

Chapter 1

Introduction

1.1 Background and motivation

Questions play a significant role in mother-child interactions. Many studies have reported that questions are a significant feature in child-directed speech and occur frequently in parent-child conversations (Holzman, 1972; Snow, 1972; Elliot, 1981; Owen, 1984). Because of the child's verbally-limited conversational competence, the mother tends to use questions as one means of initiating and sustaining the interaction with her child (Olsen-Fulero and Conforti, 1983). It seems that mothers' questions aim to pass the turn to children in order to encourage children's participation in verbal interactions. In addition to the allocation of turns, mothers often use questions as indirect requests for action to control children's behavior. Holzman (1972) and Shatz (1979) identified some questions in mothers' speech as requests for children to behave in certain ways.

Since questions occur frequently in child-directed speech and the speech that young children hear is the major source of information about language, many studies have endeavored to investigate the development of the child's questions from various perspectives of language. It was found that the child's first question occurs early, at

around the age of two (Tyack & Ingram, 1977), and most studies have suggested that children develop the skill throughout young childhood. Some studies from the linguistic and cognitive perspective have focused on children's development of syntactic structures and the semantic content of questions. The results suggest that there is more likely to exist an order in which children acquire different wh-words and other question types, and the order of emergence of different kinds of questions may be influenced by semantic-cognitive factors (Ervin-Tripp, 1970; Tyack & Ingram, 1977; Wells, 1985).

Pragmatic analysts, on the other hand, propose a differentiation between the illocutionary force and the locutionary act of questions, on the basis of Austin's speech act theory (1962), and question-answer pairings as the adjacency pair in conversational turn-taking proposed by Schegloff (1974). In order to shed light on the pragmatic role of questions in the very early stages of language acquisition, some research has examined the forms and functions of questions in children's speech (Shatz, 1979; Olsen-Fulero and Conforti, 1981; Vaidyanathan, 1988; Ho, 2000; James and Seebach, 1982; Sinclair and Van Gessel, 1990). Most of the research indicated that there exists a developmental change in the child's questions, and young children could use questions not only to seek new knowledge but also to perform other pragmatic functions.

Other studies, from the conversational perspective, have investigated the child's questions in relation to the mother's responses (Tizard, Hughes, Carmichael and Pinkerton, 1983). Previous studies have indicated that the mother's speech to the child changes in regard to the child's development as a conversational partner (Ervin-Tripp, 1978; Tamis-LeMonda, Bornstein and Baumwell, 2001; Paavola, Kunnari, Moilanen and Lehtihalmes, 2005). Therefore, the mother's responses to the child's questions seem to change as the child grows older. Generally speaking, the pragmatic development of the child's questions and its relation to the mother's responses are the two main issues in pragmatic and conversational analysis.

Although many studies have been interested in the issue of the child's questions from various perspectives, only a few studies have examined the child's questions in the conversational data of mother-child dyads. The conversational data help us know more about the child's questions from the pragmatic and conversational perspective. For one thing, the form-function mapping of the child's questions is more likely to be revealed in this kind of data. For another thing, the conversational data would manifest the mother's responses with regard to the child's questions in different contexts. However, there are few studies concerning the child's questions in Mandarin conversational data of mother-child dyads. In our study, we focus on the conversational data of one Mandarin-speaking mother-child dyad. From these data,

we hope to know more about the form-function mapping of Mandarin-speaking children's questions and their relations to the mother's responses.

1.2 Purpose of the study

The purpose of this study is to investigate the following questions:

- (1) How do the linguistic forms of the child's questions change with the increase in his age? Is there any developmental change in the forms of the child's question?
- (2) How do the functions of the child's questions change with the increase in his age? Is there any form-function mapping of the child's questions?
- (3) Is there any change in the mother's responses with regard to the child's questions?

1.3 Organization

The present study aims to examine the forms and functions of the child's questions and the mother's responses in regard to the child's questions. In Chapter 2, we will review previous research concerning questions from the pragmatic and conversational perspective, the child's development of questions and their relation to mothers' responses, and questions in Mandarin Chinese. Chapter 3 will present the methodology of this study, including the linguistic forms and the pragmatic functions of questions, and the types of responses to questions. Chapter 4 will present the results of this study. In Chapter 5, we will discuss the results, draw upon a conclusion, indicate the limitation of this study and provide suggestion for further studies.

Chapter 2

Literature Review

2.1 Studies of questions in pragmatics

Questions play an essential role in languages, and much research has been done to investigate questions from various perspectives of language. In general, there is agreement that a question has an identifiable syntactic structure, a characteristic prosodic nature and a semantic content, and that semantic meaning is different from its pragmatic and social function. In addition, from the perspective of conversation analysis, questions and answers are considered to be an adjacency pair in the structure of verbal interaction (Schegloff and Sacks et al., 1974). The main issues in many studies in pragmatics are the forms and functions of questions and question-answer sequences in conversation.

2.1.1 Pragmatic perspective

According to Austin (1962), pragmatic analysts differentiate the illocutionary force of questions from the locutionary act of question forms. In other words, when people initiate a question, they do something. For example, “What’s your name?” is asking a question and “Could you pass me the salt?” is making a request. As for the question “What’s your name?” the linguistic meaning is identical with the content

intended to be communicated. However, concerning the question “Could you pass me the salt?” the meaning of the questions is different from the content intended to be communicated. By initiating this question, one speaker can ask the hearer whether s/he could pass the salt to the speaker and further request the hearer to do something indirectly. From the perspective of the speech act theory, questions in contexts have an illocutionary force which is different from its semantic content.

Concerning the pragmatic functions of questions, Freed (1994) examined the forms and functions of questions in informal dyadic adult conversations and further established a taxonomy of question functions. According to Freed, the meaning of a question is identified by an understanding of the functions of the question in its conversational context. Moreover, Freed proposed that the functions of question lie along a linear continuum, one end is to ask the most narrowly factual questions and the other is to convey information, and that there are four general categories along the continuum: external, talk, relational and expressive style. First, external questions seek factual information external to the conversation, such as public, social and deictic information. This sort of question is most associated with the traditional understanding of the role of questions in conversations. The speaker uttering the question usually expects the hearer to provide new information. Second, questions which ask for information about the talk and conversation itself consist of clarification,

repetition, and confirmation questions, and they seek an answer in the same way as external questions. Next, relational questions seek open-ended information about the verbal and social relationship between the speaker and the hearer. This group includes conversational focus questions, shared information questions, phatic information questions and elaboration questions. These questions are usually left unanswered. Finally, expressive style questions contain information already known to the speaker, and include didactic questions, rhetoric questions, humor questions, self-directed questions and reported speech questions. These questions express the speaker's viewpoint and convey information; therefore, answers rarely follow this type of questions. Questions in natural conversation may fall in any of the categories of the linear continuum and serve various pragmatic functions.

In sum, many pragmatic scholars have distinguished the pragmatic functions of questions in contexts by their linguistic forms. Questions in natural conversations do not just seek information but serve other pragmatic functions, too.

2.1.2 Conversational perspective

According to Schegloff and Sacks (1974), adjacency pairs are sequential units which include such sequences as 'greeting-greeting,' 'invitation-acceptance/decline' and 'question-answer.' Adjacency pairs are used as one of techniques for the allocation of turns. In natural conversations, the first pair-parts set constraints on what

should be done in a next turn. For example, ‘a question’ makes ‘answer’ especially relevant for the next turn. When a question is completed, the person addressed by the questioner is expected to provide an answer. If more than one person that can be addressed by the current speaker, the speaker can use a number of resources to address the next speaker, including the use of address terms, eye gaze and the addressee’s domain of authority.

Stivers et al. (2010) conducted a cross-linguistic study and examined question-response sequences across ten languages. Concerning the responses, three types of responses were categorized: answer, non-answer response and no answer. In Hayashi’s (2010) study of Japanese question-response pairings, sixty-one percent were answers, twenty-eight were non-answer responses and eleven were no answers. Likewise, in Stivers’s (2010) study of American English question-response sequences, up to seventy-six percent were answers, nineteen were non-answer responses and only five were no answers. Moreover, the studies identified that some responses were more fitted to the questions, such as to provide an answer, to provide confirmation, or to be responded to by the selected individual. These studies suggested that answers are dominant as a response to questions in adult conversation.

In conclusion, question-answer sequences are a typical example of adjacency pairing and are often used as techniques in the allocation of turns. Many studies have

shown that answers are dominant in the following turn of a question in natural conversations in many languages.

2.2 Child language acquisition of questions

Previous studies have revealed that questions occur frequently in parent-child conversations (Holzman, 1972; Snow, 1972; Olsen-Fulero and Conforti, 1983).

Studies have shown that children begin to ask questions at around two years of age (Tyack & Ingram, 1977). According to Przetacznik-Gierowska and Ligeza (1990), the development of children's use of questions not only reveals their intellectual ability and thinking but also demonstrates children's social competence during communication with others. Therefore, many studies have done to examine the development of children's questions. Some research has focused on the development of children's questions from the semantic and cognitive perspective (Tyack & Ingram, 1977; Wootten et al., 1979). Others have examined children's questions from the pragmatic perspective (James and Seebach, 1982; Vaidyanathan, 1988). To sum up, previous research suggests that there exists an order in which children acquire different wh-words. Also, children in the early stage use questions not only to seek information but also to serve other pragmatic functions.

2.2.1 Development of children's questions

Since questions play an important part in language, many studies have made an

effort to examine the development of children's questions from various perspectives of language. In particular, several studies have investigated the sequence of acquisition of question forms in regard to the semantic and cognitive aspect of questions. Ervin-Tripp's study (1970) showed that the child's first question to be asked is What-question, and yes-no questions are mastered later. Where-questions and Who-questions occur later and precede Why-questions. Besides, Tyack & Ingram (1977) also examined children's production and comprehension of questions and concluded that there may be possible patterns of the acquisition of questions. The study inferred a rough chronological order of acquisition: What, Where, Why, How, When, and it suggested that this order may be related to constraints on children's cognitive development. Furthermore, Wells (1985) reported that Why-questions appeared before Which-questions, When-questions and How-many questions, and there were no restricted-alternative questions by 32 months. Snow and Winner (1994) indicated that the order of emergence of these questions may be influenced by semantic-cognitive factors. Young children seem to fairly understand the ideas of objects, persons and spaces while the ideas of time, quantity and causality are more abstract and less tangible ideas to them. The acquisition sequence may also be influenced by the linguistic complexity. For instance, restricted-alternative questions require the understanding of the logical connective *or*.

2.2.2 Pragmatic functions of children's questions

Many studies have examined the pragmatic functions of children's questions in both parent-child dyads and peer groups. Some research used the same classification of question functions to examine both mothers' and children's questions in parent-child dyads. For example, Holzman (1972) compared both the mothers' and children's questions and classified the functions of children's questions in the same way as their mothers'. Other studies focusing on children's questions developed another system of categorization for the pragmatic functions of children's questions. As for studies on children's questions in parent-child dyads, Vaidyanathan (1988) conducted a study investigating questions in two mother-child dyads where the children were aged 0;9-2;10. In addition to the investigation of the development of questions' forms in Tamil, the study examined the pragmatic functions of children's questions. According to Vaidyanathan (1988), questions serve two primary functions, information-seeking and non-information-seeking. Questions with an information-seeking function include requests for name, location, and description of action. Questions with a non-information-seeking function include confirmation/clarification, seeking attention, seeking permission, promoting conversation, making statements, making suggestions for action, and prohibition. Children's information-seeking questions ask for the names and locations of

objects/agents in their immediate environment. As children grow older, their questions include a greater number of requests for descriptions of action and further express other agentive functions, such as wishes, reasons and purposes. As for non-information-seeking functions, children may use questions to confirm or verify an assertion in a previous utterance. In addition, children may use questions to initiate and sustain conversation. This kind of question asked by children is related to the information which the children have already known. Next, questions performing suggestion for action provide a suggestion for the hearer's next action while questions seeking permission seek the hearer's permission for the speaker's next action. Children may also use questions to seek the hearer's attention and to perform the function of prohibition. The results showed that the children used questions to serve various pragmatic functions; however, questions with an information-seeking function were more frequent than those with non-information-seeking uses.

Concerning children's questions in peer groups, James and Seebach (1982) examined the questions of the children aged two to five years old in peer groups. According to their categorization, the children's questions mainly served three major pragmatic functions: information-seeking, conversational and directive. Questions seeking information were requests for information which the child did not possess. Conversational questions primarily initiated and maintained verbal interaction,

including stereotyped social questions and conversational openers. In addition, questions produced when the child already possessed the information were included in this category. Directive questions requested the hearer to perform some action or to give permission. The results showed that the younger children used questions mainly to seek information. And the older children's questions were more evenly distributed among the three functional categories. The study also suggested that the children's question use seemed to follow the principle of using new forms to serve old functions and old forms to serve new functions.

Like James and Seebach's study, Sinclair and Van Gessel (1990) also investigated the questions of the French-speaking children aged 3;0 to 4;10 in peer groups during the free play time. For the classification of the pragmatic functions of the children's questions, Sinclair and Van Gessel first identified unclassifiable questions, no-addressee questions and teacher questions. The remaining questions were considered to be real questions and the core data in this study. However, unlike James and Seebach's categorization, in this study, real questions were classified into two main classes: those linked to discourse and those linked to action. Questions linked to discourse include three types: verbal incomprehension, seeking agreement to comment and referential questions. As for questions linked to discourse, questions seeking verbal incomprehension ask for information which is unclear in the previous

utterance, and the results showed that all of these questions are all composed of one word in the children's utterances. Questions seeking agreement to comment are to solicit agreement from others to a descriptive statement by the speaker, and this type of question is identical to 'report questions' in Olsen-Fulero and Conforti's (1983) study of mothers' questions. Referential questions request verbal responses which will contribute something new to the conversation, ask for motivation or justification of previous utterances or acts, deal exclusively with personal relations, ask questions about past actions, etc. On the other hand, questions linked to ongoing action consist of three types: proposing action, proposing object and attracting attention. First, questions proposing action suggest, request, offer or invite possible future actions. Next, questions proposing object are offers of objects or food. Last, questions attracting attention are to direct and maintain joint attention, and this type of question is identical to questions 'calling attention' in Shatz's (1979) study. The results showed that the three major functions in the children's questions were proposing future actions, referential questions and attracting attention. Also, the study suggested that children at the age of around three might be able to use questions to structure ongoing peer-group interactions.

To sum up, although there are different categorizations of the pragmatic functions of children's questions, previous studies have shown that questions uttered

by young children both in parent-child dyads and peer groups are mainly requests for information which the children do not possess. In addition, young children seem to be able to use questions to perform other pragmatic functions and to structure communicative interaction with others further.

2.2.3 Mothers' responses to children's questions

Previous studies have indicated that the mother's speech to the child changes with regard to the development of the child as a conversational partner (Snow, 1977; Ervin-Tripp, 1978; Tamis-LeMonda, Bornstein and Baumwell, 2001; Paavola, Kunnari, Moilanen and Lehtihalmes, 2005). The mother has been shown to be aware of her child's advances in language. Therefore, when responding to her child, the mother is more likely to change the semantic and syntactic content of her utterances in order to match and further facilitate the child's understanding.

Tizard, Hughes, Carmichael and Pinkerton (1983) focused on children's 'why' questions and adults' responses to those 'why' questions. The subjects were thirty 3;9-4;3 girls who interacted with teachers' at school and parents at home. Half of the girls were working class, and the others were middle class. According to the adequacy of the response, adults' responses were categorized into five types: no reply, inadequate replies, adequate replies, extended replies and other. Inadequate replies included simple assertion, appeals to authority, appeals to wishes or feeling without

further explanation, responses which gave associated information but did not answer the questions, and irrelevant responses with no apparent relation to the question.

Adequate replies explicitly answered the question. Extended replies provided a detailed explanation of process or issue. Other included turning the question round or saying “I don’t know.” The results showed that there were significant social class differences in the mothers’ responses to children’s ‘why’ questions. The mothers of the middle class answered more extensively and adequately than the working class mothers did.

In conclusion, previous research has reported that mothers may be aware of their children’s linguistic and communicative development and fine-tune their speech consequently. In addition, some studies focused on mothers’ responses to their children’s questions compared the difference between social classes. Few studies examined mothers’ responses to children’s questions from the perspective of child development.

2.3 Questions in Chinese

2.3.1 Categorization of forms in Mandarin Chinese

According to Li and Thompson (1981), in addition to declarative questions which change a statement into a question with a rising tone, questions in Mandarin Chinese can be mainly categorized into four types: question-word questions, disjunctive

questions, tag questions, particle questions. First, question words in Mandarin Chinese, *shei*, *shenme*, *nali* and *zenme*, are equivalents of English questions words ‘who’, ‘what’, ‘where’ and ‘how.’ Question-word questions are mainly requests for specific information. Next, disjunctive questions in Mandarin consist of two sub-types: questions with constituents connected by *haishi* and A-not-A questions. Questions with constituents connected by *haishi* explicitly present a choice of two or more possible answers, and constituents within a question are of the same syntactic type. A-not-A questions, on the other hand, present a choice between an affirmative sentence and its negative counterpart. Third, tag questions added to statements are short A-not-A question forms of certain verbs, and they can change the statements into questions. *haobuhao*, *duibudui* and *shibushi* are examples of tag questions in Mandarin Chinese. Tag questions are functionally different from the other types of Mandarin questions in that they serve to seek confirmation of the statements that occur before the tags. The final type is particle questions. Questions of this type are signaled by the presence of sentence-final particles, such as *ma*, *ba* and *ne*.

In addition to types of questions in Mandarin Chinese, Li and Thompson (1981) also discussed answers to the four types of questions. Concerning the answers to question-word questions, just as in English, the respondents need to provide the information requested. Unlike the answers to question-word questions, the responses

to disjunctive questions of any type, including tag questions, require the respondent to choose one of the options presented in the questions. As for particle questions in Mandarin, the answers to this type of questions affirm or deny the statement to which the sentence final particle is added, regardless of whether the statement itself is affirmative or negative.

On the basis of Li and Thompson's categorization of questions in Mandarin, Chang (1997) in his thesis identified seven types of questions in naturally occurring conversations: question-word questions, disjunctive questions, sentence-final particle questions, independent particle questions, A-not-A questions, tag questions and declarative questions. In addition to the four types of questions identified by Li and Thompson, Chang further identified independent particle questions, /en/ and /haN/, and declarative questions as major types of questions due to the high frequency of the two types in natural conversations. Also concerning the naturally occurring conversations, Chang listed A-not-A questions as a major type of questions in Mandarin while this type of question was considered to be a sub-type of disjunctive question. In general, question-word questions, disjunctive questions, sentence-final particle questions, A-not-A questions and tag questions are the major types of Mandarin questions. Independent particle questions and declarative questions are also common in natural Mandarin conversations.

2.3.2 The studies of child language acquisition of questions in Chinese

Due to the significance of questions in various perspectives of language, some studies have investigated Chinese-speaking children's development of questions. Hsu (1996) concluded that children in the one-word stage may use intonation or a sentence-final particle with rising intonation to mark questions. In the multi-word stage later, interrogative words, *shei* 'who', *nali* 'where' and *sheme* 'what' are dominant in children's questions. Yes-no questions are more likely to emerge later, including A-not-A questions appeared before tag questions. In order to know children's understanding of different wh-words, Yuen (1994) examined the developmental sequence of responses to different question-words. The subjects, aged from 3;0 to 5;11, were asked to answer questions about pictures. The results implied acquisition orders of response to the two series of question-words. The subjects performed better significantly better in 'who-sub' questions than in 'who-obj' questions while performance for 'what-obj' questions was significantly better than for 'what-sub' questions. Also, the subjects could answer 'where' questions better than 'how, why and when.'

From the pragmatic perspective, Ho (2000) conducted a cross-sectional study examining the pragmatic functions of questions in Cantonese-speaking children aged between 2;6 to 5;6. The children were divided into seven age groups and each group

consisted of four boys and four girls. An interviewer was asked to play with each individual child for around twenty minutes. In order to know more about the pragmatic functions which the children used in their questions, Ho categorized the children's questions into ten pragmatic functions.

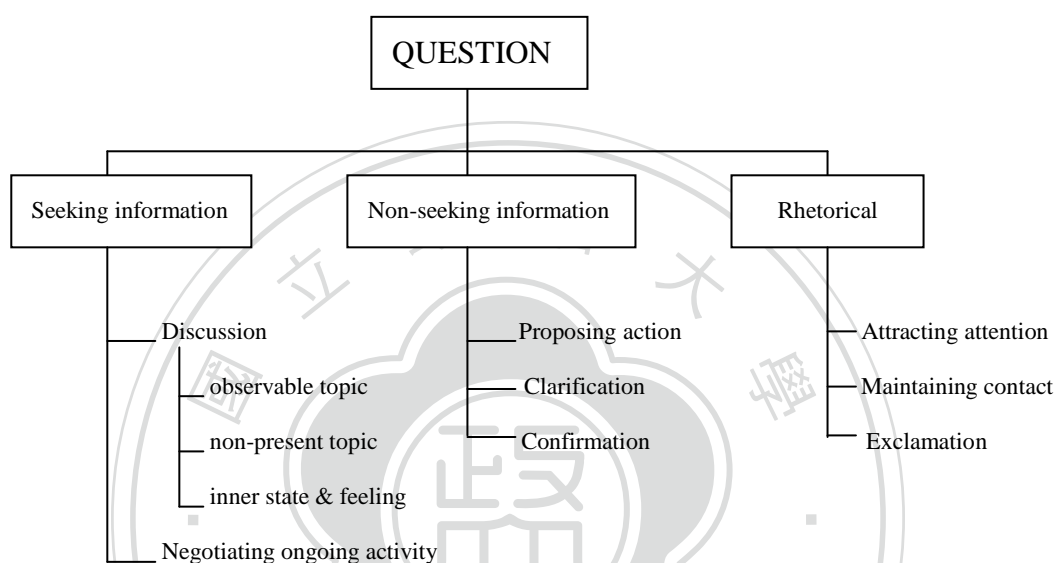


Fig 1. Ho's categorization of the pragmatic functions of children's questions

The questions were first categorized into seeking information, non-seeking information and rhetorical according to the nature of the information sought by the question and the child's intention within the social context. Next, the questions seeking information were classified into discussing observable topic, non-present topic and inner state and feeling and negotiating ongoing activity. The questions not seeking information included proposing action, clarification and confirmation. The rhetorical questions consisted of attracting attention, maintaining contact and exclamation. The results for the ten pragmatic functions show that the children used

questions mainly to seek information for discussion of observable topics and for negotiation of an ongoing activity. In addition, the children's use of questions to seek information for discussion of observable topics and questions to attract attention slightly decreased while the children's questions for seeking information for discussing inner states and feelings increased very slightly across ages. Moreover, the study showed that children extended their use of questions forms to express more functions when getting older.

The aforementioned studies examined Cantonese-speaking children's development of questions from the syntactic, semantic and pragmatic perspective. In particular, Ho's results revealed that, as in studies of other languages, Cantonese-speaking children are also able to use questions to serve other pragmatic functions. However, these studies dealt with elicited data or data in which the interviewer and the children interacted. Since questions play an essential role in mothers' speech and occur frequently in parent-child real conversations, it is important to examine questions in natural Mandarin mother-child conversations. Therefore, the present study aims to examine the forms and functions of the child's questions in Mandarin mother-child conversations and further investigate the child's questions in relation to their answers.

Chapter 3

Methodology

3.1 Subjects and data

The data examined in the study were adopted from the database¹ of Language Acquisition Lab, directed by Professor Chiung-chih Huang, in the Graduate Institute of Linguistics, National Chengchi University. The data involved six-hour video-taped natural interaction between one mother-child dyad. The child was a boy at the ages of 2;4, 2;10 and 3;4. The boy, H², was the only child in the family, and his mother, M, had a college degree. Data collection was conducted in the child's home. The mother-child dyad were told to perform daily activities, such as eating food, playing toy cars, reading books, watching DVDs and discussing, etc. The length of each episode is around two hours. The dyadic interactions of ordinary activities were videotaped and then transcribed by following the CHAT (Codes for the Human Analysis Transcriptions) convention.

3.2 Analytical framework

In order to know more about questions and responses in the mother-child conversations, the child's questions and the mother's responses to these questions

¹ I am deeply grateful to Professor Huang for allowing me to make use of the data.

² H is the subject code for the child and M is for the mother.

were both analyzed in terms of the following: (1) question types in Mandarin: question-word questions, disjunctive questions, sentence-final particle questions, independent particle questions, A-not-A questions, tag questions and declarative questions (Li & Thompson, 1981; Chang, 1997) and VP-neg questions (Zhang, 1990; Huang, 2008). (2) pragmatic functions of questions: informational, directive, conversational and self-directed. (Shatz, 1979; James & Seebach, 1982; Vaidyanathan, 1988). (3) responses to the questions: answer, non-answer response and no answer (Stivers et al., 2010).

3.2.1 Question types in Mandarin Chinese

There is agreement that questions have an identifiable syntactic structure. On the basis of Li and Thompson's (1981) and Chang's (1997) categorizations of questions in Mandarin, questions in Mandarin Chinese were categorized into seven types: question-word questions, disjunctive questions, sentence-final particle questions, independent particle questions, A-not-A questions, tag questions and declarative questions. In addition to the aforementioned seven types, we identified one more type, VP-neg questions.

(1) Question-word questions: Question-word questions in Mandarin Chinese are equivalent to wh-words in English. According to Li & Thompson (1981), question words in Mandarin usually occur in the same position where non-question words

serving the same grammatical function occur. These include questions with question words *shei* ‘who’, *shenme* ‘what’, *nali* ‘where’ and *zenme* ‘why, how’, *weishenme* ‘why’ *duoshao* ‘how much/how many’, etc. In Example (1), H and M are reading and H wants to know the name of the picture in the magazine by asking a wh-question, *shenme* ‘what’.

Example (1): H asks M the name of the picture in the magazine.

- 1.*H: 這 是 什麼 [= pointing at the picture in the magazine]?
 zhe shi shenme
 ‘What is this?’
- 2.*M: 這 是 駱駝 # camel.
 zhe shi luotuo
 ‘This is a camel.’

(2) Disjunctive questions: Disjunctive questions are questions with constituents connected by *haishi* or *hai* ‘or’ and explicitly present two or more possible answers of the same syntactic type. In Example (2), H has two books in his hands and asks M which one she wants to read. Referents of *zhege* ‘this one’, are one book in H’s right hand and the other in H’s left hand. The two choices are connected by *haishi* ‘or’ and form a disjunctive question.

Example (2): H asks M which one she wants to read.

- 1.*H: 要 看 這 個 [= one book] 好 嗎 #
 yao kan zhe ge hao ma
 還是 看 這 個 [= the other book]?
 haishi kan zhe ge
 ‘Do you want to read this book or this book?’

(3) Sentence-final particle questions: In Mandarin, a declarative clause or phrase can

be changed into a question by adding a particle at the end of the clause. These particles also carry emotive or attitudinal meaning (Li & Thompson, 1981; Lu, 2005).

For example, *ma* ‘question particle indicating the speaker has a supposition’, *ne* ‘question particle for subjects already mentioned’ and *a* ‘particle indicating the speaker’s belief and the addressee’s may be different’. In Example (3), H wants to know if the movie on TV is in English, and uses a sentence-final particle, *ma*, to change the statement into a question.

Example (3): H asks M whether the movie is in English.

→1.*H: 這 [= the movie] 講 英文 的 嗎?
zhe jiang yingwen de ma

‘Is the movie in English?’

2.*M: 是 啊.
shi a
‘Yes.’

(4) Independent particle questions: In Chang’s thesis (1997), independent particle questions were identified in natural conversations because of their high frequency of occurrence. Unlike sentence-final particles, an independent particle question may constitute a single intonation unit, including particle /haN/ with rising intonation and particle like /en/ ‘um’ with rising intonation. These independent particle questions can be used to attract the recipient’s attention or to urge the recipient to answer the question. Also, they can be used as a repair initiator. In Example (4), M asks H whether he wanted to eat the chicken claw or not. The question is unheard, and H

employs an independent particle question, /en/, to clarify M's previous question.

Example (4): M asks H whether he wants to eat the chicken claw.

1.*M: 你 看 這 個 你 要 不 要 吃。
ni kan zhe ge ni yao bu yao chi
'Do you want to eat this?'

→2.*H: /en/?
'Um?'

3.*M: 這 個 [= 指 餐 桌 上 的 雞 爪].
zhe ge
'This (The chicken claw on the dining table).'

4.*H: 不 要。
buyao
'No.'

(5) A-not-A questions: According to Li & Thompson (1981), A-not-A questions are a subtype of disjunctive questions; however, Chang (1997) listed A-not-A questions as a major type of question in Mandarin. A-not-A questions present a choice between an affirmative sentence and its negative counterpart. In Example (5), H and M are having a role-play game. H plays the role of a doctor and examines M's ear. He asks an A-not-A question in line 1 to ensure the condition of M's ear.

Example (5): H asks M whether her ear hurts or not.

→1.*H: 你 耳 朵 有 沒 有 痛?
ni erduo you mei you tong
'Does your ear hurt?'

2.*M: 我 耳 朵 沒 有 痛 痛。
wo erduo mei you tong tong
'My ear does not hurt.'

(6) Tag questions: Tag questions are short A-not-A question forms of certain verbs.

When these questions are attached to statements, they can change the statements into

questions. *duibudui* ‘Right?’ and *haobuhao* ‘OK?’ are examples of tag questions in Mandarin Chinese. In Example (6), M and H are watching TV. H uses an imperative followed by a tag question, *haobuhao*, to suggest M watching another program.

Example (6): H suggests M watching another TV program.

- 1.*H: 看 這 個 動 物 的 好 不 好?
 kan zhe ge dongwu de haobuhao
 ‘Let’s watch (the program about) animals, shall we?’
- 2.*M: 好 啊.
 ‘OK.’

(7) Declarative questions: According to Chang (1997), declarative questions are utterances which perform the function of questioning without the use of any morphosyntactic indicator of a question. The intonation may be a rising intonation or the same as that of a declarative statement. In Example (7), M is trying to remind H of his classmate and tells H that the classmate is Mr. Li’s daughter. H repeats M’s previous utterance and changes it into a declarative question by using a rising intonation in Line 7.

Example (7): M tries to remind H of his classmate.

- 1.*M: 你 以 前 的 同 學 呀.
 ni yiqian de tongxue ya
 ‘Your classmate before.’
- 2.*M: 你 忘 記 啊?
 ni wangji a
 ‘Have you forgotten her?’
- 3.*M: 一 個 女 生 啊.
 yi ge nvsheng a
 ‘A girl.’

- 4.*M: 跟你一樣大的女生呀。
gen ni yiyang da de nvsheng ya
'She is as old as you.'
- 5.*H: 誰?
shei
'Who?'
- 6.*M: 就是李老師的女兒啊。
jiushi li laoshi de nver a
'She's Mr. Lin's daughter.'
- 7.*H: 李老師的女兒?
li laoshi de nver
'Mr. Lin's daughter?'
- 8.*M: 嗯。
en
'Yes.'

(8) VP-neg questions: VP-neg questions are formed by ending a sentence with a negation marker like *mei*, which is used to negate perfective events. In general, there is a debate if VP-neg questions are a subtype of A-not-A question. In this study, VP-neg questions are identified as a main type of questions in Mandarin Chinese. As shown in Example (8), the perfective event is represented by the aspect marker *le* and ended with the negation marker *mei*.

Example (8): M is having dinner.

- 1.*H: 媽咪吃完了沒?
mami chi wan le mei
'Mom, did you finish eating?'
- 2.*M: 還沒。
hai mei
'Not yet.'

3.2.2 Pragmatic functions of questions

Previous studies have suggested that questions are used not only to seek information but also serve other pragmatic functions. On the basis of the categorizations of the previous research (Holzman, 1972; Shatz, 1979; James & Seebach, 1982; Vaidyanathan, 1988), in this study, the pragmatic functions of the child's questions are categorized into four main functions: informational, directive, conversational and self-directed. Questions performing the directive function are further categorized into permission for action and suggestion for action. Questions serving the conversational function consist of two sub-types: clarification and confirmation.

(1) Informational function: Questions serving the informational function request specific information that the speaker does not possess and believes the hearer to have. A question performing the informational function may ask for names, locations and description of actions. As shown in Example (8), H uses a question to ask for the unknown name of the animal on TV.

Example (8): H and M are watching TV.

- 1.*H: 這 什麼?
zhe sheme
'What is this?'
- 2.*M: 海豚 呀.
haitun ya
'(It's) a dolphin.'

A question with informational function may also be used to ask for inner states of the hearer or other people, such as wishes, thoughts and feelings. Example (9) shows that

H's question request information about other person's preference.

Example (9): H asks M about his friend's preference.

→1.*H: 阿超 喜歡 玩 什麼?

Achao xihuan wan sheme

'What does Achao like to play?'

2.*M: 阿超 喜歡 玩 什麼 # 我 不 知道 啊.

Achao xihuan wan sheme wo bu zhidao a

'What does Achao like to play? I have no idea.'

Besides, a question may request the information about the past events which the hearer has been involved in. Example (10) demonstrates the child's question ask for the mother's past experience of playing with the toy.

Example (10): H and M are playing with a toy.

→1.*H: 你 有 玩 過 這 個 玩 具 嗎?

ni you wan guo zhe ge wanju ma

'Have you ever played with the toy?'

(2) Directive function: Directive functions are related to the next action of the speaker or the hearer. This function includes two sub-types, i.e. suggestion for action and permission for action.

(a) Suggestion for action: Questions used as suggestion for action request the hearer to perform an action. Example (11) shows that the child uses a question to suggest their next action.

Example (11): M and H are playing with clay.

- 1.*H: 做 個 米菲 [= a rabbit doll] 好 不 好?
 zuo ge Miffy hao bu hao
 ‘Let’s make a Miffy, shall we?’
- 2.*M: 好 -. .
 hao
 ‘OK.’

(b) Permission for action: Questions may ask the hearer to give permission for the speaker’s next action as shown in Example (12). H has already watched one VCD and asks M if she permits him to watch another VCD.

Example (12): H wants to watch another VCD.

- 1.*H: 我 看 這 個 [= VCD] 好 嗎?
 wo kan zhe ge hao ma
 ‘May I watch this (VCD)?’
- 2.*M: +^ 不 可以.
 bu keyi
 ‘No way.’

(3) Conversational function: Questions serving the conversational function are used to initiate or maintain verbal interactions, including clarification and confirmation.

(a) Clarification questions: Clarification questions request repetition or amplification of new information associated with previous unheard or uncertain utterances. This kind of questions includes ‘What?’ and ‘Huh?’ and questions repeating part or all of the previous utterance. In Example (13), the mother instructs H to put the toy car in order in Line 1. However, the child H is not sure which toy car, so he produces a question in Line 2 for clarification of his mother’s previous instruction.

Example (13): M instructs H to put the toy car into the basket.

1. *M: 還有 這個 [= a toy car].
 haiyou zhege
 ‘(You need to put) this (in order).’
- 2. *H: 什麼?
 sheme
 ‘What?’
3. *M: 還有 這個 [= pointing at the toy car] 呀.
 haiyou zhege ya
 ‘This one.’

(b) Confirmation questions: Confirmation questions request the hearer to confirm or verify what has already been heard. When asking this kind of question, the speaker usually has an assumption which has not been proven and is seeking to check the accuracy or understanding of newly received information. In Example (14), M and H are looking at the old pictures, and H cannot find himself in these pictures. M states that H was nearby. Hearing M’s statement, H confirms the given information by asking a question in Line 2.

Example (14): H and M are looking at the old pictures.

1. *M: 你 在 旁邊.
 ni zai pangbian
 ‘You were nearby.’
- 2. *H: 我 在 旁邊 是 不 是?
 wo zai pangbian shi bu shi
 ‘I was nearby, right?’

(4) Self-directed questions: Self-directed questions are not addressed to other participants in the context, but to the speaker him/herself, to inanimate objects and to imaginary, absent entities. Since self-directed questions are addressed to the speaker

him/herself, there is no expectation that the other participant will answer the question in the following turn. This category is identical with Sinclair and Van Gessel's (1990) 'questions with no addressee.' In Example (15), H is playing with a toy car. He talks to himself, asks himself a self-directed question and answers it by himself in Line 2.

Example (15): H talks to himself while he is playing with a toy car.

→1.*H: Eddie 在 做 什麼 咧?
zai zuo sheme lie

'What is Eddie doing?'

2.*H: 在 做 xx.

zai zuo

'Eddie is doing...'

3.2.3 Types of responses to questions

On the basis of Stivers's (2010) coding scheme, the response in the next turn to the question is categorized into three types: Answers, Non-answer responses and No answer.

(1) Answers: Responses as answers directly deal with the questions in the previous utterance. In other words, if the speaker provides the required information either vocally or visibly, i.e. *shaking* or nodding his head, the response will be coded as answers. In addition, questions with different functions require different kinds of responses as answers. For example, questions with the informational function demand the specific information while questions with the directive function demand acceptance or refusal of the suggestion or permission. As shown in Example (16), the

child asks for the name of the object on TV and the mother's response in the following turn is coded as an answer.

Example (16): H and M are watching TV.

- 1.*H: 這 什麼?
zhe sheme
'What is this?'
- 2.*M: 洗衣機.
xiyiji
'This is a washing machine.'

(2) Non-answer responses: Non-answer responses are coded if the speaker gives a verbal or visible response that fails to directly answer the question in the previous utterance, including laughter, 'I don't know', initiation of repair or other responses dealing with the question indirectly. In Example (17), the child asks the information of one object on the book. The mother in the following turn asks for clarification of the child's previous question, and the response is coded as non-answer.

Example (17): H and M are reading a book.

- 1.*H: 那 什麼 媽咪 -: ?
na sheme mami
'What is that, Mom?'
- 2.*M: 哪 一 個?
na yi ge
'Which one?'

(3) No answer: No answer is coded if the interlocutor does nothing in response, continues his own activity or initiates a wholly unrelated sequence. As shown in Example (18), the child asks for the information of the toy on his hands and does not

receive any response in the following turn.

Example (18): H is playing with a toy.

1.*H: 這 [= a toy] 是 什麼?
zhe shi sheme
'What is this?'

→2.*M: 0 [% watching TV and does not give responses to H].

3.3 Coding system

The child's questions in the mother-child dyad are identified according to the eight types of question in Mandarin Chinese: question-word questions, disjunctive questions, sentence-final particle questions, independent particle questions, A-not-A questions, tag questions, declarative questions and VP-neg questions. Next, each question is classified with regard to the four main pragmatic functions: informational, directive, conversational and self-directed. Directive questions are further categorized into suggestion for action and permission for action while conversational questions are further categorized into clarification questions and confirmation questions. The immediate response to the child's question is categorized into three types: answer, non-answer and no answer. The framework for the analysis is shown in Figure 2.

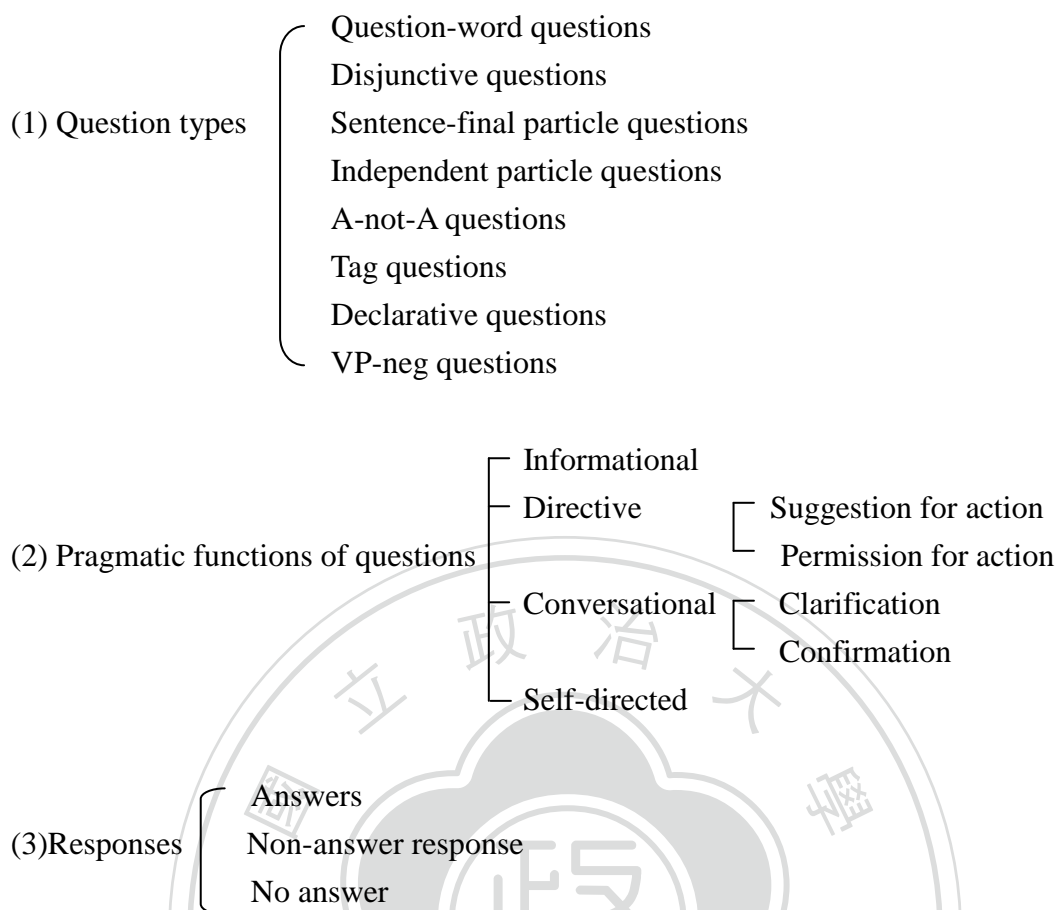


Fig 2. Framework of questions and responses in the mother-child interaction

Chapter 4

Results

In this chapter, the child's questions and their responses at the three stages, i.e. 2;4, 2;10 and 3;4, are examined and analyzed. Section 4.1 presents the results of the child's questions. Section 4.2 presents the results of the mother's responses to the child's questions.

4.1 The child's questions

The child's questions are analyzed with regard to the linguistic forms (Section 4.1.1) and pragmatic functions (Section 4.1.2). The relation between the linguistic forms and the pragmatic functions of the child's questions is further examined in Section 4.1.3.

4.1.1 The linguistic forms of the child's questions

In our data, three hundred and fifty tokens of the child's questions are identified. One hundred and five questions are identified in the two-hour speech of the child at 2;4, one hundred and eight questions are identified at 2;10, and one hundred and thirty-seven questions at 3;4. All of the child's questions are categorized into the eight types of questions in Mandarin Chinese, including wh-questions, sentence-final particle questions, tag questions, A-not-A questions, independent particle questions,

disjunctive questions, declarative questions and VP-neg questions. Table 1 displays the distribution of the types of the child's questions at the three different ages.

Table 1

Distribution of the linguistic forms of the child's questions

	2;4	2;10	3;4
Q. Type	N(%)	N(%)	N(%)
WHQ	83 (79.0)	74 (68.6)	103 (75.2)
PAR	21 (20.0)	12 (11.1)	16 (11.7)
TAG		16 (14.8)	11 (8.0)
ANA	1 (1.0)	4 (3.7)	
IND		1 (0.9)	4 (2.9)
DIS		1 (0.9)	
DEC			1 (0.7)
MEI			2 (1.5)
TOTAL	105 (100)	108 (100)	137 (100)

(WHQ: wh-questions, PAR: sentence-final particle questions, TAG: tag questions, ANA: A-not-A questions, IND: independent particle questions, DIS: disjunctive questions, DEC: declarative questions, MEI: VP-neg questions)

As shown in Table 1, three questions types are identified at 2;4 while six types are seen at both 2;10 and 3;4. The data identified at 2;4 include three question types, wh-questions, sentence-final particle questions and A-not-A questions. At 2;10, six question types are identified, including three more new types, i.e. tag questions, independent questions and disjunctives. At 3;4, two new question types, declarative and VP-neg questions, are identified although A-not-A and disjunctive questions are not seen in the data at this stage. It appears that question types increase with the child's ages and the significant developmental difference is between 2;4 and 2;10.

Among the eight question types, wh-questions are the most frequently used at the three ages. Eighty-three wh-questions (79%) are identified at 2;4, seventy-four (68.6%) at 2;10 and one hundred and three (75.2%). Wh-questions occupy around seventy percent of the whole data. The result suggests that wh-questions play a big part in children's questions.

In order to know more about the child's wh-questions, wh-question words are examined in more detail. At 2;4, the child's wh-question words include *sheme* 'what', *shei* 'who' and *nali* 'where.' At 2;10, in addition to the three aforementioned wh-question words, *nayige* 'which one' is identified. At 3;4, *jidian* 'when' is further identified as shown in Example (19).

Example (19): H asks M when Dad is coming home.

- 1.*H: 爸爸 幾點 才 會 回來?
 baba jidian cai hui huilai
 'When is Dad coming back?'
- 2.*M: 爸爸 過 幾 天 才 會 回來.
 baba guo ji tian cai hui huilai
 'Dad is coming back in a few days.'

In sum, the highest frequency of occurrence among the eight question types is wh-questions. The wh-question words *sheme* 'what', *shei* 'who' and *nali* 'where' occur at earlier stage while *nayige* 'which one' and *jidian* 'when' occur later.

In addition to wh-questions, sentence-final particle questions are important at the three ages. Twenty-one (20%) tokens are identified at 2;4, twelve (11.1%) tokens at

2;10 and sixteen (11.7%) at 3;4. The result shows that the frequency of the use of sentence-final particle questions at 2;4 is a little higher than the other two ages. Since sentence-final particle questions play a big role at the three ages, the linguistic forms of sentence-final particle questions are examined further. At 2;4, most of the child's sentence-final particle questions are more likely to be a noun phrase followed by a sentence-final particle as shown in Example (20).

Example (20): H asks M where Daddy is.

- 1.*H: 爸爸 咧?
 baba lei
 'Where is Daddy?'
 2.*M: 爸爸 去 開 車車.
 baba qu kai cheche
 'Daddy has gone to drive the car.'

In Example (20), the child's question in line 1 is a noun *baba* 'Daddy' followed by a sentence-final particle *lei*. This kind of structure is very common at 2;4. However, at the two later stages, the child may add a sentence-final particle to not only a noun but also a declarative clause in order to form sentence-final particle questions. Example (21) demonstrates the use of this question type at 3;4.

Example (21): H asks M whether Daddy is coming home.

- 1.*H: 爸爸 要 回 我們 家 嗎?
 baba yao hui women jia ma
 'Is Daddy coming home?'
 2.*M: 不 是 要 回 上海 的 家.
 bu shi yao hui Shanghai de jia
 'No, Daddy is going back to our house in Shanghai.'

In line 1, the child's question is a declarative clause followed by a sentence-final particle *ma*. The data shows that this kind of sentence-final particle questions occur frequently at 2;10 and 3;4. To sum up, sentence-final particle questions are significant at the three ages, but the linguistic forms seem to be various with the increase of the child's age.

Compared to sentence-final particle questions, tag questions are more likely to be important at the later two stages. At 2;4, tag questions are not found while sixteen (14.8%) tokens are identified at 2;10 and eleven (8%) tag questions are found at 3;4. The child at the two ages may use short A-not-A question forms of certain verbs to form tag questions, for example, *haobuhao* 'OK?' and *shibushi* 'Right?' Besides, the child at 2;10 uses another tag question, *haoma* 'OK?', as shown in Example (22).

Example (22): H wants F to find the magazine.

→1.*H: 你 去 找 雜誌 車子 好 嗎 [% to FAT]?
 ni qu zhao zazhi chezi hao ma
 'Can you go to find the magazine about cars, OK?'

In brief, the data shows that tag questions occur at 2;10 and 3;4 and include short A-not-A question forms and a certain verb with a sentence-final particle. It appears that tag questions may occur later, and there may be a significant developmental difference between 2;4 and 2;10.

In conclusion, it seems that question types may increase with the child's age.

Among the eight question types, wh-questions and sentence-final particle questions

are two major types identified at the three ages, and the linguistic forms may be various with the increase of the child's age. Also, tag questions are vital at the two later stages.

4.1.2 The pragmatic functions of the child's questions

After discussing the linguistic forms of the child's questions, we will examine the pragmatic functions of each question. The child's questions identified at the three ages are categorized with regard to the four main pragmatic functions, including informational, directive, conversational and self-directed. Questions with the directive function consist of suggestion for action and permission for action. The conversational function includes clarification and confirmation. Table 2 displays the distribution of the pragmatic functions of the child's questions at the three ages.

Table 2

Distribution of the pragmatic functions of the child's questions

Pragmatic Function		2;4	2;10	3;4
		N(%)	N(%)	N(%)
Informational		93 (88.6)	81 (75.0)	102 (74.5)
Directive	Suggestion	1 (1.0)	12 (11.1)	7 (5.1)
	Permission		5 (4.6)	3 (2.2)
	TOTAL	1 (1.0)	17 (15.7)	10 (7.3)
Conversational	Clarification	4 (3.8)	8 (7.4)	20 (14.6)
	Confirmation	1 (1.0)	1 (0.9)	5 (3.6)
	TOTAL	5 (4.7)	9 (8.3)	25 (18.2)
Self-directed		6 (5.7)	1 (0.9)	
TOTAL		105 (100)	108 (100)	137 (100)

As shown in Table 2, among the one hundred and five questions of the child at 2;4, ninety-three (88.6%) are identified for the informational function, one for the directive function (1.79%), five for the conversational function (4.7%) and six are self-directed (5.7%). The child at 2;10 has one hundred and eight questions which consist of eighty-one (75%) for the informational function, seventeen (15.7%) for the directive function, nine (8.3%) for the conversational function and one for self-directed (0.9%). At 3;4, the child uses one hundred thirty-seven questions including one hundred and two (74.5%) performing the informational function, ten (7.3%) for the directive function and twenty-five (18.2%) for the conversational function. The result shows that the first three pragmatic functions are all identified in the child's questions at the three ages. Self-directed questions are not found at the age of 3;4.

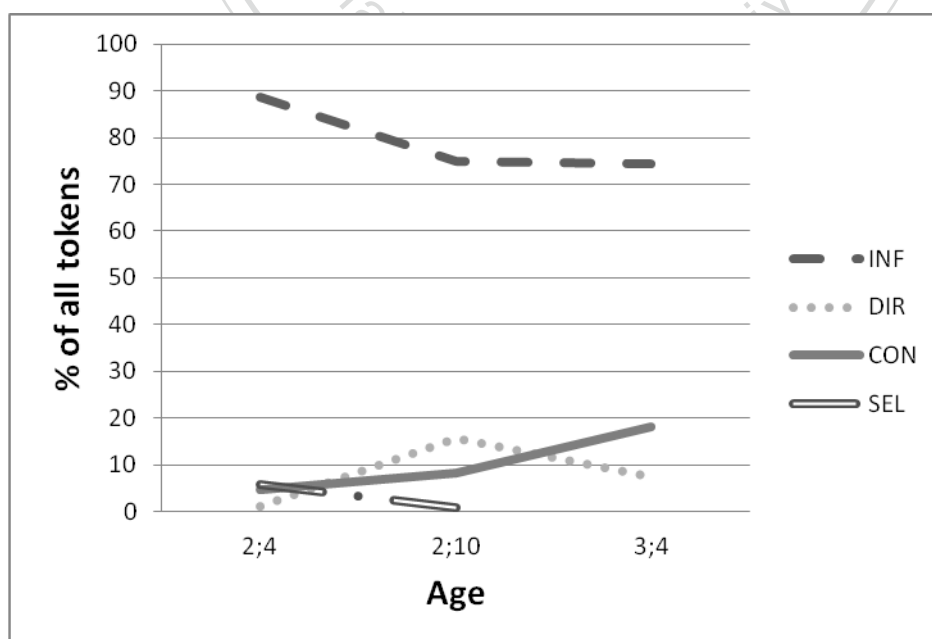


Fig 3. Distribution of the pragmatic functions of the child's questions

As shown in Figure 3, among the four pragmatic functions, the result shows that the informational function is the most frequently used by the child at the three ages.

The data identified at 2;4 include ninety-three (88.6%) questions with the informational function. The data at 2;10 include eighty-one (75%) tokens with the informational function while one hundred and two (74.5%) at 3;4. It appears that the main function of the child's questions is informational. The child's questions are more likely to seek new knowledge in the world. This finding corresponds with James & Seebach's (1982) and Vaidyanathan's (1988) studies which showed that the child's questions served an informational-seeking function more frequently than non-information-seeking functions.

With regard to the informational function, we will discuss in more detail. At 2;4, the child's questions with the informational function are more likely to request names, locations and descriptions of surrounding objects or to ask for information of unfamiliar words in the previous utterances. As shown in Example (23), the mother and the child are discussing one movie, Shaolin Soccer, and the mother is introducing the main character, Chou Sing-chi, to the child in line 1. Since Chou Sing-chi is unfamiliar to the child, in the following turn, the child then requests the information of the man which has been mentioned.

Example (23): H asks M what Chou Sing-chi is.

- 1.*M: 他 是 周 星 馳.
ta shi chousingchi
'He is Chou Sing-chi.'
- 2.*H: 周 星 馳 幹 嘛?
chousingchi ganma
'What is Chou Sing-chi?'
- 3.*M: 周 星 馳 就 是 一 個 明 星 啊.
chousingchi jiu shi yi ge mingxing a
'Chou Sing-chi is a (movie) star.'

This kind of use plays a big part in the questions with the informational function at the three ages, especially at the first stage. At 2;10 and 3;4, questions which request information about the inner state of other people or a past event are also identified.

Example (24) demonstrates the child's use of a question asking for the inner state of a character on the book.

Example (24): H and M are reading a book.

- 1.*H: 他 開 心 嗎?
ta kaixin ma
'Is he happy?'
- 2.*M: 受 傷 的 人 不 開 心 耶.
shoushang de ren bu kaixin ye
'A wounded man will not be happy.'

To sum up, it appears that most of the child's questions at the three ages serve the informational function. Most of the data may ask for information about the observable objects or new words in the previous utterance. Some data concerning inner states or past events are further found at the later stages.

In addition to the informational function, the child's questions also serve the

three other pragmatic functions. As for the directive function, one (1.0%) token as suggestion is identified at 2;4. At 2;10, seventeen (15.7%) questions are found, including twelve as suggestion and five as permission. At 3;4, ten (7.3%) which consist of seven as suggestion and three as permission are identified. The result shows that there are few tokens with the directive function at 2;4 while the use of this function is significant at both 2;10 and 3;4. Also, the data suggest that the use of questions as suggestion may be more frequent than the use of permission.

To know more about the child's questions as directives, we found that there are three tokens as re-requests among the seventeen directives identified at 2;10. That is, the child may utter another request if his first directive fails to be fulfilled. As shown in Example (25), in line 1, the child requests his mother to help him find the magazine about cars. However, the mother does not know the specific magazine which the child wants, so she tells the child to ask the father for help. Then, the child asks his father to find the exact magazine in line 4. Since the father is busy in his own work and not aware of the request, the child further re-requests in line 5. Comparing the three questions as requests, we could find that the child modifies the names of the intended object, the magazine about cars, and makes the reference more concrete in order to get his request realized. For example, the child first uses *cheche* 'car', then *zazhi chezi* 'magazine car' and finally *chezi de zazhi* 'the magazine of cars.'

Example (25): H and M are reading a book.

- 1.*H: 幫 我 找 車車 好不好?
ban wo zhao cheche haobubao
'Help me to find (the magazine about) cars, won't you?'
- 2.*M: 你 說 這 個 書 裡 面 阿.
ni shuo zhe ge shu limian a
'You mean this book.'
- 3.*M: 這 個 書 裡 面 不 會 有 車車 啦.
zhe ge shu limian bu hui you cheche la
'The book is not about cars.'
- ...
- 4.*H: 你 [= to FAT] 去 找 雜誌 車子 好 嗎?
ni qu zhao zazhi chezi hao ma
'Help me to find the magazine cars, won't you?'
- ...
- 5.*H: 你 [= to FAT] 去 找 找 車子 的 雜誌 好不好?
ni qu zhaozhao chezi de zazhi haobuaho
'Help me to find the magazine about cars, won't you?'
- 6.*F: 媽媽 陪 你 找 # 爸爸 要 忙.
mama pei ni zhao babayao mang
'Ask Mom for help. Daddy is busy.'

In addition, concerning the directive function, most of the data may share one significant feature. The child's questions with the directive function mainly offer or propose possible actions of the speaker or the hearer in order to structure or determine near future actions. In other words, these data are more likely to request the hearer to perform an action at the present context or to give permission to the child's next action. There are no tokens about suggestion and permission of the action in the future. As shown in Example (26), the child and the mother are watching TV. The child uses a question in line 1 to suggest the following action of the dyad.

Example (26): H and M are watching TV.

- 1.*H: 看 這 個 動 物 的 好 不 好?
 kan zhe ge dongwu de haobuhao
 ‘Let’s watch the program about animals.’
- 2.*M: 好 啊.
 hao a
 ‘OK.’

As for the conversational function, both clarification and confirmation are identified at the three ages. At 2;4, five (4.7%) tokens are identified, including four tokens for clarification and one for confirmation. At 2;10, nine (8.3%) tokens are found, including eight as clarification and one as confirmation. At 3;4, twenty-five (18.2%) questions serving this function consist of twenty tokens as clarification and one as confirmation. The result shows that the child’s questions with the conversational function occur early, and the use of clarification is more than confirmation. Also, the frequency of the occurrence of this function seems to increase with the child’s age. At the last stage of our data, the child’s questions with the conversational function are more likely to be significant among the four pragmatic functions of questions.

The use of questions to serve the conversational function reveals the child’s participation in verbal interactions. This kind of questions request clarification or confirmation of the newly received messages associated with the previous utterances, and they usually follow the previous unheard or uncertain utterances. In other words,

the child may be involved in not only the daily activities but also the verbal interaction with the conversational partner, i.e. the mother. Since the child's questions serving the conversational function occur early and increase with age, it seems that the child involving in the conversation may become more skillful. Example (27) and Example (28) demonstrates the use of questions with the conversational function at 2;4.

Example (27): M instructs H to identify the location of a VCD.

- 1.*M: 再 下面 # 再 下面 一 格.
zai xiamian zai xiamian yi ge
'(The VCD) is on the lower shelf.'
- 2.*H: 上面 啊?
shangmian a
'Is it on the upper shelf?'
- 3.*M: /e/ # 不 是 上面 # 是 下面.
bu shi shangmian shi xiamian
'It's not on the upper shelf. It's on the lower shelf.'

In Example (27), the mother asks the child to take the VCD from the bookshelf. She uses a spatial relation word, *xiamian* 'lower', to instruct him to identify the position of the VCD. Because the child is not sure the reference object, he asks a question, including another spatial relation word *shangmian* 'upper', in line 2 to clarify his mother's previous utterance.

Example (28): M and H are reading a book.

- 1.*M: 那 這個 [= the boy on the book] 在 幹 什麼?
na zhege zai gan sheme
'What is he doing?'

→2.*H: 小朋友 在 幹 什麼?
 xiaopengyou zai gan sheme
 ‘What is the kid doing?’

3.*M: 對.
 dui
 ‘Right.’

4.*H: 在 # 生氣.
 zai shengqi
 ‘He’s angry.’

As shown in Example (28), in line 1, the referent of the deictic word *zhege* ‘this’ in the mother’s question is uncertain to the child. He then refers to the context and makes an assumption that the referent is the kid on the storybook. Therefore, in line 2, he replaces *zhege* ‘this’ with *xiaopengyou* ‘the kid’ and asks a question to request the mother to confirm his assumption of the referent.

Last, as for the questions with the self-directed function, these questions occur at the early two stages, six (5.7%) tokens at 2;4 and one (0.9%) at 2;10. There is no tokens of this type identified at 3;4. It seems that the phenomena of the child’s monologue are significant at young age. At 2;4, the child utters several self-directed questions when playing with his toy cars. These questions are not addressed to the mother in the context, but to the speaker himself, to inanimate objects or to imaginary and absent entities. In Example (29), the child talks to himself while playing with his toy car. He produces a question which is directed to himself in line 1 and then provides an answer in line 2.

Example (29): H talks to himself while he is playing with a toy car.

→1.*H: Eddie 在 做 什麼 咧?
zai zuo sheme lie

‘What is Eddie doing?’

2.*H: 在 做 xx.

zai zuo

‘Eddie is doing...’

In conclusion, with regard to the pragmatic functions of the child’s questions, the major function is informational. The findings are consistent with those of James & Seebach’s (1982), Olsen-Fulero and Conforti’s (1983) and Vaidyanathan’s (1988). All of the studies have reported that the major pragmatic function of the child’s questions is to seek information. In addition, the child may use questions to serve other non-information functions. Previous research has also indicated the non-information use of children’s questions. Moreover, in our data, questions for the conversational function are found to be an important function with the increase in the child’s age. The results suggest that although the child’s questions for non-information-seeking functions may occur early, this kind of questions are more likely to become significant as the child grows older.

4.1.3 Form-function mapping of the child’s questions

To know more about the form-function mapping of the child’s questions, the linguistic form as well as the pragmatic function of each question is identified. The distribution of the four different pragmatic functions served by different linguistic forms is presented in Table 3.

Table 3
Distribution of the pragmatic functions of child's questions served by different linguistic forms

Q. Type	Informational			Directive			Conversational			Self-directed		
	2;4 N (%)	2;10 N (%)	3;4 N (%)	2;4 N (%)	2;10 N (%)	3;4 N (%)	2;4 N (%)	2;10 N (%)	3;4 N (%)	2;4 N (%)	2;10 N (%)	
WHQ	73 (78.5)	66 (81.5)	90 (88.2)				4 (80.0)	7 (77.8)	13 (52.0)	6 (100)	1 (100)	
PAR	20 (21.5)	11 (13.6)	10 (9.8)				1 (20.0)	1 (11.1)	6 (24.0)			
TAG		1 (1.2)			15 (88.2)	10 (100)			1 (4.0)			
ANA		3 (3.7)		1 (100)	1 (5.9)							
IND								1 (11.1)	4 (16.0)			
DIS					1 (5.9)							
DEC									1 (4.0)			
MEI			2 (2.0)									
TOTAL	93 (100)	81 (100)	102 (100)	1 (100)	17 (100)	10 (100)	5 (100)	9 (100)	25 (100)	6 (100)	1 (100)	

As shown in Table 3, at the three ages, most of the child's questions with the informational function are wh-questions and sentence-final particle questions. At later stages, other types are also identified. Of the ninety-three questions identified at 2;4, seventy-three (78.5%) are wh-questions and twenty (21.5%) are sentence-final particle questions. At 2;10, sixty-six (81.5%) are wh-questions, eleven (13.6%) are sentence-final particle questions, one (1.2%) is a tag question and three (3.7%) are A-not-A questions. At 3;4, of one hundred and two questions, ninety (88.2%) are wh-questions, ten (9.8%) are sentence-final particle questions and two (2.0%) are VP-neg questions. Wh-questions are formally and unambiguously marked by insertion of wh-question words. This finding is compatible with the conclusions reached by Sinclair and Van Gessel (1990). According to Sinclair and Van Gessel's (1990) study, it was found that wh-questions are highly associated with referential questions, i.e. the informational function in the study. They indicated that wh-questions most closely resemble the traditional conception of questions. In order to ask for the missing information in conversations, wh-questions are often used for the information-seeking function. In addition, sentence-final particle questions are used to ask for information by the child. Kearsley (1976) stated that wh-questions are used to gain information about topics unfamiliar to the speaker while yes-no questions are used to obtain information about topics already familiar to the speaker. Therefore,

sentence-final particle questions, a type of yes-no questions in Mandarin Chinese, are also used for the informational function.

The second pragmatic function of the child's questions is directive, and most of these questions are in the form of tag questions. At 2;4, one token in the form of A-not-A questions is identified. At 2;10, seventeen directives are identified; of these, fifteen (88.2%) are tag questions, one (5.9%) is an A-not-A question and one (5.9%) is a disjunctive question. At 3;4, ten questions with the directive function are identified, and all of them are in the form of a tag questions. The result suggests that tag questions may be the important form in serving the directive function. The finding is consistent with Ho's study (2000), which indicated that tag questions were the major type for proposing action.

Regarding the child's questions for the conversational function, the child at 2;4 uses four wh-questions and one sentence-final particle question to make clarification and confirmation. At 2;10, besides the aforementioned two question types, a new type is identified, independent particle questions. Questions for the conversational function at 2;10 consist of seven wh-questions (77.7%), one sentence-final particle question (11.1%) and one independent particle question (11.1%). At 3;4, the child further uses two more question types, tag questions and declarative questions, to serve the function. Of the twenty-five tokens, thirteen (52%) are wh-questions, six (24%) are

sentence-final particle questions, four (16%) are independent particle questions and one (4%) is a tag question and one (4%) is a declarative question. It was found that wh-questions are likely to be the major type to serve the conversational function at the three ages. However, the percentage of wh-questions decreases with the increase in the child's age. The decrease of wh-questions may be related to the increase of other question types. The result reveals that the child may use more question types to serve the conversational function as he grows older. The child aged two may use two or three question types while he may employ five types at 3;4. It appears that although the child aged two could perform the conversational function, there is a significant developmental change in the types of the child's questions serving the conversational function.

Last, the child's self-directed questions identified are all wh-questions, including six tokens at 2;4 and one token at 2;10. This type of questions seems to convey information which is already known to the child or some other unavailable messages to both of the interlocutors. Therefore, no answers are expected to follow these self-directed questions. According to the results, it seems that the child may prefer to use wh-questions to convey his self-directed questions.

In conclusion, the child's informational function is generally served by wh-questions and sentence-final particle questions while the child's directives are

mainly performed by tag questions. Also, all of the child's self-directed questions are wh-questions. In addition, it was found that, in our data, the child may use new question types to serve the old pragmatic functions. For example, a few more questions types are identified in the child's questions serving the informational function and, in particular, the conversational function. The finding partially corresponds to that in James and Seebach's (1982) study which revealed that the child used new linguistic forms to serve old pragmatic functions with the increase of age. It appears that although the child may use questions to perform the four pragmatic functions at very young age, he may use new question types to perform the functions as he grows older. The variety of linguistic forms with the increase of the child's age may manifest the child's developmental change.

After discussing each pragmatic function served by different question types, we will examine the pragmatic functions of the three major question types which the child uses, including wh-questions, sentence-final particle questions and tag questions according to the results in Table 1. Table 4 displays the distribution of the three major question types serving the four pragmatic functions.

Table 4
Distribution of the child's three major question types for different pragmatic functions

Function	WHQ			PAR			TAG		
	2:4 N (%)	2:10 N (%)	3:4 N (%)	2:4 N (%)	2:10 N (%)	3:4 N (%)	2:4 N (%)	2:10 N (%)	3:4 N (%)
INF	73 (88.0)	66 (89.2)	90 (87.4)	20 (95.2)	11 (91.7)	10 (62.5)		1 (6.3)	
DIR								15 (93.7)	10 (90.9)
CON	4 (4.8)	7 (9.5)	13 (12.6)	1 (4.8)	1 (8.3)	6 (37.5)			1 (9.1)
SEL	6 (7.2)	1 (1.3)							
TOTAL	83 (100)	74 (100)	103 (100)	21 (100)	12 (100)	16 (100)		16 (100)	11 (100)

First, as show in Table 4, the child's wh-questions generally serve the informational and conversational function. As for the child's wh-questions at 2;4, eighty-three are identified, including seventy-three (88%) for the informational function, four (4.8%) for the conversational function and six (7.2%) for the self-directed function. At 2;10, of the seventy-four tokens, sixty-six (89.2%) are for the informational function, seven (9.5%) are for the conversational function and one (1.3%) serving the self-directed function. Among the one hundred and three tokens at 3;4, ninety (87.4%) serve the informational function and thirteen (12.6%) are for the conversational function. The result shows that the child's wh-questions mainly ask for the new knowledge which the child does not possess. Besides, some of the child's wh-questions serve the conversational function. The child may use a wh-question word alone to clarify the previous utterance. In Example (30), the mother is instructing the child to put away the toys. She uses a referential word *zhege* 'this' to identify the toy. Since the child is uncertain of the referent, he then uses a wh-question word in line 2 to clarify.

Example (30): M is instructing H to clear away the toys.

- 1.*M: 還有 這個 [= toy car].
 haiyou zhege
 'There is still (a toy car) left.'
- 2.*H: 什麼?
 sheme
 'What?'
- 3.*M: 還有 這個 [= toy car] 呀.
 haiyou zhege ya
 'There is still (a toy car) left.'

The child may sometimes use a wh-question word to replace the unheard or uncertain word in the previous utterance in order to clarify. As shown in Example (31), the child repeats part of the mother's previous utterance and replaces the word *tang* 'soup' with a wh-question word *sheme* 'what' to clarify.

Example (31): M and H are playing house.

- 1.*M: 你 要 不 要 煮 湯?
ni yao bu yao zhu tang
'Would you like to cook soup?'
- 2.*H: 煮 -: 什麼?
zhu sheme
'Cook what?'
- 3.*M: 你 要 不 要 煮 湯?
ni yao bu yao zhu tang
'Would you like to cook soup?'

Next, as for the sentence-final particle questions, the child's questions mainly serve the informational function. Of the twenty-one sentence-final particle questions at 2;4, twenty (95.2%) are for the informational function and one (4.8%) is for the conversational function. At 2;10, the twelve sentence-final particle questions include eleven (91.7%) for the informational function and one (8.3%) for the conversational function. At 3;4, of the sixteen tokens, ten (62.5%) are for the informational function and six (37.5%) for the conversational function. It appears that the main function of this type of questions may be informational. The child may use sentence-final particle questions to request information about their familiar topics. Besides, although there were few tokens of sentence-final particle questions serving the conversational

function at 2;4 and 2;10, this use seems to be significant at the child's age of 3;4.

According to Ho's study (2000), it was found that children's sentence-final particle questions can be used to ask for information, to clarify or confirm and to propose action. However, in our data, there are no tokens of sentence-final particle questions serving the directive function.

Concerning the child's tag questions, no tokens are identified at 2;4 while this question type plays an important role in the data at 2;10 and 3;4. Sixteen tag questions are found at 2;10, including one (6.3%) for the informational function and fifteen (93.7%) for the directive function. At 3;4, of the eleven tokens, ten (90.9%) are for the directive function and one (9.1%) is for the conversational function. Over ninety percent of the tag questions serve the directive function. The result suggests that the major function of the child's tag questions may be directive.

In conclusion, it seems that the three major types of the child's questions are more likely to serve different functions. The child's wh-questions and sentence-final particle questions generally serve the informational function, and some of them are for the conversational function. The child's tag questions mostly perform the directive function.

4.2 The mother's responses to the child's questions

The mother's responses in the next turn to the child's questions are identified and

categorized into three types, including answers, non-answer responses and no answers.

Table 5 presents the distribution of the types of the mother's responses to the child's questions at the three ages.

Table 5

Distribution of the mother's responses to the child's questions

R. Type	2;4 N(%)	2;10 N(%)	3;4 N(%)
Answer	67 (63.8)	64 (59.3)	96 (70.1)
Non-answer	26 (24.8)	31 (28.7)	27 (19.7)
No answer	12 (11.4)	13 (12.0)	14 (10.2)
TOTAL	105 (100)	108 (100)	137 (100)

According to the results in Table 5, the child's questions are generally followed by a response. At 2;4, the mother's responses to the one hundred and five questions of the child include sixty-seven (63.8%) as answers, twenty-six (24.8%) as non-answer responses and twelve (11.4%) as no answers. Concerning the mother's responses to the one hundred and eight questions of the child aged 2;10, sixty-four (59.3%) are answers, thirty-one (28.7%) are non-answer responses and thirteen (12%) are no answers. As for the responses to the one hundred and thirty-seven questions at 3;4, ninety-six (70.1%) are answers, twenty-seven (19.7%) are non-answer responses, and fourteen (10.2%) are no answer. In short, no answers as responses occupy around ten percent of the data. That is, about ninety percent of the child's questions are followed by a response, either an answer or a non-answer response. Moreover, responses as answers occupy about sixty percent of the data at the three ages. The result suggests

that most of the child's questions are accompanied by a response from the mother, and most of the responses deal directly with the questions.

As for the mother's responses as answers, sixty-seven (63.8%) tokens at 2;4 and sixty-four (59.3%) at 2;10 are identified while ninety-six (70.1%) are found at 3;4. It appears that answers increase a little at the stage of 3;4. The increase of answers at 3;4 may be related to the decrease of non-answer responses. At the two early stages, around twenty-five percent of the data are non-answer responses, twenty-six (24.8%) tokens at 2;4 and thirty-one (28.7%) at 2;10. However, at 3;4, this kind of responses seems to decrease a little, occupying around twenty percent of the data. It is found that there may be a significant difference in the mother's responses at 3;4. The mother at this stage is more likely to understand the child's questions and thus provide the required information.

In order to shed a light on the relation between the mother's responses and the child's questions, the mother's responses as well as the pragmatic function of the child's questions are examined. Table 6 presents the distribution of the mother's responses in relation to the pragmatic functions of the child's questions.

Table 6

Distribution of the mother's responses in relation to the child's questions

R. Type	INF			DIR			CON			SEL		
	2:4 N (%)	2:10 N (%)	3:4 N (%)	2:4 N (%)	2:10 N (%)	3:4 N (%)	2:4 N (%)	2:10 N (%)	3:4 N (%)	2:4 N (%)	2:10 N (%)	3:4 N (%)
Answer	61 (65.6)	48 (59.2)	69 (67.6)	8 (47.1)	5 (50.0)	4 (80.0)	8 (88.9)	22 (88.0)	2 (33.3)			
Non-answer	24 (25.8)	22 (27.2)	22 (21.6)	1 (41.2)	4 (40.0)	1 (4.0)	1 (11.1)	1 (4.0)				
No answer	8 (8.6)	11 (13.6)	11 (10.8)	2 (11.7)	1 (10.0)	1 (20.0)	2 (8.0)	4 (66.7)				
TOTAL	93 (100)	81 (100)	102 (100)	1 (100)	10 (100)	5 (100)	9 (100)	25 (100)	6 (100)			

As shown in Table 6, it was found that most of the child's informational questions are followed by responses, and no answers occupy about ten percent of the data. At 2;4, sixty-one (65.6%) questions are answered, twenty-four (25.8%) are non-answer responses and eight (8.6%) are no answers. At 2;10, forty-eight (59.2%) are followed by answers, twenty-two (27.2%) are non-answer responses and eleven (13.6%) are not answered. At 3;4, sixty-nine (67.6%) are answers, twenty-two (21.6%) are accompanied by non-answer responses and eleven (10.8%) are not answered. The results of the responses to the child's informational questions are similar to the general pattern of the mother's total responses as shown in Table 5. That is, at the three ages, most of the child's questions serving the informational function are either answered or given a non-answer response, and the responses as answers are the most preferred responses. Also, around ten percent of the data are identified to be no answers. Because questions with the informational function are used the most by the child among the four pragmatic functions, the results for the mother's responses to these questions mainly represent the general pattern of the mother's responses in total.

In order to know more about the mother's responses as answers to the child's questions with the informational function, in addition to the responses which provides the required answers, two more features are identified, i.e. responses in the form of questions and responses with repetition of the child's question. First, it was found that

many of the mother's responses are in the form of questions as demonstrated in

Example (32).

Example (32): The child asks his mother what Bob the Builder is doing.

1.*H: 建築師 巴布 要 幹 什麼?

jianzhushi babu yao gan sheme

'What is Bob the Builder doing?'

→2.*M: 建築師 巴布 是 不 是 在 <睡 搞搞> [= sleeping]?

jianzhushi babu shi bu shi zai shui gaogao

'Is Bob the Builder sleeping?'

In (32), the child asks what Bob the builder is doing and the mother in the next turn provides an answer in the form of a question. Previous research has indicated that questions are significant in child-directed speech (Elliot, 1981; Owen, 1984; Snow, 1986). In addition, Kaye and Charney (1981) reported that in mother-child interactions, mothers employ many turnabouts, which both respond to and require a response from the other speaker. In general, it seems that adults use questions to respond to children's questions in order to pass the turn to children, keep the conversation going and encourage children's involvement in the verbal interaction. In our data, the results of the mother's responses as answers to the child aged two manifest this feature in child-directed speech. The result shows that the mother may employ questions as responses in order to engage the child in verbal interaction.

The other significant feature of the mother's responses as answers is repetition of the child's previous questions followed by the answers. It is found that, in some data,

the mother may repeat the child's question before offering the required answer as shown Example (33).

Example (33): H and M are reading a storybook.

- 1.*H: 這 個 是 誰 啊?
zhe ge shi shei a
'Who is he?'
- 2.*M: 這 個 是 誰?
zhe ge shi shei
'Who is he?'
- 3.*M: 這 個 是 觀 眾.
zhe ge shi guangzhong
'He is a spectator.'

In Example (33), the child utters a question in Line 1 to ask for information about the character in the storybook. The mother in the following turn repeats the child's question first, and then provides a required answer. The mother's repetition of the child's previous questions is common in our data. It seems that the repetition shows the mother's acknowledgement, or awareness, of the child's question. The results of the mother's answer along with repetition of the child's previous question demonstrate that the mother may repeat the question to show her awareness of the child's question.

As for the mother's non-answer responses to the child's questions with the informational function may share three significant features. First, the mother's non-answer responses may also be repeat the child's questions. Unlike responses as answers, these responses are not followed by the required answers. Example (34) demonstrates the use of a question as a response.

Example (34): M and H are looking at the old pictures.

- 1.*H: 這 [= a man on the picture] 誰?
zhe shei
'Who is this?'
- 2.*M: 這 是 誰 啊?
zhe shi shei a
'Who is this?'
- 3.*H: 爸爸.
baba
'(It's) Daddy.'

As shown in Example (34), the mother does not provide the required answer but repeats the child's question. Since the mother assumes that the child possesses the required knowledge, she uses a question to pass the turn to the child and thus makes the child figure out the answer by himself. The repetition here is different from the use of repetition to response as answers. The mother repeats the child's question and then provides the required answer in order to express her acknowledgement of the child's question. However, concerning the repetition as non-answer responses, the mother seems to take the child's possessed knowledge into consideration. Therefore, she uses repetition to foster the child's cognitive thinking and encourage the child's involvement in the verbal interaction.

In addition to the repetition as non-answer responses, the mother may ask for repair of the child's previous question. The repair may result from a lack of clarity in the question of the child. Since the child is not skillful at asking questions, his question may be ambiguous, or unspecified in the context to his mother. For this

reason, the mother in the following turn may ask for clarification of the previous question. Another possible reason may be that when the child asks the question, he is not aware that his mother is not sharing joint attention with him. Therefore, after the mother receives the child's question, she first changes her attention to the thing which the child has mentioned and then asks for the repair of the previous question as shown in Example (35). In (35), although the mother and the child are both in the living room, they are doing different things. The mother is making a car model while the child is watching a cartoon on TV. The child does not notice that his mother is paying no attention to the cartoon. Therefore, the mother needs to ask for repair of the question in Line 1 in order to identify what the child has talked about.

Example (35): The child asks information about the character on TV.

- 1.*H: 那 是 誰 [% on TV]?
 na shi shei
 'Who is that?'
 →2.*M: /en/?
 'Um?'

Moreover, the mother may also provide non-answer responses even if she understands the child's questions. The reason may be that they do not have shared knowledge and the mother consequently does not know the answer to the question. In Example (36), the child asks the mother about the interests of his classmate *A-Chao*. Because the mother does not know the classmate, she then provides a non-answer response in Line 2.

Example (36): The child asks for information about his friend.

- 1.*H: 阿超 喜歡 玩 什麼?
 achao xihuan wan sheme
 ‘What does A-Chao like to play with?’
- 2.*M: 阿超 喜歡 玩 什麼 # 我 不 知 道 啊.
 achao xihuan wan sheme wo bu zhidao a
 ‘What does A-Chao like to play with? I don’t know.’

After discussing the mother’s responses to the child’s questions with the informational function, we will examine the mother’s responses to the directive questions. It seems that these responses are more likely to be answers or non-answer responses. At 2;4, only one token, as a non-answer response, is identified. At 2;10, of the seventeen tokens, eight (47.1%) are answered, seven (41.2%) are non-answer responses and two are followed by no answers. At 3;4, the ten tokens include five (50%) answers, four (40%) non-answer responses and one (10%) no answers. The result shows that around ninety percent of the data are followed by either answers or non-answer responses. Besides, the mother’s responses as answers are a little more than the non-answer responses. The mother’s responses as answers to the child’s directives may be acceptance or refusal of the child’s next action. As shown in

Example (37), the mother accepts the child’s suggestion of the next action.

Example (37): M and H are opening the toy.

- 1.*M: /e/ # 我 來 拆.
 wo lai chai
 ‘I am going to open (the toy).’
- 2.*H: 那 我們 一起 來 拆 <好 不 好> [>]?
 na women yiqi lai chai hao bu hao

- ‘Let’s open it together, shall we?’
 →3.*M: <喔> [< >] # 好 謝謝 你.
 o hao xiexie ni
 ‘OK, thank you.’

The mother’s non-answer responses to the child’s directives are more likely to clarify the child’s directive questions. Example (38) demonstrates the mother’s clarification of the child’s directive question. In (38), the child asks for permission to get the card, the referent of *zhe* ‘this’, in line 1. Since the referent of *zhe* ‘this’ is uncertain to the mother, she then gives a non-answer response to ask for clarification.

Example (38): H wants to have a card.

- 1.*H: 這 [= a card] 可以 給 我 嗎?
 zhe keyi gei wo ma
 ‘May I have this (card)?’
 →2.*M: 哪 一 個?
 na yi ge
 ‘Which one?’
 3.*H: +^ 這 個 [= the card on H’s hand].
 zhe ge
 ‘This (card).’
 4.*M: 我 看看.
 wo kankan
 ‘Let me see.’

As for the child’s conversational questions, most of them are followed by answers at the three ages. At 2;4, of the five tokens, four (80%) are all provided with answers and one (20%) is no answers. At 2;10, eight (88.9%) of the conversational questions are answered while one (11.1%) is a non-answer response. At 3;4, twenty-two (88%) are answered, one (4%) is followed by a non-answer response, and

two (8%) are not answered. About eighty percent of the child's questions with the conversational function are provided with answers by the mother. These answers do not contribute new information to the topic of the conversation but repair the breakdowns in verbal interaction. As shown in Example (39), the mother in line 1 asks a question to suggest the child's next action. Since the question is unheard to the child, he then asks a question to clarify the previous utterance. The mother thus repeats her question again in order to maintain the flow of the conversation.

Example (39): M and H are playing house.

- 1.*M: 你 要 不 要 煮 湯?
ni yao bu yao zhu tang
'Would you like to cook soup?'
- 2.*H: 煮 -: 什麼?
zhu sheme
'Cook what?'
- 3.*M: 你 要 不 要 煮 湯?
ni yao bu yao zhu tang
'Would you like to cook soup?'

It was found that the child's conversational questions are generally answered at the three ages. The result suggests that the mother could identify the conversational function of the child's question and thus provide a corresponding answer, either by repeating the previous utterance, by clarifying or by confirming the child's question, to repair the breakdown of the conversation.

The child's self-directed questions occur at 2;4 and at 2;10. At 2;4, two of them are answered and the others are accompanied by no answers. At 2;10, the one token is

followed by a non-answer response. Because self-directed questions are mainly directed to the speaker himself, it seems that these questions do not expect and require answers in the following turn. For this reason, it is reasonable that the mother provides no answers to the self-directed questions. However, there are some cases where the mother gives responses to the child's self-directed questions as shown in Example (40).

Example (40): H is playing toys.

- 1.*H: Eddie [= H's name] 在 幹 什麼?
zai gan sheme
'What is Eddie doing?'
- 2.*M: Eddie 在 幹 什麼?
zai gan sheme
'What is Eddie doing?'
- 3.*M: 在 玩 建築師 巴布 對 不 對?
zai wan jianzhushi babu dui bu dui
'Is he playing Bob the builder?'

In (40), while the child is playing toys alone, he is talking to himself and uttering a self-directed question in line 1. The mother in the next turn tries to get involved in the child's activity by responding with an answer. In addition to the answer response, the mother in line 3 adds a agree-seeking tag question *duibudui* 'Right?' to involve the child in their verbal interaction. In general, although the child's self-directed questions expect no responses, the mother may try to participate in the child's activity and thus expend their verbal interaction by responding with an answer.

In conclusion, the mother's responses to the child's questions are more likely to

be related to the pragmatic functions of the child's questions. It was found that the pattern of the mother's responses to the child's questions with the informational function generally represents the pattern of the mother's responses in total at the three ages. In addition, the child's conversational questions are mostly answered, and the child's self-directed questions were either answered or provided with no answers.



Chapter 5

Discussion and Conclusion

In Chapter 4, the results of the analysis of the child's questions shows that the types of the child's questions seem to increase with his age, and his questions mainly serve the informational function. In addition, the child might employ more question types to serve the old pragmatic function, especially the conversational function, as he grows older. Moreover, the child's questions are generally followed by the mother's responses. In Section 5.1, we will discuss the child development of questions from the semantic-cognitive perspective. In Section 5.2, through the increase in the child's questions as requests for clarification, we will examine the child's development of repair from the conversational perspective. In Section 5.3, we will discuss the results of the mother's responses with regard to the pragmatic functions of the child's questions. In Section 5.4, the limitations of the present study and suggestions for future research will be presented.

5.1 The child's development of questions

The results of the distribution of the linguistic forms of the child's questions show that there seem to be a significant developmental change between 2;4 and 2;10. It appears that the child may use more question types as he grows older although

wh-questions and sentence-final particle questions are still the two main types which the child employs. The result is more likely to be consistent with Ho's (2000) study which investigated questions in the speech of Cantonese-speaking children. In fact, according to Chang's (1997) study concerning Mandarin-speaking adults' questions in conversations, the results showed that the most frequently used question types are wh-questions, around thirty percent of the data, and sentence-final particle questions, occupying about twenty-five percent of the data. The high frequency of wh-questions and sentence-final particle questions in children's questions may be related to the high frequency of these two types in adults' speech. At the two later stages, new question types are identified in our data. The results suggest that wh-questions and sentence-final particle questions occur early in the child's speech while other question types seem to occur later. There seem to exist a developmental change in the linguistic forms of the child's questions.

In our data, the result also shows that the child's questions seem to generally serve the informational function. It appears that the child between 2;4 and 3;4 uses questions mainly to obtain information, in particular, to seek factual knowledge. The result corresponds to the previous studies which indicated the importance of children's questions serving the information-seeking function (Shatz, 1979; Olsen-Fulero and Conforti, 1981; Vaidyanathan, 1988; James and Seebach, 1982; Ho, 2000). Much

research has reported that children at two years are eager to learn and become an active explorer of the surroundings. Since questions are an essential and typical means of seeking new knowledge, children at very young age seem to employ questions to gain new information about the world.

Concerning the question types which serve the informational function, wh-questions and sentence-final particle questions are the two major types. Since wh-questions mostly resembled the traditional concept of questions, they are often used to seek new information (Sinclair and Van Gessel, 1990). The child's use of question words seems to follow the chronological order proposed by Tyack & Ingram (1977). Because of the semantic-cognitive factor, *sheme* 'what', *nali* 'where' and *shei* 'who', representing the ideas of objects, place and person, seem to be concrete and occur early. Question words about ideas of time, *jidien* 'when', seem to be abstract to the child and thus occur later. In addition, according to Kearsley (1976), compared to wh-questions requesting missing information which is unfamiliar to the speaker, yes-no questions may ask for information about topic already known to the speaker. Sentence-final particle questions, as a sub-type of yes-no questions in Mandarin Chinese, may be used frequently to ask for information about the familiar topics by the child.

In our study, the results of form-function mapping of the child's questions

suggest that as the child grows older, he may use new question types to perform the old pragmatic function, especially the conversational function. This finding partially corresponds to James and Seebach's (1982) study which revealed that the child used new linguistic forms to serve old pragmatic functions with the increase of age. Our results demonstrate that the most significant developmental change may be in the child's question serving the conversational function.

5.2 The child as a conversationalist

To have an effective conversational exchange, one significant characteristic may be repair of breakdown of message transmission. It is inevitable that conversations may be broken down by occasional failures. A skilled conversationalist may employ polite procedures for eliciting repairs and checking on comprehension, including the use of clarification request, *Huh?* or *What did you say?*, or the use of some more specific request for clarification, *He gave you a what?*. Previous research has indicated that children do not produce clarification requests until about the second year (Ninio & Snow, 1996). The study also indicated child-initiated requests for clarification increased with children's age although these requests were severely restricted in form, most of which consisted of *huh?*, *what?* and repetition.

In our study, the result shows that the child at 2;4 may use questions to serve the conversational function, i.e. request for clarification and the use of questions as

request for clarification seem to increase with the child's age. The forms of the child's request for clarification at 2;4 mainly consist of the question word *sheme* 'what' along with repetition of some of the previous queried utterances. As the child grows older, it seems that the question words which the child uses as requests for clarification may be various and fit to the discourse. Question words, *nayige* 'which one' and *nali* 'where' and *shei* 'who' are identified in the child's questions as requests for clarification at 3;4. In addition, at 3;4, some more question types are identified to request for clarification. These questions are found to repeat part of the queried utterances along with sentence-final particles, tag questions or rising intonation. Independent particle questions are also significant at this stage. Our data show that as the child grows older, he may repair the breakdown of the conversation more frequently by using various question forms, and through the development of repair in conversations, he may gradually become a skillful conversationalist.

5.3 The mother's responsiveness in mother-child interactions

In our study, the results suggest that the child's questions are mostly followed by the mother's responses, and the mother's responses may be related to the pragmatic function of the child's questions. First, concerning the child's questions seeking knowledge, around sixty percent of the child's questions are followed by the mother's responses as answers at the three ages, and about twenty percent of this kind of the

child's questions is followed by non-answers. In our data, the mother's responses to these questions may exhibit some characteristics of child-directed speech. For example, the mother may respond to the child's questions in the form of questions as turnabouts in order to encourage the child's involvement in the verbal interaction or to help the child's cognitive development (Kaye and Charney, 1981). Also, the mother's may sometimes repeat the child's questions first in order to show her acknowledgement of the receipt information. Second, as for the child's directives at the two later stages, the mother's non-answer responses occupy about forty percent of the data. The child's requests for action seem to fail because the requests may be unclear in the context. Or, the child may make a request while not being aware of the other people's ongoing action in the conversation and therefore result in the failure of the requests. Third, as for the child's conversational questions, it seems that the mother generally repairs the breakdown of the verbal interactions in the following turn and keeps the conversations going. Last, the mother's responsiveness to the child's self-directed questions suggest that the mother's attempt to get involved in the child's activity.

5.4 Limitations and suggestions for future research

In the present study, we focused on the questions and responses within one child-mother dyad from the pragmatic and conversational perspective. It seems that

there exist some limitations in this study. First, our study examines the mother's responses with regard to the child's questions. From the conversation analysis (CA) approach, there exist pre-sequences in conversations. Pre-sequences mean a pair of turns which are understood as preliminary to the main course of action. For example, question-answer pairs may be preceded by pre-answer pairs. In our study, when investigating the mother's responses, we do not pay much effort to take the mother's responses as pre-answers into consideration. Further studies could examine the sequence of the mother's responses in more detail. Second, the data in the present study are from one child-mother dyad. It appears that the sample is not enough, and tokens of some question types are not enough. However, our findings may shed a light on the child's development of questions, in particular, from the pragmatic perspective. Third, the present study only focused on the development of the child's questions. Future research may investigate the mother's questions and compare both of the child's and the mother's questions in order to know more about how the child's development of questions may be influenced by the mother's speech. Last, since the present study examined the questions and responses within a parent-child dyad, future research may put an effort to investigate the child's questions and responses in peer groups and, moreover, to see if there may be a gender difference in children's use of questions and responses.

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Appendix

Transcribing symbols

(Adopted from MacWhinney, Brian. 1995. The CHILDES project: Tools for analyzing talk. Hillsdale, NJ: Lawrence Erlbaum Associates.)

xxx	unintelligible speech, not treated as a word
xx	unintelligible speech, treated as a word
.	period
?	question
!	exclamation
#	pause
###	extra long pause between words
-:	lengthening
+...	trailing off
+^	quick uptake
[/]	retracing without correction
[//]	retracing with correction
<>	portion of utterances been overlapped
[>][<]	overlapping utterances
+/.	interruption
+,	self-completion
[= text]	explanation
[=! text]	paralinguistic material
%act:	action tier
%sit:	situation tier