the candles'
- 3 *MOT: <不用 先 許願> [//] 要 許願
 <buyong xian xuyuan> [//] yao xuyuan
 no use first make wish must make wish
 完 再 吹 蠟燭.
 wan zai chui lazhu.
 over then blow candle
 'Don't you make a wish first? Make a wish before you
 blow out the candles.'
- 4 *LRY: 我 希望 # 柔柔 可以 買 餅乾
 wo xiwang rourou keyi mai binggan
 1sg hope Rourou AUX buy cookie
 給 我 吃.
 gei wo chi.
 give 1sg eat
 'I hope that Rou-rou can buy some cookies for me.'
- 5 *LRY: 好 了.
 hao le.
 OK CRS

‘That’s all.’

Example 26: (4;5)

- 1 *LRY: 哇 好像 有 破 了.
wa haoxiang you po le.
PAR seem have broken CRS
‘Wow, there seems to be a hole in it.’
- 2 *MOT: 破 給 他 捏 起來.
po gei ta nie qilai.
broken give 3sg pinch rise come
‘Let’s fix it.’
- 3 *MOT: 破洞 捏 起來 .
podong nie qilai.
hole pinch rise come
‘Fix it’
- 4 *LRY: 我 找 不 到 破.
wo zhao bu dao po.
1sg find not RVC broken
‘I can’t find any hole in it.’

As seen in the examples, these non-lexical particles may function as pause fillers, attention getters or exclamers, which often signaled the initiations of discourse topics.

In addition to particles, the children also used lexical items to mark the initiations of topics. The most common kind of lexical devices used by the children was the vocative ‘mama’ (‘mother’). The children used it not only to draw the mothers’ attention but also to mark the beginning of discourse topics.

Example 27: (4;5)

- 1 *GYL: eh # 媽媽+...
eh # mama+...
PAR Mother
‘Eh, Mommy.’
- 2 *MOT: 嗯.
en.
PAR

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- 3 *GYL: ‘Mm.’
 我 知道 那 一 個+...
 wo zhidao na yi ge+...
 1sg know DEM one CL
 ‘I know that one.’
- 4 *GYL: 垃圾 # 垃圾 不 可以 往 #
 lese # lese bu keyi wang #
 trash trash not AUX toward
 <河 裡 丟> [>].
 <he li diu> [>].
 river inside throw
 ‘You can’t throw trash into the river.’
- 5 *MOT: +^ <對 啊> [<]!
 +^ <dui a> [<]!
 right PAR
 ‘You’re right.’

Example 28: (4;8)

- 1 *GYL: 媽媽 +...
 mama +...
 Mother
 ‘Mommy.’
- 2 *GYL: 上次 我 在 阿媽 家 有 #
 shangci wo zai ama jia you #
 last time 1sg in grandma house have
 淹水 一 次 耶.
 yangshui yi ci ye.
 flood one CL PAR
 ‘Last time when I was at Grandma’s place, there was a flood.’
- 3 *MOT: 差點 <淹> [/] 淹 到 裡面 來
 chadian <yan> [/] yan dao limian lai
 almost submerge submerge to inside come
 對 不 對?
 dui bu dui?
 right not right
 ‘The water almost flowed into the house, right?’
- 4 *MOT: 差一點點 嘛 # 對 不 對?

- chayidiandian ma # dui bu dui?
almost PAR right not right
'Almost, Right?'
- 5 *GYL: 對.
dui.
right
'Right.'

In addition to vocatives, other lexical devices included pause fillers such as 'na' ('then'), initiative markers such as 'hao' ('OK'), time terms such as 'jintian' ('today'), and other expressions such as 'wo gen ni jiang' ('I'll tell you something'). The following examples illustrate the children's use of these topic initiation signals.

Example 29: (4;8)

- 1 *GYL: 那 我 讓 你 看看 我的
na wo rang ni kankan wode
then 1sg let 2sg see my
那 一 本 書.
na yi ben shu.
DEM one CL book
'Then, I'll let you read that book of mine.'
- 2 *MOT: 妹妹 有 書 喔?
meimei you shu o?
sister have book Q
'You have a book?'
- 3 *GYL: 嗯 數碼寶貝 的 啦!
en shumabaobei de la!
PAR Digital Baby DEM PAR
'Yes, it's about "Digital Baby"!'

Example 30: (4;5)

- 1 *LRY: 好 喝 水.
hao he shui.
OK drink water
'OK, I'll drink some water.'
- 2 *MOT: 喝 水.

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- he shui.
drink water
'Drink some water.'
- 3 *LRY: 喝 一點點 就 夠 了.
he yidiandian jiu gou le.
drink a little then enough CRS
'A little will be enough.'
- 4 *MOT: 喝 一點點.
he yidiandian.
drink a little
'A little.'

Example 31: (4;5)

- 1 *LRY: 我 今天 要 講的 是 小熊 +...
wo jintian yao jiangde shi xiaoxiong +...
1sg today will tell be little bear
'The story I'm going to tell you today is about a little bear.'
- 2 *LRY: 這 是 什麼?
zhe shi sheme?
this be what
'What's this?'
- 3 *MOT: 小 # 熊.
xiao # xiong.
little bear
'A little bear.'
- 4 *LRY: 小 # 熊.
xiao # xiong.
little bear
'A little bear.'

Example 32: (4;8)

(GYL and the mother were reading a picture book.)

- 1 *GYL: 我 跟 你 講 喔.
wo gen ni jiang o.
1sg with 2sg tell PAR
'I'll tell you something.'

- 2 *MOT: 恩.
 en.
 PAR
 ‘Oh.’
- 3 *GYL: 裙子.
 qunzi.
 skirt
 ‘Skirts.’
- 4 *MOT: 裙子?
 qunzi?
 skirt
 ‘Skirts?’
- 5 *MOT: 你 喜歡 穿 裙子 嗎?
 ni xihuan chuan qunzi ma?
 2sg like wear skirt Q
 ‘Do you like to wear skirts?’
- 6 *GYL: 我 喜歡 穿 這 一 個.
 wo xihuan chuan zhe yi ge.
 1sg like wear DEM one CL
 ‘I like to wear this one.’

3.3. SUMMARY

In this chapter, topic initiations in the parent-child interactions were examined. The results showed that in all the three groups, the parents initiated more topics than the children. In other words, in the parent-child interaction, the parent played the primary role of setting the topics for the conversation. Among the three age groups, older children initiated relatively higher percentages of topics in the interactions than younger children. Thus, it appeared that with increasing age and language abilities, older children were able to contribute to topic initiations more actively.

The communicative intents of the children’s topic-initiating utterances were predominantly informatives. The children’s frequent use of informatives may be related to the fact that the children’s topic-initiating utterances often described what the children were doing at the time of speech or what the children were about to do. Such utterances sometimes may not in fact oblige the parents to respond or may not be intended as social. However, as the parents were usually

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rather attentive to and responsive to the children's utterances, they often acknowledged and accepted the children's utterances as initiating discourse topics. In other words, the parents tended to create a state of mutual involvement for interaction.

While the children used mainly informatives to initiate discourse topics, the parents initiated discourse topics with different communicative intents: questions, requests or informatives. Since questions explicitly demanded responses, the parents' frequent use of questions may reflect the parents' attempts to engage the children in conversation. The data showed that the parents' use of questions and requests were often effective in initiating discourse topics in the interactions.

As for the qualitative analyses, it was found that the two-year-olds often used deictic forms or non-verbal means to locate referents in here-and-now topics. However, as the children's utterances were often incomplete, the intended propositions may not be immediately clear. In such cases, the discourse topics were often co-constructed by both the child and the parent in interaction. As for the three-year-olds, although the three-year-olds' topic-initiating utterances were syntactically more complete and semantically clearer than the two-year-olds', the three-year-olds' topic-initiating utterances were sometimes not appropriate at the discourse-interactional level. That is, it was found that when the three-year-olds initiated discourse topics, they may not have been able to take into account the new-old information distinction and the interlocutors' perspectives. As for the four-year-olds, a characteristic of the four-year-olds' initiations of topics was that the four-year-olds were able to use various linguistic and interactional devices to signal the beginning of discourse topics.

CHAPTER IV

TOPIC MAINTENANCE

After a discourse topic is initiated, the challenge is to maintain the topic. This chapter presents the analysis of how the children and the parents maintained discourse topics in conversational interactions.

4.1 METHODS

4.1.1 The Subjects and the Data

The subjects and the data for the analysis of topic maintenance in this Chapter were the same as those presented in Chapter II and Chapter III for the analysis of conversational contingency and topic initiation (See Section 2.1.1 for details).

4.1.2 The Framework of Analysis

In the parent-child interactions, utterances which maintained discourse topics were identified (Keenan & Schieffelin, 1976; Kertoy & Vetter, 1995). In addition, the speakers of the topic-maintaining utterances and the communicative intents of the topic-maintaining utterances were also identified.

1. Topic maintenance: (Keenan & Schieffelin, 1976)
 - a. Topic collaboration: an utterance that continues the topic by matching the proposition of the previous utterance
 - b. Topic incorporation: an utterance that continues the topic by adding or requesting additional information
2. Topic maintainers:
 - a. The child: topic-maintaining utterances which were produced by the child
 - b. The parent: topic-maintaining utterances which were

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- produced by the parent
3. Communicative intents (Wanska & Bedrosian, 1986; Huang, 2002):
 - a. Informative: an utterance which gives information or comment in a declarative form
 - b. Question: an utterance which asks for information in a question form
 - c. Request: an utterance which asks for an action to be performed in a question, declarative or imperative form
 - d. Acknowledgement: an utterance which recognizes the fact that the previous speaker has said or done something
 - e. Response: an utterance involving a yes/no response to a question, or an answer supplied to a question asked

The data were coded according to the analysis framework presented above. Quantitative analyses were employed to examine the frequency of the children's and the parents' topic-maintaining utterances and the communicative intents of these utterances. In addition, qualitative analyses were also conducted to investigate the characteristics of the children's topic maintenance in the interactions.

4.2 RESULTS

The results presented in this section consist of two main parts. The first part presents the results from the quantitative analyses mentioned above and the second part presents the results from the qualitative analyses.

4.2.1 Quantitative Analyses

For the quantitative analyses, attention was given to the roles of the topic maintainers in the interaction and the communicative intents expressed in the topic-maintaining utterances. In addition, topic collaboration and topic incorporation were also examined.

4.2.1.1 Topic Maintainers

The children's and the parents' contributions to topic maintenance

were analyzed. Table 4-1 and Figure 4-1 present the numbers and percentages of topic-maintaining utterances produced by the children and the parents in the interaction.

Table 4-1: The numbers and percentages of topic-maintaining utterances in parent-child interaction

	Two-year-olds	Three-year-olds	Four-year-olds
Child	1332 (30%)	2198 (37%)	2528 (39%)
Parent	3095 (70%)	3720 (63%)	3894 (61%)
Total	4427 (100%)	5918 (100%)	6422 (100%)

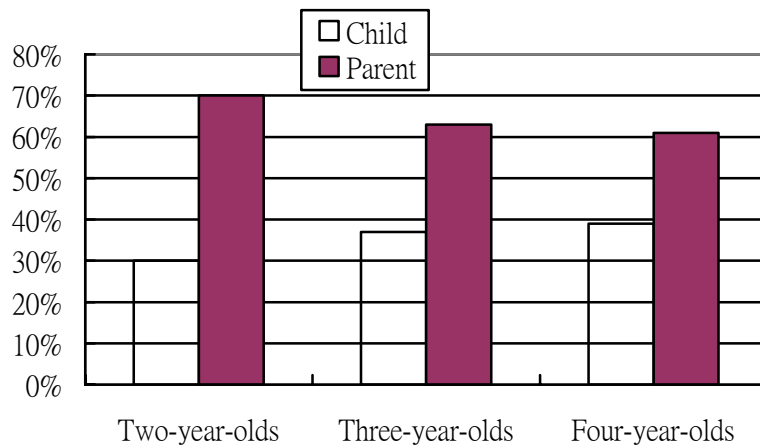


Figure 4-1: The percentages of topic-maintaining utterances in parent-child interaction

As seen in Table 4-1 and Figure 4-1, the parents contributed more topic-maintaining utterances than the children in all the three groups. We observed that the parents in the three groups produced 70%, 63% and 61% of the topic-maintaining utterances in the interactions. In other words, in the parent-child interactions, the parents played the primary role in maintaining the topics of the conversation. This finding may

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reveal that the children's ability to maintain discourse topics was still not well-developed. The interaction between the children and the parents relied heavily on the parents to maintain the topics. However, it appeared that with increasing age, the children's ability to maintain discourse topics increased. The results revealed that with increasing age, the children appeared to participate more actively in maintaining discourse topics. We observed that among the three age groups, older children contributed relatively higher percentages of topic-maintaining utterances than younger children, and the differences across the groups were highly significant ($\chi^2(2) = 101.7, p < .001$).

4.2.1.2 Communicative Intents

Further analysis was conducted to examine the communicative intents of the children's topic-maintaining utterances. The results are presented in Table 4-2 and Figure 4-2.

Table 4-2: Communicative intents of topic-maintaining utterances in children's speech

	Two-year-olds	Three-year-olds	Four-year-olds
Informative	712 (54%)	1390 (63%)	1733 (69%)
Question	57 (4%)	146 (7%)	223 (9%)
Request	73 (5%)	102 (5%)	112 (4%)
Acknowledgment	4 (0.3%)	16 (1%)	23 (1%)
Response	486 (36%)	544 (24%)	437 (17%)
Total	1332 (100%)	2198 (100%)	2528 (100%)

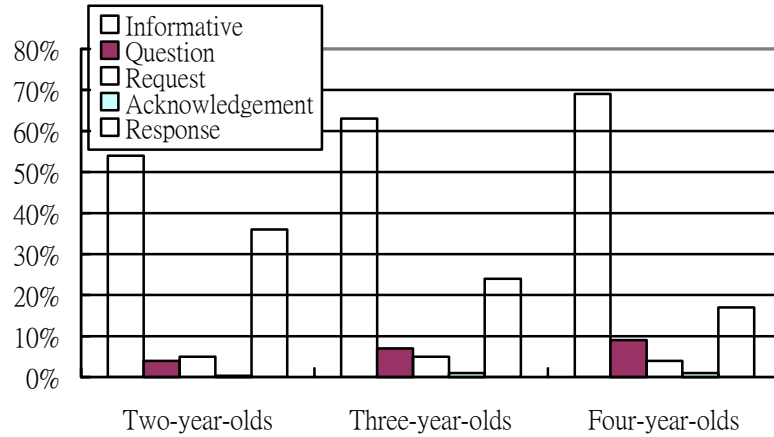


Figure 4-2: Communicative intents of topic-maintaining utterances in children's speech

The results showed that the communicative intents of the children of all the three age groups were predominantly informatives and responses. However, it appeared that informatives increased while responses decreased with increasing age. Statistical analysis showed that the differences across the age groups were significant ($\chi^2(8) = 197.64$, $p < .001$).

In addition to the children's communicative intents, the parents' communicative intents in topic maintenance were also analyzed. The results are presented in Table 4-3 and Figure 4-3.

Table 4-3: Communicative intents of topic-maintaining utterances in parents' speech

	Two-year-olds' parents	Three-year-olds' parents	Four-year-olds' parents
Informative	1014 (33%)	1638 (44%)	1930 (50%)
Question	1201 (39%)	1226 (33%)	1170 (30%)
Request	595 (19%)	510 (14%)	450 (12%)
Acknowledgment	195 (6%)	72 (2%)	84 (2%)
Response	90 (3%)	274 (7%)	260 (6%)
Total	3095 (100%)	3720 (100%)	3894 (100%)

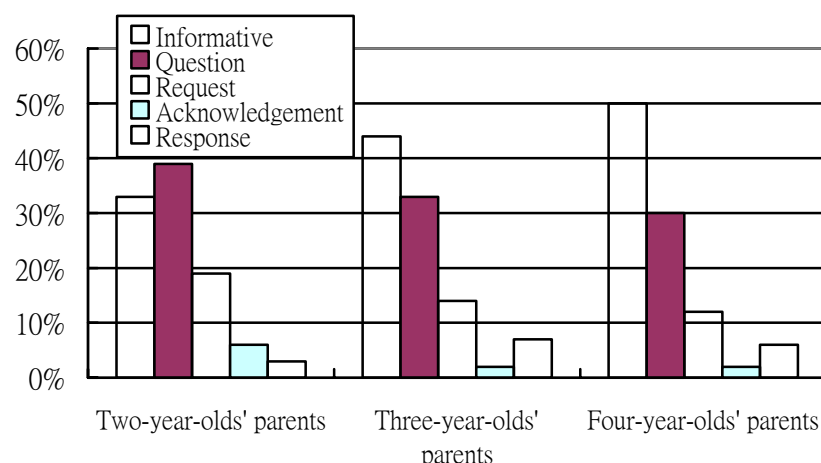


Figure 4-3: Communicative intents of topic-maintaining utterances in parents' speech

In contrast to the children's results, the communicative intents of the parents were mainly informatives and questions. However, the results showed that the parents of older children used relatively higher percentages of informatives and lower percentages of questions than the parents of younger children. The differences among the parents' communicative intents were highly significant across the age groups ($\chi^2(8) = 415.15, p < .001$).

4.2.1.3 Topic Collaboration and Topic Incorporation

Topic-maintaining utterances were further analyzed in terms of topic collaboration and topic incorporation. That is, we analyzed how frequently new information was added in the interactional exchanges for topic maintenance. To incorporate new information in topic maintenance, the children needed to know not only how to provide relevant information that was coherent to the preceding discourse but also how to contribute additional information that moved the conversation forward. Table 4-4 and Figure 4-4 present the distributions of topic collaboration and topic incorporation in the children's contributions to topic

maintenance.

Table 4-4: Topic collaboration and topic incorporation in children's speech

	Two-year-olds	Three-year-olds	Four-year-olds
Collaboration	935 (70%)	1357 (62%)	1325 (52%)
Incorporation	397 (30%)	841 (38%)	1203 (48%)
Total	1332 (100%)	2198 (100%)	2528 (100%)

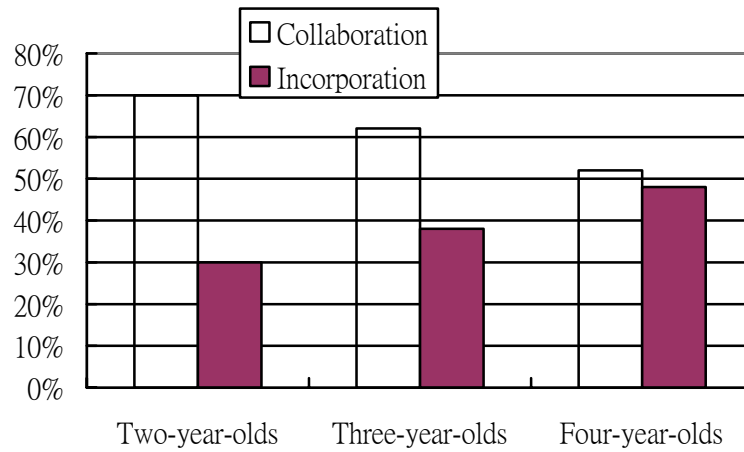


Figure 4-4: Topic collaboration and topic incorporation in children's speech

As seen in Table 4-4 and Figure 4-4, the children employed mainly topic collaboration. In other words, the children's contributions usually matched the propositions of the preceding utterances, without adding additional information. Thus, it appeared that topic incorporation still presented a challenge to the children. However, a developmental trend was evident. We observed that older children were able to contribute relatively more topic incorporation than younger children. In contrast,

younger children used topic collaboration more frequently than older children. The differences across the age groups were statistically significant ($\chi^2(2) = 120.58, p < .001$).

As for the parents, the analysis of the parents' topic collaboration and topic incorporation is presented in Table 4-5 and Figure 4-5. We observed that the parents of all the three groups used more topic incorporation than topic collaboration. In other words, the parents' contributions usually moved the conversation forward by adding or requesting new information for topic maintenance.

Table 4-5: Topic collaboration and topic incorporation in parents' speech

	Two-year-olds' parents	Three-year-olds' parents	Four-year-olds' parents
Collaboration	1476 (48%)	1533 (41%)	1483 (38%)
Incorporation	1619 (52%)	2187 (59%)	2411 (62%)
Total	3095 (100%)	3720 (100%)	3894 (100%)

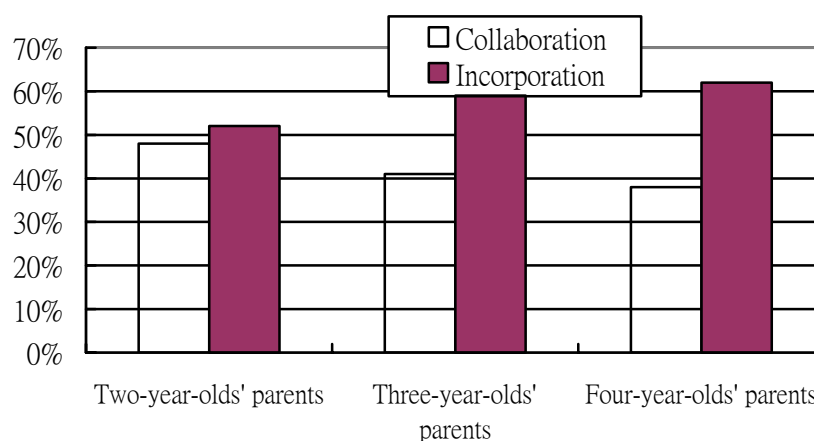


Figure 4-5: Topic collaboration and topic incorporation in parents' speech

Although the parents of all the three groups used mostly topic

incorporation, older children's parents used even more topic incorporation than younger children's parents ($\chi^2(2) = 66.61, p < .001$). In other words, for the dyads with older children, both the children and the parents incorporated more new information to maintain discourse topics. Thus, it appeared that the children, to some extent, shaped the way in which the parents spoke. That is, when the children demonstrated better skills in topic incorporation, the parents would also resort to more topic incorporation to interact with the children.

Example 1 demonstrates how PJZ used topic collaboration to maintain a discourse topic. In Example 1, both the child and the mother were looking at a picture of household objects, including an iron.

Example 1: (3;4)

- 1 *MOT: 這 是 什 麼 [//] 媽 媽 燙 衣 服 的
zhe shi sheme [//] mama tang yifu de
Thisbe what mommy iron clothes NOM
是 什 麼?
be what
'What's this, what is it that mommy uses to iron clothes?'
- 2 *MOT: +^ 熨 斗.
+^ yundo.
iron
'An iron.'
- 3 *PJZ: 燙 衣 服 的 是 熨 斗.
tang yifu de shi yundo
iron clothes NOM be iron
'The thing used for ironing clothes is an iron.'

As seen in the example, the child's utterance in Line 3 maintained the topic by matching the proposition of the preceding utterances. Although the child's utterance maintained the topic, no additional information was added to the discourse.

Example 2, on the other hand, presents how GYL demonstrated the skills of topic incorporation. In this example, the child and the mother were playing with a jigsaw puzzle.

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Example 2: (4;8)

- 1 *MOT: 這 個 地方 完成 了.
zhe ge difang wancheng le.
DEM CL place finish CRS
'This place is finished.'
- 2 *GYL: 然後 # 如果 我們 通通 把 它
ranhou # ruguo women tongtong ba ta
then if 1pl all BA 3sg
<拼> [/] 拼 完 的話 +...
<ping> [/] ping wan dehua +...
fit together fit together finish PAR
'Then afterwards, if we finish it all...'
- 3 *GYL: 就 會 變成 很 美麗 的.
jiu hui biancheng hen meili de.
then will become very beautiful NOM
'It'll be very beautiful.'
- 4 *MOT: 對 對 對.
dui dui dui.
right right right
'That's right.'
- 5 *GYL: 就 會 跟 他們 一樣 # 跟 他們 一樣 #
jiu hui gen tamen yiyang # gen tamen yiyang
then willwith 3pl same with 3pl same
很 美麗 的.
hen meili de.
very beautiful NOM
'Then it'll become very beautiful, just like them.'

As seen in Example 2, the child's utterances maintained the discourse topic by the use of topic incorporation. The child not only provided relevant information but also added new information to the discourse.

4.2.2. Qualitative Analyses

Qualitative analyses were conducted to further examine the characteristics of the topic maintenance by the children in the

parent-child interactions.

4.2.2.1 Two-year-olds

The analysis of the two-year-olds' data revealed that the children's contributions to topic maintenance were rather limited. In the parent-child interactions, the maintenance of established discourse topics relied heavily on the parents' scaffolding. In other words, the children's topic-maintenance utterances were often elicited by the parents. With successive elicitations by the parents, the children often needed to supply only simple responses to participate in topic maintenance, as shown in the examples below.

Example 3: (2;2)
(YLX pretended that she was cooking.)

- 1 *MOT: 好 了 嗎?
hao le ma?
OK CRS Q
'Are you done?'
- 2 *YLX: 好 了.
hao le.
OK CRS
'Yes.'
- 3 *MOT: 那 -: # 有 味道 了 嗎?
na -: # you weidao le ma?
then have smell CRS Q
'Do you smell anything?'
- 4 *YLX: 有.
you.
have
'Yes.'
- 5 *MOT: 什麼 味道?
sheme weidao?
what smell
'What's the smell?'
- 6 *YLX: 是 -: 蘋果 口味 的.
shi pingguo kouwei de.
be apple flavor NOM

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‘It’s apple.’

As seen in the example above, the mother’s questions led the progress of the topic. With the mother’s elicitations, the child was able to participate in maintaining the topic with only simple responses.

An interesting observation in relation to the parents’ successive elicitations was that the parents often asked a series of similar questions which were partially repetitive in content and form. In the successive elicitations the parents may only substitute one of the constituents in the previous questions.

Example 4: (2;0)

- 1 *FAT: 大容 喜歡 玲玲 姊姊 # 還 是
Darong xihuan lingling jiejie # hai shi
Darong like Lingling sister or be
喜歡 # 珮珮 姊姊?
xihuan # peipei jiejie?
like Peipei sister
‘Do you like sister Ling-ling or sister Pei-pe?’
- 2 *FAT: 還是 喜歡 # 水蜜桃 姊姊?
haishi xihuan shuimitao jiejie?
or like peach sister
‘Or do you like sister Peach?’
- 3 *DRZ: 玲玲 姊姊 跟 珮珮 姊姊.
lingling jiejie gen peipei jiejie.
Lingling sister with Peipei sister
‘Sister Ling-ling and sister Pei-pe.’
- 4 *FAT: # 那 -: 你 喜 不 喜歡 #
na -: ni xi bu xihuan #
then 2sg like not like
水蜜桃 姊姊?
shuimitao sjiejie?
Peach sister
‘Then, do you like sister Peach or not?’
- 5 *DRZ: 喜歡.
xihuan.
like
‘Yes, I do.’

- 6 *FAT: 也 喜歡 呀?
ye xihuan a?
also like Q
'You really do?'
- 7 *FAT: 那 你 喜 不 喜歡 -: #
na ni xi bu xihuan -: #
then 2sg like not like
水果 奶奶?
shuiguo nainai?
fruit grandmother
'Then, do you like Grandma Fruit?'
- 8 *DRZ: 喜歡.
xihuan.
like
'Yes, I do.'
- 9 *FAT: 也 喜歡 啊?
ye xihuan a?
also like Q
'You really do?'
- 10 *FAT: 那 你 喜 不 喜歡
na ni xi bu xihuan
then 2sg like not like
普普?
pupu?
Pupu
'Then, do you like Pupu?'
- 11 *DRZ: 喜歡.
xihuan.
like
'Yes, I do.'
- 12 *FAT: 那 你 喜 不 喜歡 -: # 巧虎?
na ni xi bu xihuan -: # qiaohu?
then 2sg like not like Qiaohu
'Then, do you like Qiao-hu?'
- 13 *DRZ: 喜歡.
xihuan.
like
'Yes, I do.'

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As seen in Example 4 above, the father asked the child a series of questions about some TV characters. The questions were similar in content and form. The father asked the child whether he liked the TV characters, and in the questions the father simply replaced one constituent in the questions. Thus, the child could participate in topic maintenance simply by giving the same answer 'xihuan' four times. The question forms used in Lines 1 and 2 were choice questions, while the question forms used in Lines 4, 7 and 12 were A-not-A questions. Choice questions and A-not-A questions were relatively easier for the child to answer than other question forms since the answers were already given in the questions. Thus, by structuring the conversation in such a way, the father reduced the child's comprehension and production load in the interaction.

Example 5 demonstrates another similar case.

Example 5: (2;2)

- 1 *MOT: 妳 給 叔叔 介紹 一下 這 是
ni gei shushu jieshao yixia zhe shi
2sg give uncle introduce a while DEM be
妳的 枕頭.
nide zhentou.
your pillow
'Introduce your pillow to Uncle.'
- 2 *MOT: 它 今年 差不多 幾 歲?
ta jinnian chabuduo ji sui?
3sg this year nearly how many years old
'How old is it?'
- 3 *Y LX: ha?
ha?
Q
'What?'
- 4 *MOT: 差不多 兩 歲.
chabuduo liang sui.
almost two years old
'It's almost two years old.'
- 5 *Y LX: 兩 歲.
liang sui.
two years old

- 6 *MOT: 'Two years old.'
 嗯.
 en.
 PAR
 'Yes.'
- 7 *YLX: 三 歲.
 san sui.
 three years old
 'Three years old.'
- 8 *MOT: 三 歲.
 san sui.
 three years old
 'Three years old.'
- 9 *MOT: 好.
 hao.
 OK
 'OK.'
- 10 *MOT: 啊 還有 妳的 臭 被被 咧?
 a haiyou nide chou beibei lie?
 PAR and your smelly quilt Q
 'And what about your smelly quilt?'
- 11 *YLX: 五 歲.
 wu sui.
 five years old
 'It's five years old.'
- 12 *MOT: 臭 被被 五 歲 了 喔.
 chou beibei wu sui le o.
 smelly quilt five years old CRS PAR
 'Are you sure that it's five years old?'
- 13 *YLX: 嗯 差不多 -: .
 en chabuduo
 yes almost
 'Yes, almost.'
- 14 *MOT: 差不多 喔?
 chabuduo o?
 almost Q
 'Almost?'
- 15 *YLX: 五 歲.
 wu sui.

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- five years old
'Five years old!'
- 16 *MOT: 那 妳的 -: # 水瓶 呢?
na nide -: # shuiping ne?
then your bottle Q
'Then, what about your water bottle?'
- 17 *YLX: 水瓶 -: 差不多 -: 兩 歲.
shuping -: chabuduo -: liang sui.
bottle almost two years old
'It's almost two years old.'
- 18 *MOT: 差不多 兩 歲.
chabuduo liang sui.
almost two years old
'Almost two years old.'
- 19 *MOT: 那 那 隻 狗狗 咧?
na na zhi gougou lie?
then DEM CL doggie Q
'What about your stuffed dog?'
- 20 *YLX: 狗狗 -: 差不多 兩 歲.
gougou -: chabuduo liang sui.
doogie almost two years old
'It's almost two years old.'
- 21 *MOT: 差不多 兩 歲.
chabuduo liang sui.
almost two years old
'Almost two years old.'

In Example 5, we observed that the mother asked a series of questions about the 'ages' of certain objects in the setting, including a pillow, a quilt, a water bottle and a toy dog. The questions were similar in content and form. The mother also answered the first question for the child to demonstrate how such a question should be answered, and the child repeated the answer as demonstrated by the mother. As for the questions which followed, we observed that the child was able to respond to the mother's questions by giving similar answers. In such interaction, it appeared that whether the child answered the questions correctly or not was not important. By responding to the mother's questions, the child was able to take turns appropriately in the interaction, and was able to contribute to topic maintenance.

As seen above, the parents' questions which had similar structures and contents may help topic maintenance in the parents' interaction with the two-year-olds. In the parent-child interaction, we observed that the turn-taking sequences often followed three routine patterns, as shown below.

- (1) parent's questions → child's answer
- (2) parent's question → child's answer → parent's acknowledgement
- (3) parent's question → child's answer → parent's request for confirmation → child's confirmation

In Example 4, the first pattern of the turn-taking sequence occurred in Lines 1, 2, 3, Lines 10, 11, and Lines 12, 13. The second pattern was observed in Lines 4, 5, 6 and Lines 7, 8, 9. In Example 5, we observed the third pattern in Lines 10, 11, 12, 13 and the second pattern in Lines 16, 17, 18, and Lines 19, 20, 21. As seen in the examples, the parents' acknowledgements were verbal reflected utterances; that is, the parents echoed or expanded on the children's utterances to show acknowledgement.

Example 6 and Example 7 illustrate two more cases of the third pattern of sequence. As seen in Examples 6 and 7, the third pattern was observed in Lines 1, 2, 3, 4 in both examples.

Example 6: (2;2)

- 1 *MOT: 請問 這 個 是 什麼?
qingwen zhe ge shi sheme?
please ask DEM CL be what
'Please tell me what this (=a toy car) is?'
- 2 *Y LX: 汽車.
qiche.
car
'A car.'
- 3 *MOT: 是 汽車 嗎?
shi qiche ma?
be car Q
'A car?'
4. *Y LX: 嗯.
en.

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PAR
'Yes.'

Example 7: (2;2)

- 1 *MOT: 你 要 去 哪裡 騎 車車?
ni yao qu nali qi cheche
2sg AUX go where ride bicycle
'Where do you want to ride your bicycle?'
 - 2 *YLX: 我 要 去 這邊 下面 騎 車車 -: .
wo yao qu zhebian xiamian qi cheche -: .
1sg AUX go here under ride bicycle
'I want to go down there (to ride my bicycle).'
 - 3 *MOT: +^ 要 去 下面 騎 車車 喔?
+^ yao qu xiamian qi cheche o?
+^ AUX go under ride bicycle Q
'To ride your bicycle down there?'
 - 4 *YLX: 嗯.
en.
PAR
'Yes.'

It appeared that routine turn-taking sequences made the conversation easier for the children to cope with and helped the children to successfully participate in it (Huang, 2003).

As seen above, the parents involved the children in topic maintenance by using successive elicitations which were similar in content and form, and were partial repetitions. In the data, it was found that the children also used similar strategies to extend their contributions in topic maintenance. That is, the children produced utterances which were repetitive in content and form to their own prior utterances. Such repetitive utterances may involve exact repetitions or partial repetitions, as illustrated in the examples below.

Example 8: (2;0)

- 1 *FAT: 我們 玩 粉紅 色 的 好 不 好?
women wan fenhong se de hao bu hao?
1pl play pink color NOM right not right

- 2 *FAT: 'Let's play with the pink one, OK?'
 粉紅 色 的。
 fenhong se de.
 pink color PAR
 'The pink one.'
- 3 *DRZ: 我 要 拿 -: 這 個。
 wo yao na -: zhe ge.
 1sg want take DEM CL
 'I want to take this one.'
- 4 *DRZ: 這 也 是 粉紅 色。
 zhe ye shi fenhong se.
 DEM also be pink color
 'This is also pink.'
- 5 *DRZ: 這 也 是 粉紅 色。
 zhe ye shi fenhong se.
 DEM also be pink color
 'This is also pink.'
- 6 *DRZ: 這 也 是 粉紅 色。
 zhe ye shi fenhong se.
 DEM also be pink color
 'This is also pink.'
- 7 *DRZ: 這 也 [//] 綠 色。
 zhe ye [//] lu se.
 DEM also green color
 'This is also green.'
- 8 *DRZ: 這 紫 色 -: .
 zhe zi se -: .
 DEM purple color
 'This is purple.'
- 9 *DRZ: 綠 色。
 lu se.
 green color
 'Green.'
- 10 *DRZ: 綠 色。
 lu se.
 green color
 'Green.'
- 11 *DRZ: 綠 色。
 lu se.

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- 12 *DRZ: green color
 ‘Green.’
 紫 色.
 zi se.
 purple color
 ‘Purple.’

In Example 8, we observed that the child’s utterances, which listed several colors, were repetitive in form and/or content. The child’s speech turn in the example consisted of ten utterances, and was a very long turn in comparison with most of the child’s speech turns in the data. It appeared that such repetitions helped the child to supply longer and relatively more substantial contributions.

Example 9: (2;0)

- 1 *FAT: 那 -: [/] 那 -: 綠 色 誰的?
 na -: [/] na -: lu se sheide?
 then then green color whose
 ‘Then, whose is the green one?’
2 *DRZ: 是 大容的.
 shi Darongde.
 be Darong’s
 ‘It’s mine.’
3 *DRZ: 是 爸爸的.
 shi babade.
 be Daddy’s
 ‘It’s Daddy’s.’
4 *DRZ: 是 大容的.
 shi Darongde
 be Darong’s
 ‘It’s mine.’
5 *DRZ: xxx.
6 *DRZ: 這 通通 是 大容的 啦!
 zhe tongtong shi Darongde la!
 DEM all be Darong’s PAR
 ‘They’re all mine.’
7 *FAT: 通通 是 大容的 呀?
 tongtong shi Darongde ya?

all be Darong's Q
'They're all yours?'

Example 9 demonstrates another similar case. In the example, the child's turn consisted of several partially repetitive utterances. Through repetitions, the child was able to provide a longer and more substantial turn to contribute to topic maintenance.

4.2.2.2 Three-year-olds

In the analysis of the two-year-olds' data, we observed that the children relied heavily on the parents' elicitations to maintain discourse topic. In the analysis of the three-year-olds' data, it was found that parental elicitations also played an important role in sustaining discourse topics in the parent-child interactions; the three-year-olds' topic-maintaining utterances were often elicited by the parents. However, we also observed that the three-year-olds demonstrated the ability to contribute spontaneously to topic maintenance. With spontaneous topic-maintaining utterances, the children were able to play a role in controlling the development of discourse topics. In other words, the parents became less dominant in topic controlling. Example 10 and Example 11 illustrate the children's spontaneous contributions in topic maintenance.

Example 10: (3;4)

- 1 *PJZ: 換 你 當 老闆.
huan ni dang laoban
change 2sg be shopkeeper
'It's your turn to be the shopkeeper.'
- 2 *MOT: 好 好 你 要 買 什麼?
hao hao ni yao mai sheme
ok ok 2sg want buy what
'What do you want to buy?'
- 3 *PJZ: 我 要 買 一 個 一 個 一 個
wo yao mai yi ge yi ge yi ge
1sg want buy one CL one CL one CL
一 個 飲料.
yi ge yinliao

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- one CL drink
'I want to buy a...a...a drink.'
- 4 *MOT: 咦 收銀機 沒有 拿 下來.
yi shouyinji meiyou na xialai
PAR cash register not exist take down come
'Well, the cash register hasn't been brought downstairs.'
- 5 *PJZ: 收銀機.
shouyinji
cash register
'The cash register.'
- 6 *MOT: 收銀機 ne 在 四 樓.
shouyinji ne zai si lou
cash register PAR on fourth floor
'The cash register is on the fourth floor.'
- 7 *PJZ: 我 剛剛 是 把 那 個 大 的
wo ganggang shi ba na ge da de
1sg just be BA that CL big NOM
當 收銀機.
dang shouyinji
be cash register
'I just took that big one for a cash register.'

Example 10 was a pretend play in which the mother played a shopkeeper while the child played a customer. As seen in the example, both the child and the mother contributed to the development of the conversation. The mother was not dominant in controlling the discourse topics. Example 11 shows another case.

Example 11: (3;7)

- 1 *JWX: 你 在 做 什麼?
ni zai zuo sheme
2sg DUR do what
'What are you doing?'
- 2 *MOT: 做 一 個 船 啊.
zuo yi ge chuan a
make one CL boat PAR
'I'm making a boat.'

- 3 *JWX: # # 我 做 一 個 房 子
 # # wo zuo yi ge fangzi
 1sg make one CL house
 'I'm making a house.'
- 4 *MOT: 你 會 做 房 子 喔?
 ni hui zuo fangzi o
 2sg AUX make house Q
 'You can make a house?'
- 5 *JWX: 對.
 dui
 yes
 'Yes.'
- 6 *JWX: 這 個 就 是 房 子 了
 zhe ge jiu shi fangzi le
 this CL just be house CRS
 'This is a house.'
- 7 *MOT: 喔 這 樣 就 是 房 子 了?
 o zhe yang jiushi fangzi le
 oh DEM way just house CRS
 'Oh, is it?'
- 8 *JWX: # 你 看 -: 有 沒 有 一 樣?
 # ni kan -: you meiyou yiyang
 2sg see exist not exist same
 'See, doesn't it look like a real one?'

In Example 11, the child contributed more utterances than the mother in topic maintenance. Most of the child's utterances were spontaneous. We observed that the child played an important role in controlling the development of the topics in the interaction.

In the two-year-olds' data, discourse topics were restricted to the here-and-now. In the three-year-olds' data, however, we observed that the children were able to talk about topics related to pretend plays and narratives.

We have seen an example of pretend play in Example 10 above. The following examples illustrate more cases of pretend plays in the data.

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Example 12: (3;4)

- 1 *PJZ: 喂.
wei
hello
'Hello.'
- 2 *MOT: 喂.
wei
hello
'Hello.'
- 3 *PJZ: 琪琪 我 正在 忙.
qiqi wo zhengzai mang
qiqi 1sg DUR busy
'I'm busy, Qiqi.'
- 4 *MOT: 喔 好 我 也 在 忙.
o hao wo ye zai mang
oh ok 1sg also DUR busy
'Oh, alright, I'm busy, too.'
- 5 *PJZ: 我 又 不 是 在 在 講 話 我 在
wo you bu shi zai zai jianghua wo zai
1sg but not be DUR DUR speak 1sg DUR
我 在 我 在 xx xx xx.
wo zai wo zai xx xx xx
1sg DUR 1sg DURxx xx xx
'I'm not talking. I am...'
- 6 *MOT: 你 正在 幹 嘛?
ni zhengzai ganma
2sg DUR do what
'What are you doing?'
- 7 *PJZ: 我 在 做 事情 要 要 做 事情
wo zai zuo shiqing yao yao zuo shiqing
1sg DUR do thing AUX AUX do thing
要 打 電腦
yao da diannao
AUX play computer
'I am working. I'm gonna play on the computer.'
- 8 *MOT: 打 電腦 真 的 喔?
da diannao zhen de o
play computer true NOM Q

- 9 *PJZ: 'Play on the computer, really?'
對.
dui
yes
'Yes.'
- 10 *MOT: 喔 好 那 就 等 一 下 再 聊 吧.
o hao na jiu deng yixia zai liao ba
oh ok then just wait one moment again talk PAR
'Oh, alright. Then we'll talk later.'
- 11 *PJZ: 好 bye-bye [%English].
hao bye-bye
ok bye-bye
'Ok, bye-bye.'
- 12 *MOT: +^ bye-bye [%English].
+^ bye-bye
bye-bye
'Bye-bye.'

In the pretend play in Example 12, the child pretended to speak on the phone to the mother, who pretended to be the child's younger sister Qiqi. In this pretend play, we observed that the child was able to maintain the discourse topics in the interaction.

Example 13: (3;7)

- 1 *MOT: 我 今 天 想 買 -: 西 瓜.
wo jintian xiang mai -: xigua
1sg today want buy watermelon
'Today I want to buy a watermelon.'
- 2 *JWX: 西 -: 瓜.
xigua
watermelon
'A watermelon.'
- 3 *JWX: 大 大 的 啊?
dada de a
big NOM PAR
'A big one?'
- 4 *MOT: 大 的 西 瓜.
da de xigua

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- big NOM watermelon
'Yes, a big watermelon.'
- 5 *JWX: 喔 好.
o hao
oh ok
'Oh, OK.'
- 6 *JWX: 我 去 拿 喔.
wo qu na o.
1sg go take PAR
'I'll get it.'
- 7 *MOT: 喔 好.
o hao
oh ok
'Oh, OK.'
- 8 *JWX: 你 要 (/2) 你 要 什麼 顏色 的?
ni yao (/2) ni yao sheme yanse de
2sg AUX 2sg AUX what color NOM
'What color do you want?'
- 9 *MOT: 西瓜 有 什麼 顏色?
xigua you sheme yanse
watermelon have what color
'What colors of watermelons do you have?'
- 10 *JWX: m 你 要 橘色 還是 -: 黑色?
m ni yao juse haishi -: heise
PAR 2sg want orange or black
'Mm, do you want orange or black?'

In this pretend play, the child pretended to be a shopkeeper and the mother pretended to be a customer. As seen in the example, the child asked the mother several questions in the interaction. It appeared that in the topic maintenance, the child was able to lead the progress of the interaction.

The three-year-olds also demonstrated the ability to produce narratives. In other words, the children were able to produce extended discourse. In such interaction, the children were the main speakers in the interaction to maintain discourse topics. In the data, it was found that the children were able to give rather detailed narratives. In addition, the children were able to use temporal devices to mark temporal sequences of events, as shown in the following example. In Example 14, PJZ was

telling a imaginary story.

Example 14: (3;4)

- 1 *PJZ: 全部 的 人 都 被 蟑螂 吃 掉 了.
quanbu de ren dou bei zhanglang chidiao le
total NOM people all BEI cockroach eat PFV
‘All the people were eaten by a cockroach.’
- 2 *MOT: 全部 的 人 都 被 蟑螂
quanbu de ren dou bei zhanglang
total NOM people all BEI cockroach
吃掉 囉 ?
chidiao luo
eat PAR
‘All the people were eaten by a cockroach ?’
- 3 *PJZ: 對 呀.
dui ya
yes PAR
‘Yes.’
- 4 *MOT: 然後 呢?
ranhou ne
then Q
‘And then?’
- 5 *MOT: 蟑螂 這麼 恐怖 喔 # 它 可以 吃
zhanglang zheme kongbu o # ta keyi chi
cockroach so horrible PAR 3sg AUX eat
這麼 +...
zheme +...
so
‘The cockroach was so horrible. It could eat so...’
- 6 *MOT: 它 肚子 有 這麼 大 嗎 # 可以 吃 這麼
ta duzi you zheme da ma # keyi chi zheme
3sg belly exist so big Q can eat so
多 東西?
duo dongxi
many things
‘Its belly was that big that it could eat so much?’
- 7 *PJZ: 有 啊.
you a

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- exist PAR
'Yes, it could.'
- 8 *MOT: 真的嗎?
zhen de ma
true NOM Q
'Really?'
- 9 *PJZ: 然後 然後 蟑螂 就 走 了.
ranhou ranhou zhanglang jiu zou le
then then cockroach then go CRS
'And then, the cockroach was gone.'
- 10 *MOT: 然後 <蟑螂 就 走 囉> [>].
ranhou <zhanglang jiu zou luo> [>]
then cockroach then go PAR
'And then, the cockroach was gone.'
- 11 *PJZ: <然後 它 爸爸> [<]+...
ranhou ta baba
then its father
'And then its father...'
- 12 *MOT: 吃 飽 了 # 它 就 走 囉?
chi bao le ta jiu zou luo
eat full PFV 3sg then go Q
'It was full and then it was gone?'
- 13 *PJZ: 好 # 它 就 它 就 +...
hao # ta jiu ta jiu +...
ok 3sg then 3sg then
'OK, then it...'
- 14 *PJZ: +, 它 爸爸 媽媽 就 再 裝 一
+, ta baba mama jiu zai zhuang yi
its father mother then again put one
個 人 +...
ge ren +...
CL people
'Its father and mother then loaded another person...'
- 15 *PJZ: 它 就 它 # 就 全部 的 人 都
ta jiu ta # jiu quanbu de ren dou
3sg only 3sg only total NOM people all
沒有 來 了.
meiyou lai le
not exist come CRS

- 16 *MOT: 'It...None of the people came.'
 嗯.
 en
 PAR
 'Mm.'
- 17 *PJZ: 然後 就 死 了 就 算 了 就
 ranhou jiu si le jiu suan le jiu
 then then die PFV then count PFV then
 不 要 聽 了.
 bu yao ting le
 not AUX listen CRS
 'Then (it) died... never mind, you won't want to listen.'
- 18 *MOT: 喔.
 ou
 oh
 'Oh.'

In Example 14, the child's narrative was about a cockroach. As seen in the example, the child was the main speaker in contributing to the progress of the story and the maintenance of discourse topics. The mother, on the other hand, interacted with the child by acknowledging the child's contributions and encouraging the child's further elaboration. In addition, we observed that in Lines 9, 11, and 17, the child used the temporal device 'ranhou' ('then') at the beginning of the utterances. By using the temporal markers, the child was able to explicitly mark the temporal sequence of the narrated events.

While the children were able to maintain extended narratives, it was found that in the children's narratives, the story lines were often not coherent or logical, and certain referents mentioned were unidentifiable. For example, in Example 14 above, we observed that from Line 14 the child started to talk about 'its father and mother'. While we might speculate that the pronoun 'it' referred to the cockroach, the sudden mention of the father and the mother was out of the blue, and the following development of the story was not coherent. We also observed that in Line 17 the listeners would not be able to identify 'who' died since the subject was omitted. Thus, the three-year-olds' narratives were often difficult for the listeners to follow.

Example 15 illustrates another similar case. Before PJZ told the narrative in Example 15, she and the mother were talking about a model

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house she had made with Lego blocks. PJZ then started to tell a narrative related to an imaginary house, as shown in Example 15.

Example 15: (3;4)

- 1 *PJZ: 有 一 個 房子.
you yi ge fangzi
exist one CL house
'There is a house.'
- 2 *MOT: 嗯 # 然後 呢?
en # ranhou ne
PAR # then Q
'Mm, and then?'
- 3 *PJZ: 是 我們 睡覺 的 房子.
shi women shuijiao de fangzi
be 1pl sleep NOM house
'It's the house where we sleep.'
- 4 *MOT: 然後 呢?
ranhou ne
then Q
'And then?'
- 5 *PJZ: 然後 很 大 # 有 個 空間.
ranhou hen da # you ge kongjian
then very large exist CL space
'Then there is a very large space.'
- 6 *MOT: 喔 # 很 大 的 空間.
o # hen da de kongjian
oh very big NOM space
'Oh, a very large space.'
- 7 *PJZ: 對.
dui
yes
'Yes.'
- 8 *PJZ: 走路 了 # 看 到 廁所 旁邊 有 一
zoulu le # kan dao cesuo pangbian you yi
walk PFV see RVC toilet nearby exist one
個 東西.
ge dongxi
CL thing

- 9 *MOT: (It) walked and saw something near the toilet.
廁所 旁邊 有 一個 東西.
cesuo pangbian you yi ge dongxi
toilet nearby exist one CL thing
'There was something near the toilet.'
- 10 *MOT: 什麼 東西?
sheme dongxi
what thing
'What was it?'
- 11 *PJZ: 抽 衛生紙 的.
chou weishengzhi de
draw toilet paper NOM
'It was something for pulling out the toilet paper.'
- 12 *MOT: 喔 # 抽 衛生紙 的 東西.
o # chou weishengzhi de dongxi
oh draw toilet paper NOM thing
'Oh, it was for pulling out the toilet paper.'
- 13 *PJZ: 他 爸爸 看 一下.
ta baba kan yixia
3sg father look a while
'His father took a look.'
- 14 *MOT: 他 爸爸 怎樣?
ta baba zenyang
3sg father what about
'What about his father?'
- 15 *PJZ: 看 一下.
kan yixia
look a while
'(He) took a look.'
- 16 *MOT: 喔 # 看 了 一下 # 然後 呢?
o # kan le yi xia # ranhou ne
oh look PFV a while # then Q
'Oh, (he) took a look, and then?'
- 17 *PJZ: 是 老鼠.
shi laoshu
be mouse
'It was a mouse.'
- 18 *MOT: 是 老鼠.
shi laoshu

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be mouse
'A mouse.'

As seen in the example, the story described was not coherent. The events mentioned in the story were not related in a logical way. In addition, some of the referents involved were confusing. For example, in Line 8, the subject was not mentioned. The ellipsis, however, caused confusion since the listener was not able to identify 'who' walked and saw something next to a restroom. In Line 13, a pronoun 'ta' ('he') was used; however, no antecedent could be found in the discourse. Thus, it appeared that the child's skill in narration was still limited. The three-year-olds often were not able to maintain discourse topics coherently in narrative contexts.

4.2.2.3 Four-year-olds

As for the four-year-olds, it appeared that the children relied less on parental scaffolding for topic maintenance; the children did not need successive parental elicitations and guidance to participate in conversational interaction and topic maintenance. They were able to spontaneously interact with the parents in conversation. The parents were less likely to ask questions simply for the purpose of involving the children in interaction. Questions asked by the parents were mainly motivated by requests for information. The children's increasing skills in topic maintenance were demonstrated not only in the topics about the here-and-now but also in the topics concerning pretend plays, past events and narratives. Example 16 illustrates the children's pretend plays.

Example 16: (4;5)

- 1 *LRY: 早晚 喝 水 早晚
zaowan he shui zaowan
morning and evening drink water morning and evening
刷牙 早晚 吃 藥.
shua ya zaowan chi yao
brush teeth morning and evening eat medicine
'Every morning and evening, drink some water, brush
your teeth, and take some medicine.'
- 2 *MOT: 喔 -: 這 樣子 好 謝謝.

- o -: zhe yangzi hao xiexie
oh DEM way ok thanks
'Oh, I've got it. Thanks.'
- 3 *MOT: 醫生 真的 很 +/.
yisheng zhen de hen +/.
doctor true NOM very
'Doctor, you are really...'
- 4 *LRY: 最好 最好 不 要 出 去 玩
zuihao zuihao bu yao chu qu wan
best best not AUX go out play
騎 腳踏車 還有 踢 足球 e.
qi jiaotache haiyou ti zuqiu e
ride bicycle still kick soccer PAR
'She had better not go outside, ride her bike, or play soccer.'
- 5 *MOT: 啊 都 不 可以 出 去 玩 那 他 好
a dou bu keyi chu qu wan na ta hao
PAR all not AUX go out play then 3sg so
可憐 喔.
kelian o
pitiful PAR
'She can't even go out to play. How sad she will be.'
- 6 *LRY: 可以 出 去 玩 射 飛盤 啦.
keyi chu qu wan she feipan la
AUX go out play shoot frisbeePAR
'She can go out to play a with frisbee.'
- 7 *MOT: 可以 玩 射 飛盤 那 不 可以 騎
keyi wan she feipan na bu keyi qi
AUX play shoot plates then not AUX ride
腳踏車 是 不 是?
jiaotache shi bu shi
bicycle right not right
'She can play with a frisbee, but she can't ride a bike, is that right?'
- 8 *LRY: 對.
dui
right
'Right.'
- 9 *LRY: 來 最好 要 貼 這 種 ok 繃.

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- lai zuihao yao tie zhe zhong ok beng
come best AUX paste DEM kind ok bandage
'Here you are. She had better use this kind of band-aid.'
- 10 *MOT: 為什麼 要 貼 那 種 ok 繃?
weisheme yao tie na zhong ok beng
why AUX paste DEM kind ok bandage
'Why does she need to use that kind of band-aid?'
- 11 *LRY: 就是 貼 這 種 的.
jiushi tie zhe zhong de
just paste DEM kind NOM
'It's just the kind you stick on.'
- 12 *MOT: 喔 貼 那 個 會 好 嗎?
o tie na ge hui hao ma
oh paste DEM CL AUX recover Q
'Oh, so if she uses the band-aid, she'll get better?'
- 13 *LRY: 會.
hui
AUX
'Yes, she will.'

Example 16 was a doctor-patient pretend play. As seen in the interaction, the child was able to supply substantial contributions to maintain the topics; the child was also able to control the progress of the topics.

In addition to pretend plays, narratives about past events were also observed in the four-year-olds' data. In other words, the children were able to maintain a topic which involved events displaced from the here-and-now, as seen in Example 17.

Example 17: (4;8)

- 1 *MOT: 你 今天 有 沒有 小朋友 跟 你
ni jintian you meiyou xiaopengyou gen ni
2sg today exist not exist kids with 2sg
一起 玩?
yiqi wan
together play
'Were there any kids playing with you today?'
- 2 *MOT: 有 沒有?

- you meiyou
exist not exist
'Were there?'
- 3 *GYL: 就是 # <就是 我 跟> [/] # 就是 我 在 +...
jiushi # <jiushi wo gen> [/] # jiushi wo zai +...
just just 1sg with just 1sg DUR
'It was me and...'
- 4 *GYL: 看 到 xxx 腳 流血 了.
kan dao xxx jiao liuxie le
see RVCxxx leg blood CRS
'I saw xxx's leg bleeding.'
- 5 *MOT: 為什麼 會 # <會> [/] 會 那 個 樣子?
weisheme hui # <hui> [/] hui na ge yangzi
why AUX AUX AUXDEM CL way
'How did that happen?'
- 6 *GYL: <那 是> [>] +...
<na shi> [>] +...
DEM be
'It was...'
- 7 *MOT: <跌 倒> [<] 嗎?
<die dao> [<] ma
fall down Q
'Did she fall down?'
- 8 *GYL: +, 那 是 因為 李進傑 推 她
+, na shi yinwei lijinnie tui ta
DEM be because Li Jinjie push 3sg
跌倒 的.
diedao de
fall NOM
'It's because Li Jinjie pushed her over.'
- 9 *MOT: 李進傑 推 她 跌 倒 的 喔?
lijinnie tui ta die dao de o
Li Jinjie push 3sg fall down NOM Q
'It was Li Jinjie who pushed her over?'
- 10 *GYL: <然後> [/] 然後 那 一個 她 腳 就 #
<ranhou> [/] ranhou na yi ge ta jiao jiu #
then then DEM one CL her leg then
流 -: 血 -: 了.
liu -: xie -: le

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- blood CRS
'Then...then her leg was bleeding.'
- 11 *MOT: 老師 沒有 幫 她 擦 藥?
laoshi meiyou bang ta ca yao
teacher not exist help 3sg spread on medicine
'Did the teacher put something on her leg?'
- 12 *GYL: +^ 有 啊.
+^ you a
exist PAR
'Yes, (she) did.'
- 13 *MOT: 有 喔.
exist o
have PAR
'Yes.'
- 14 *GYL: <但是 還> [/] 但是 還 不 會 乾 e.
<danshi hai> [/] danshi hai bu hui gan e
but still but still not AUX dry PAR
'But it still did not dry out.'

Example 17 involved the child's narration of an event which occurred earlier that day. As seen in the narration, the child was able to use some connectives, including 'yinwei' ('because'), 'ranhou' ('then') and 'danshi' ('but'), to relate the events and maintain the topics.

Example 18 below illustrates another narration of a past event. In the narration, the child related what she did before going to bed when she stayed at her grandma's place.

Example 18: (4;8)

- 1 *GYL: <但是 也> [//] # <但是> [/] # 但是 第一
<danshi ye> [//] # <danshi> [/] # danshi diyi
but also but but first
個 <就是> [/] # 就是 爺爺 看 電視.
ge <jiushi> [/] # jiushi yeye kan dianshi
CL then then Grandfather watch TV
'But also, but, but, first, Grandfather watched TV.'
- 2 *GYL: 第二 個 我 看 電視 +...
dier ge wo kan dianshi +...
second CL 1sg watch TV

- 3 *GYL: 'Second, I watched TV.'
 <然後> [/] # 然後 第三 個 就是 關
 <ranhou> [/] # ranhou disan ge jiushi guan
 then then third CL then close
 燈 +...
 deng +...
 light
 'Then, then, the third was to turn off the light.'
- 4 *GYL: 然後 第四 個 # 就是 刷 牙 +...
 ranhou disi ge # jiushi shua ya +...
 then fourth CL # then brush teeth
 'Then, the fourth was to brush my teeth.'
- 5 *GYL: 然後 第五 個 就是 睡覺.
 ranhou diwu ge jiushi shuijiao
 then fifth CL then sleep
 'Then, the fifth was to go to sleep.'

As seen in the example, the child was able to talk about the events in temporal sequence and maintain the topic coherently. With the expressions such as 'first' and 'second', the child explicitly signaled the temporal sequence of the events.

As seen in the examples, the four-year-olds' narratives were more coherent and logical than the three-year-olds' narratives. In addition, it was found that the four-year-olds' narratives were often much longer than three-year-olds' narratives. One of the four-year-olds' narratives consisted of seventy-seven utterances, including forty-seven child utterances and thirty adult utterances; another narrative contained sixty-three utterances, including fifty-two child utterances and eleven adult utterances. Thus, the four-year-olds demonstrated better skills to maintain topics concerning stories and past events.

Example 19 is a segment from one of the lengthy narratives in the data. As seen in the example, the narrative was rather coherent and organized.

Example 19: (4;5)

- 1 *LRY: 從前 從前 羊 媽媽 跟 七
 congqian congqian yang mama gen qi
 long time ago long time ago sheep mother with seven

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- 隻 小 羊 就 說 七 隻 小 羊
zhi xiao yang jiu shuo qi zhi xiao yang
CL small sheep then say seven CL small sheep
羊 媽 媽 要 出 去 買 東 西 了 喔.
yang mama yao chu qu mai dongxi le o
sheep mother want exit go buy object CRS PAR
'A long, long time ago, mother lamb told her seven little
lambs that she was going out to buy something.'
- 2 *LRY: 然 後 過 不 久 啊 之 後 大 野 狼
ranhou guo bujiu a zhihou dayelang
then pass not long PAR after big wild wolf
來 了.
lai le
come CRS
'Then, after a while, a big wolf came.'
- 3 *LRY: 他 扣 扣 扣 [= knocking at door] 說 +"/.
ta koukoukou [= knocking at door] shuo +"/.
3sg kokoko say
'He knocked at the door and said,'
- 4 *LRY: +" 小 羊 們 媽 媽 回 來 囉.
+" xiao yang men mama hui lai luo
little sheep PL Mom back come PAR
'Little lambs, Mommy is back.'
- 5 *LRY: 他 [= sheep] 說 那 你 要 給 手 伸 到 #
ta [= sheep] shuo na ni yao gei shou shendao #
3sg say then 2sg AUX give hand stretch
窗 戶 看 看.
chuanghu kan kan
window see see
'The lamb then said, "You should stretch your hand to
the window."'
- 6 *LRY: 然 後 啊 他 看 說 +"/.
ranhou a ta kan shuo +"/.
then PAR he see say
'Then he saw it and said,'
- 7 *LRY: +" e 好 像 不 是 喔.
+" e haoxing bu shi o
PAR seem not right PAR
'"It looks like there's something wrong."'

- 8 *MOT: 為什麼 不 是 啊?
weisheme bu shi a
why not right Q
'What was wrong?'
- 9 *LRY: 大野狼.
dayelang
big wild wolf
'A big wild wolf.'
- 10 *MOT: 為什麼 啊?
weisheme a
why Q
'Why?'
- 11 *MOT: 為什麼 看 出來 不 是 媽媽的 手?
weisheme kan chulai bu shi mamade shou
why see exit come not be Mom's hand
'How could he tell that it wasn't the hand of the mother lamb?'
- 12 *LRY: 因為 是 黑黑 的 大野狼.
yinwei shi heihei de dayelang
because be black NOM big wild wolf
'Because it was a big black wolf.'
- 13 *MOT: 黑黑 的.
heihei de
black NOM
'Black'
'It was black'
- 14 *MOT: 啊 媽媽的 手 是 怎樣?
a mamade shou shi zenyang
PAR Mom's hand be how
'How about the mother lamb's hand?'
- 15 *LRY: 白白 的.
baibai de
white NOM
'White'
'It's white'
- 16 *MOT: 對 啊 白白 的.
dui a baibai de
right PAR white NOM
'Yes, it's white.'

4.3 SUMMARY

The children's and the parents' contributions to topic maintenance were analyzed. It was found that with increasing age, the children participated more actively in maintaining discourse topics. The communicative intents of the children of all the three age groups were predominantly informatives and responses. However, the use of informatives increased while the use of responses decreased with increasing age. In contrast to the children's results, the communicative intents of the parents were mainly informatives and questions. However, the parents of older children used a relatively higher percentage of informatives and a lower percentage of questions than the parents of younger children.

The results also showed that while all the children employed mainly topic collaboration, older children were able to contribute relatively more topic incorporation than younger children. As for the parents, although all the parents used mostly topic incorporation, the parents of older children used relatively more topic incorporation than the parents of younger children. In other words, for the dyads with older children, both the children and the parents incorporated more new information to maintain discourse topics. Thus, it appeared that the children, to some extent, shaped the way in which the parents spoke. That is, when the children demonstrated better skills in topic incorporation, the parents would also employ more topic incorporation to interact with the children.

Qualitative analyses of the two-year-olds' data revealed that the children's contributions to topic maintenance were rather limited. In the parent-child interactions, the maintenance of established discourse topics relied heavily on the parents' scaffolding. The parents often asked a series of similar questions which were partially repetitive in forms and contents. By structuring the conversation in this way, the parents reduced the children's comprehension and production load in the interaction. The routine turn-taking sequences appeared to make the conversation easier for the children to cope with and helped the children successfully participate in it. In the analysis of the three-year-olds' data, it was also found that the three-year-olds demonstrated the ability to spontaneously contribute to topic maintenance. With the use of spontaneous

topic-maintaining utterances, the children were able to control the progress of discourse topics. While the two-year-olds' data were restricted to here-and-now topics, the three-year-olds' data also included pretend plays and narratives. However, it was found that in the three-year-olds' narratives, the story lines were often not coherent or logical, and the referents mentioned were often unidentifiable. As for the four-year-olds, it appeared that the four-year-olds relied less on parental scaffolding for topic maintenance; they often interact spontaneously with the parents in conversation. The parents were less likely to ask questions simply for the purpose of involving the children in interaction. The children's increasing skills in topic maintenance were demonstrated not only in the topics about the here-and-now but also in the topics concerning pretend plays, past events and narratives.

CHAPTER V

GENERAL DISCUSSION

This study has analyzed how Mandarin-speaking children demonstrated conversational contingency and managed discourse topics in parent-child conversation. The findings have revealed not only the complex picture of contingency relations and topic organizations in parent-child interaction but also interesting developmental patterns.

5.1. THE DEVELOPMENT OF CONVERSATIONAL SKILLS

Ninio and Snow (1996) suggested that a skilled conversation includes the following characteristics: 1) rapid turn-taking, 2) avoidance of overlaps, interruptions, and dysfluencies, 3) observance of obligations to respond, 4) observation of obligations as a listener, 5) topic relatedness, and 6) repair strategies. The authors also pointed out that children become competent in some of these domains fairly early while they are less precocious in others. For example, children are able to take turns in the early stages of language acquisition; however, the ability to observe obligations to respond and the ability to maintain topic relevance emerge later. The findings of this present study also revealed the disparity of development in these different domains. We observed that all of the children produced more adjacent utterances than non-adjacent utterances in the data. In other words, the children, as young as two years old, had learned to take turns to fulfill their roles as conversationalists. However, the children's adjacent utterances were not necessarily contingent. We observed that while younger children may know that conversation was reciprocal, they were unable to respond appropriately. They had not learned the ability to obtain information represented in input utterances, relate that information to existing knowledge, and form contingent utterances. As suggested by Bloom *et al.* (1991), certain rules of discourse appeared to function independently of the cognitive

processes involved in speaking and understanding. Thus, while the children may be able to follow the discourse rule to respond after another person's speech turn, they may not necessarily process the prior message. This ability to relate one's own utterance to the preceding utterance of the interlocutor contingently and appropriately is an essential component of conversational skill. The analysis showed that the ability to talk contingently developed with age. Older children continue to improve in topic coherency and to achieve coherency in increasing sophisticated ways (Dorval & Eckeman, 1984).

The study also revealed that older children were able to relate more functions to the forms of repetition. While imitation was the earliest function used by younger children for repetition, more functions were found in older children's data. As suggested by Slobin (1982), in language acquisition, new functions are first expressed in old forms. It appeared that as the communicative functions in the children's speech expanded, repetitions were used to serve the new communicative functions, including answering questions, acknowledging what the prior speaker had said and showing agreement.

As for contingent utterances, we observed that with increasing age, the children were able to express more sophisticated contingent relations. For example, we observed that older children were able to demonstrate linguistic contingency rather than only contextual contingency. The findings were consistent with Bloom, *et al.* (1991). As suggested by Bloom *et al.*, increase in linguistic contingency was an important development in discourse for children from two years old to three years old.

The results of the study also showed that while younger children relied heavily on topic collaboration to maintain topics, older children were able to incorporate more new information into the on-going topics. The results were consistent with Bedrosian (1985) and Kertoy and Vetter (1995). As pointed out by Bedrosian (1985), the development of children's conversational skills is characterized by an increasing ability to supply new information in order to maintain discourse topics. Kertoy and Vetter (1995) also suggested that topic incorporation may be cognitively and linguistically more difficult than collaboration for the child. In topic incorporation, the child needs to formulate an utterance that is propositionally related to but linguistically unique to the prior utterance.

In the use of communicative intents, we observed that the children

initiated and maintained discourse topics mainly with informatives. The finding was consistent with that of Wanska and Bedrosian (1986). Since informatives were less explicit in eliciting responses from the listeners, it appeared that the children's strategies for topic management were less interactive in nature. As suggested by Wanska and Bedrosian (1986), children's use of informatives in topic initiations may reflect the children's less sophisticated conversational style. Thus, in order to become competent speakers, the children would need to acquire more interactive conversational skills to engage their listeners in conversations. Another explanation suggested by Wanska and Bedrosian was that children's use of informatives may indicate their greater interest in describing objects/events than in their parents' verbal participation. Thus, we may speculate that some of the children's informatives reflected collective monologues, which revealed the egocentric nature of the children's speech.

5.2. PARENTAL SUPPORT AND LANGUAGE DEVELOPMENT

The results revealed that the parents' contributions played an important role in the success of the children's topic management. Ninio and Snow (1996) characterized adult-child conversation as follows:

In fact, many problems of conversational management are eased for young children (and thus the appearance of continuity is enhanced) by the availability of highly cooperative adult conversational partners. Thus, children's violations of some of the rules governing adult conversation are not considered particularly serious, and their frequent difficulties abiding by the Gricean maxims (Grice, 1975) of relevance and quantity are compensated for by adult willingness to engage in extensive repair (p.150).

The analysis has shown that discourse topics in the parent-child conversation were maintained largely through the parents' elicitations and the children's responses. The parents' elicitations were rather effective in engaging the children in conversation. In addition, the routinized turn-taking sequences also helped make interaction successful. Based on the predictable structure of the conversation, both the parent and the child knew what to expect from the other in the interaction. As

suggested by Sachs (1983), successful parent-child communication often occurred within the framework of 'conversational routines'. Routines allow the child to initiate and maintain interaction without having to engage in complex planning (Watson-Gegeo & Boggs 1977, Andersen & Kekelis 1983). In conversational routines, the child can engage in a coherent discourse topic by simply responding contingently to each of the parent's utterances, thus producing a relevant next turn (Foster, 1986, 1990).

It was found that through the use of communicative intents, the parents effectively structured the topics and guided the children in interaction. The results also showed that the parents were sensitive to the children's language abilities. It appeared that the parents' speech adjustments, such as the adjustments in using communicative intents and topic collaboration/incorporation, reflected the development of their children's skills in managing discourse topics. The results were in line with the findings of Wanska and Bedrosian (1985, 1986) and Kertoy and Vetter (1995) that the parents played a facilitative role in the topic performance of preoperational children. With the parents' participation, the children's task of establishing and maintaining discourse topics became less demanding. The parent's speech adjustments appeared to arise from the attempt to communicate with the noncompetent child speakers (Brown, 1977). As pointed out by Snow (1977), much of the parent's speech is shaped by the child's ideas, interests, and cognitive and linguistic abilities. The findings also evidenced what Vygotsky (1978) called the 'zone of proximal development', i.e., the difference between what the child can do alone and what s/he can do with the caretaker's guidance and support. According to Vygotsky, the child develops higher mental functions within the context of the child's interactions with adults. Thus, by participating in guided interactions, a child develops his/her cognitive, linguistic and conversational capabilities. Thus, such parental speech styles may provide not only the guidance for effective communication but also the support for language growth (Bruner, 1978; Pine, 1994). In addition, the parent-child interaction observed in the study can also be explained by the concept of LASS (the Language Acquisition Support System) proposed by Bruner (1983). In LASS, the parent reduces the degree of freedom with which the child has to cope. As a result, the child can concentrate his/her attention into a manageable domain and interact with the parent in conversation. According to Bruner, LASS plays an important role in the child's acquisition of linguistic

skills.

The analysis also showed that with increasing age, the children could participate more actively in topic initiation and maintenance. In other words, the parents of older children were less dominant in the interaction. As suggested by Hoff-Ginsberg (1987), there may be an inverse relationship between child language competence and parent conversational control. That is, parents may initiate most of the topics of conversation when interacting with children with limited language competence; however, they may relinquish part of the conversational control to the children as the children become more competent speakers and take more active roles in interaction. In other words, the children's increasing ability also influenced how the parents interacted with the children. Thus, the influence between the children and the parents was mutual in the course of their interaction.

In fact, the children's abilities to elicit adult participation in conversation may have influence on their own language development. As pointed out by Hoff-Ginsberg (1987), children's language-learning experiences are in part created by the children themselves. Hoff-Ginsberg further hypothesized that 'variation among children in how successfully they can engage adults in conversation about topics they initiate may contribute to variation in their rates of language growth' (p.154).

5.3 STATE OF MIND AND LANGUAGE DEVELOPMENT

Successful topic management is essentially related to the speaker's capacities for assessing the listener's perspectives and the new/given information status. According to Chafe (1976), 'given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance. So-called new information is what the speaker assumes he is introducing into the addressee's consciousness by what he says' (p.30). When establishing discourse topics, the speaker must establish references and express propositions. That is, the speaker must give sufficient information about the intended referents and the semantic relations between the references. As suggested by Keenan and Schieffelin (1976), these two prerequisites are felicity conditions for the successful establishment of a discourse topic. However, the analysis showed that the children often did not

provide sufficient information about references and propositions because they were not able to assess the listeners' state of mind (McTear, 1985; Ninio & Snow, 1996). That is, they were not able to make assumptions about what the addressees do and do not know, and adapt the information according to the listener's state of mind and the demands of the communicative situation.

Since the topics in the parent-child interactions were usually related to the here-and-now, situational contexts thus often provided the given information that is necessary for interpreting the children's topic-initiating utterances. Situational information often can be easily accessed by the speakers to gain the 'given' information status. In parent-child conversation, the child's eye gaze or gesture can provide an indication to the parent as to what reference and information is to be evoked in the parent's consciousness; thus it is easier for the parent to interpret the child's contextually related utterances. However, when the child establishes displaced references in past events or narratives, the child's topic-initiating utterances can sometimes seem to be confusing because the background information may not be in the forefront of the parent's mind, i.e. not in the consciousness of the parent at the time of the utterances (Chafe 1970). In such cases, the success of the communication may rely heavily on the parents' inferencing and guessing skills

As suggested by Mening-Peterson (1975), three-year-olds and four-year-olds take more care when introducing new elements into the discourse in experimental situations. However, our analyses of the children's narratives in natural conversation showed that the children's abilities to assess the listener's state of mind were still limited. Thus, to be competent speakers, the children needed to develop not only more sophisticated linguistic ability but also the ability to respect the Cooperative Principle (Grice 1975), i.e., a tacit agreement between speakers that they will not mislead or confuse hearers or otherwise be uncooperative.

5.4. CONCLUDING REMARKS

This study has revealed some insightful findings concerning Mandarin-speaking children's acquisition and use of conversational skills. Some limitations to this study, however, should be noted. First, the

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data used in the study consisted of speech of only six children. Further studies of more participants would be beneficial to understand whether the findings observed in this study also hold for other participants. Another limitation is that this study investigated cross-sectional data. For further research, longitudinal studies would be needed to see whether the developmental patterns observed in this study would also be found in longitudinal data. Despite the limitations, it is hoped that this study has shed some light on our understanding of the acquisition of communicative competence by Mandarin-speaking children.

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