

Chapter 3

Methodology

3.1 Subjects

Thirty-two mother-child dyads participated, 16 pairs from upper-middle class families and the other 16 from low SES families. Families defined as low SES in this study all meet the criterion for low-income households set by Taipei City Government. According to the criterion published on the website of Department of Social Welfare, Taipei City Government (<http://www.dosw.tcg.gov.tw/newbook2/index.asp>), households that have resided in Taipei City for more than 4 months and satisfy the following conditions can apply for the social assistance from Taipei City Government:

1. The total assessable monthly income divided by the population of the household must not exceed the lowest cost of living for per person every month in Taipei. (In 2003, the lowest cost of living in Taipei is NT\$13,313.)
2. The average deposit of the household (stocks included) is below NT\$150,000.
3. The total real estate value of the household does not exceed NT\$5,000,000.

Households meet the criterion for low-income household in Taipei City obtained financial, medical, and social assistance supported by Taipei City Government. The education background of most low-income mothers received high school or junior high school education, but one of them did not finish elementary school and still one illiterate.

As to the upper-middle SES group, children in this group all have mothers who received at least college education. Moreover, the parents are doctors, college faculty, school teachers, company employees or other occupations that are commonly regarded as upper-middle social class.

Children in this study include sixteen children from low-income families and sixteen from upper-middle SES families. Sex is evenly divided in both groups. All of the children were three years old. The average age of children from upper-middle group is 3;6, and that of low-income group is 3;5.¹

3.2 Materials

The 16 dyads of children and parents were required to read a book together. The selection of the book followed Chang (2000). The book, *Good Dog, Carl* (Day, 1985),

¹ The upper-middle SES data included in this study was taken from Chang's (2000) doctoral dissertation, and the low-income data from Chang's 2002 project "Home support for language and literacy development in preschoolers" supported by National Science Council (NSC-91-2413-H-152-017). Special thanks to Dr. Chien-ju Chang for sharing her precious data.

is a storybook with only few words on the first and last pages so that mothers and children can read the story on their own way without the influence of words. The story was chosen because it is a narrative so that it is possible to examine the narrative structure of mothers and children. The story is about a dog, Carl, which takes care of a baby when the mother is out. The whole reading processes were recorded in both video- and audio- tapes.

CHILDES (Child Language Data Exchange System) (MacWhinney, 1991) were used for data analysis. Among the three tools in CHILDES, CHAT format (Codes for the Human Analysis of Transcripts) was used for data transcription, and CLAN program (Child Language Analysis) were employed for data analysis.

3.3 Procedure and Data Analysis

The upper-middle data was taken from Chang's (2000) doctoral dissertation. Subject mothers and children were asked to read the book, *Good Dog, Carl*, together. The subjects were told that there was no time limit so they were free to use any way to read the story. The reading was audio recorded.

The low-income data came from the data collected in Chang's 2002 project in which four tasks, joint reading of two books, joint personal anecdote, and toy play, were done during home visit. One of the two books read by subjects was *Good Dog*,

Carl. The mothers were told that the task was focused on three-year-olds' language ability, so they were not aware that themselves were included as subjects. During the book reading interaction, no instruction was given to the mothers, so they can read the book with their children in any way they wanted. The interactions between mothers and children were recorded in both video- and audio- tapes so that the transcription was done with audio and video cues.

After home visits, the interactions between mothers and children were transcribed verbatim in CHAT format. The transcripts were then coded based on the interactional patterns of both participants and the content of the information carried in their utterances. Details about the coding scheme will be discussed in the following section. The coded transcription was computed by CLAN program. The results of CLAN were then discussed according to the similarities and differences of the reading styles that mothers and children from the two groups adopt when reading a story together.

The percentage of each code in all utterances of one subject was computed in order to be used to compare the significance and difference between groups. T-tests were made to determine whether the means of particular codes between groups was significantly different.

3.4 Coding Scheme

Two coding schemes were used in this study and they were adapted from De Temple (1994) and Chang (2000). Some modification was made to fit the content of *Good Dog, Carl* and research questions of this study. Generally, the two coding tiers, interactional coding tier and information coding tier, was a simplified version of Chang's (2000) four-tiered system (Chang's coding system includes tiers for interaction, narrative structure, evaluation, and temporality). The codes in interactional coding tier were adopted from Chang (2000) except for some minor revision. However, the codes in information coding tier are a mixture of the coding system of De Temple (1994) and Chang's (2000) coding tier for narrative structure.

The coding was generally organized from two coding systems. The two systems represent two ways of analyzing data. That is, they are two perspectives of examining how mothers and children talk in book reading. The first system functions to examine the interactional styles of mothers and children in book reading. Interactional styles include strategies parents used to narrate and elicit storyline, and children's responses to parents' strategies. The second one aims to investigate parents and children's information structure during book reading. This part of coding focuses on the content of interaction, including parents and children's immediate/non-immediate talk and spontaneous/responsive utterances. Definition, criterion, and hierarchy of codes are

stated as follows.

3.4.1. Interactional Coding Tier

The codes in this coding tier mark the functions of utterances in parent-child interactions. Two main purposes are to be achieved: (1) to differentiate utterances that function to provide and request information, and (2) to identify different functions that each utterance carries. This coding tier was organized to examine how parents and children interact with each other in book reading, and what strategies they adopt to elicit and narrate a story. The hierarchy of codes in this tier is presented in Figure 1.

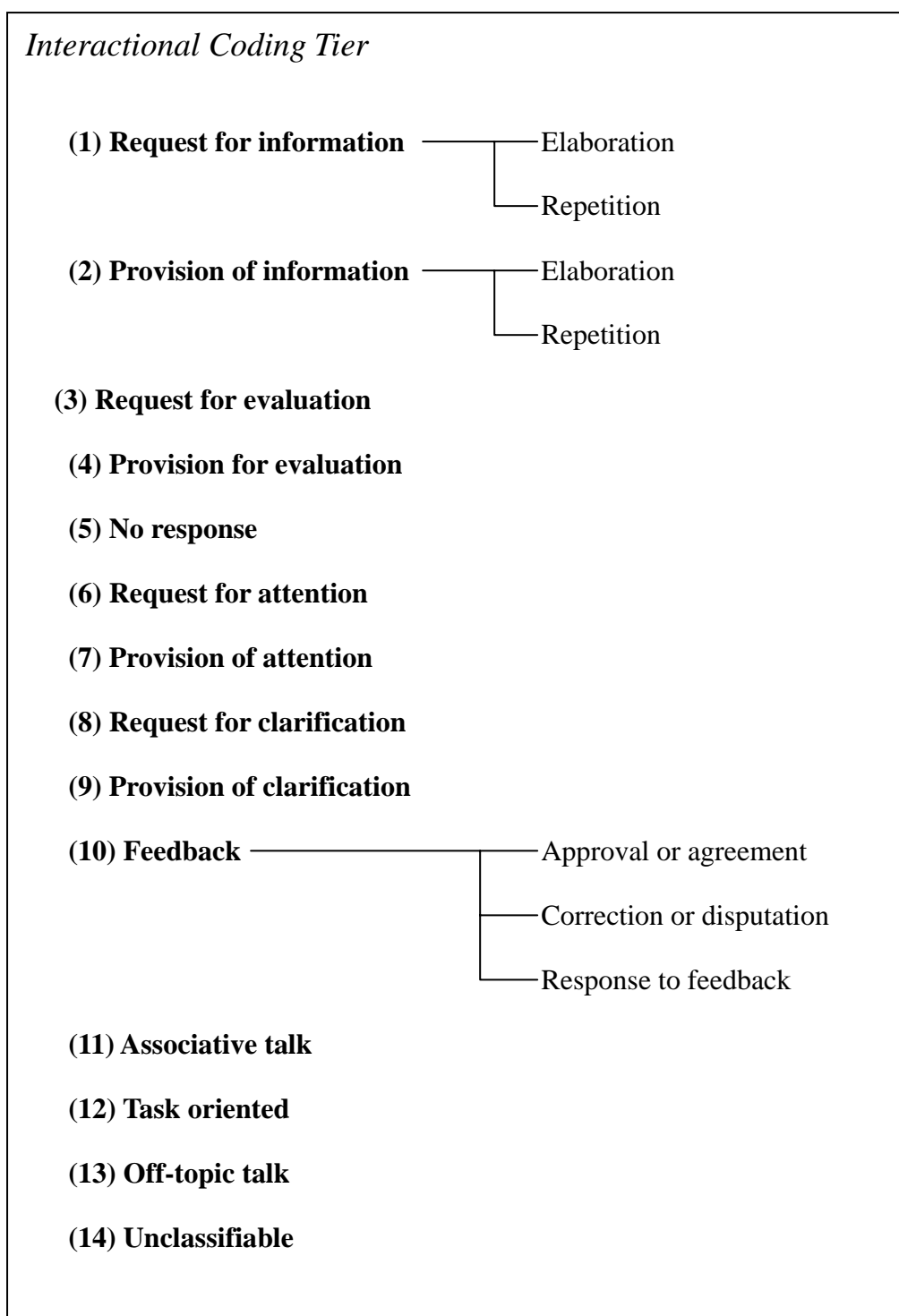


Figure 1. The hierarchy of codes in interactional coding tier

The unit of coding is utterance. Definition and examples of each code will be listed as follows.

(1) Request for Information

This code is used when one speaker requests the other interlocutor to provide information about the storyline. This kind of request can be categorized as two subtypes: elaboration and repetition. When a speaker requests elaborate information, he or she asks the other interlocutor to add new information to the topic under discussion or to provide more information incorporating the information that has been given. The following example illustrates mother's request for elaborate information. The utterance in question was underlined. Other utterances provide context for the target utterance.²

Example 01 (low-income, child Fei-fei, 3;4, female)

Mother: 哇 他 拿 葡萄 給 小 baby 吃。
 wa ta na putao gei xiao baby chi
 wow 3sg take grape give small baby eat
 Wow, he takes grapes for the baby to eat.

Mother: 還 倒 什麼?
 hai dao sheme
 still pour what
 What else does he take for him?

² The examples were all extracted from real data. The symbols and transcription format follow CHAT format. The CHAT symbols used in the study were listed in Appendix A.

Mother: <還> [/] 還 倒 咖啡.³
 <hai> [/] hai dao kafei
 <still> [/] still pour coffee
 He also takes him coffe.

Repetition of request for information occurs when a speaker repeats the previous question without adding any new information. In the following example, the mother repeated the same question.

Example 02 (Upper-middle SES, child Fang-wei, 3;6, male)

Mother: 結果 媽媽 上班 去 了 是 不是?
 jieguo mama shangban qu le shi bushi
 then mother go-to-work go PFV be not-be
 Then, the mother went to work, didn't she?

Child: 對 呀.
 dui ya
 yes PAR
 Yeah.

Mother: 然後 呢?
 ranhou Q
 then Q
 Then?

Mother: 然後 呢?
 ranhou Q
 then Q
 Then?

Mother: 他 在 幹 嘛?
 ta zai gan ma
 3sg DUR do what
 What is he doing?

Child: 他 在 陪 他.

³ The translation format is adapted from Li & Thompson (1997). Abbreviation of terms is listed in Appendix B.

ta zai pei ta
 3sg DUR accompany 3sg
 He is keeping him company.

(2) Provision of Information

Speakers provide information about the story, including extension, continuation, and summarization of the story. Speakers may also elaborate or merely repeat previously given information. Examples below show the difference between elaborate and repetitive provision of information.

Example 03 (Low-income, child Jing, 3;8, female)

Mother: +^ 狗狗 把他 帶出來 了. (elaborate)

+^ gougou ba ta dai chulai le
 +^ doggie BA 3sg take exit-come PFV
 Doggie takes him out.

Mother: 呢 他們 就在 聽 音樂 跳舞 囉. (elaborate)

e tamen jiu zai ting yinyue tiaowu lo
 Er 3pl then DUR listen music dance PAR
 Er, after that, they listen to music and dance.

Mother: 狗狗 聽 音樂 跳舞 對 不對? (repeat)

gougou ting yinyue tiaowu dui bu-dui
 doggie listen music dance right not-right
 The doggie listens to music and dances, doesn't he?

Mother: 狗狗 站 起來 跳舞 (elaborate).

gougou zhan qilai tiaowu
 doggie stand rise-come dance
 The doggie stands up and dances.

In the above example, the first two utterances are elaborate provision of

information. However, the third utterance is repetitive information because the information carried in this utterance has been provided in the second utterance.

(3) Request for Evaluation

A speaker requests for the interlocutor's perspective on the characters or events in the story.

Example 04 (Low-income, child Jing, 3;8, female)

Mother: 哇 天 啊 小 baby 跑 到 # [/] 小 baby
 wa tian a xiao baby pao dao # [/] xiao baby
 wow god PAR little baby run to # [/] little baby
 跑 到 水缸 裡 面 去 了。
 pao dao shuigang limian qu le
 run to water vat inside go PFV
 Wow, my god! The little baby goes into the water vat!

Mother: +^ 跟 魚 一 起 怎 麼 辦?
 +^ gen yu yiqi zeme ban
 +^ with fish together how do
 He's together with the fish. What should we do?

Mother: +^ 是 不 是 很 危 險?
 +^ shi bushi hen weixian
 +^ be not-be very dangerous
 Is that very dangerous?

Child: 是.
 shi
 be
 Yes.

(4) Provision of Evaluation

A speaker provides evaluation about events in the story, sometimes accompanied with requests for evaluation.

Example 05 (Low-income, child Fei-fei, 3;4, female)

Mother: 小 # 卡兒 就 看 到 <外面 主人 走
 xiao # ka'er jiu kan dao <waimian zhuren zou
 small # Carl then see RVC <outside master go
 掉 了> [>].
 diao le> [>]
 RVC PFV> [>]

Carl sees the master has gone away.

Child: <e 他 出來 耶> [<].
 <e ta chulai ye> [<]
 <e he exit PAR> [<]

Hey, he comes out.

Mother: 對 你 看 他 好 皮 喔.
 dui ni kan ta hao pi o
 yes you look he very naughty PAR
 Yes. Look! He is so naughty.

(5) No Response

One speaker refuses to answer the other interlocutor's questions or requests.

Utterances such as "I don't know" and "I don't remember" are typical examples.

Example 06 (Upper-middle SES, child Fang-wei, 3;6, male)

Mother: 結果 呢?
 jieguo ne
 result Q

And then?

Child: 你 幫 我 講 啊.
ni bangwo jianga
you help me speak PAR
You tell you the story for me.

Mother: 我 不 知道.
wo bu zhidao
I not know
I don't know.

Child: 我 也 不 知道.
wo ye bu zhidao
I also not know
I don't know either.

Mother: 結 果 媽 媽 上 班 去 了 是 不 是?
jieguo mama shangban qu le shi bu-shi
then mommy work go PFV be not be
Then mommy has gone to work, hasn't she?

(6) Request for Attention

One speaker requests for the other interlocutor's attention. Parents usually demand children's attention in the process of telling a story. Requests for attention occur when parents ask their children to show signs of attention, for example "mm" or a simple nod, in order to make sure that the children pay attention to the ongoing topic. In the following example, Qiang's mother aroused his attention by an exclamation and a directive.

Example 07 (Low-income, child Qiang, 3;2, male)

Mother: 對 啊 不 能 這 樣 爬 喔.
dui a bu-neng zheyang pa o

right PAR not-can this way climb PAR
 Right. You can't climb like that.

Mother: 會 摔 下來 喔.
 hui shuai xialai o
 will tumble down-come PAR
 You will fall down.

Mother: <哇> [>] [!] 你 看.
 <wa> [>] [!] ni kan
 <wow> [>] [!] you look
 Wow! Look!

Child: <喔> [<].
 <o> [<].
 <oh> [<].
 Oh.

Chinese mothers use tag questions, such as *shi-bu-shi* '是不是' or *dui-bu-dui* '對不對', frequently in talking to children (Erbaugh, 1992). These tag questions are not real questions requesting for information or opinions from their children. Parents ask these questions with a pre-selected answer in mind, and usually persist in asking the child until the child produces the selected answer, as in the following example.

Example 08 (Low-income, child Qiang, 3;2, male)

Mother: 媽媽 要 出去 了 啊.
 mama yao shuqu le a
 mommy want exit-go CRS PAR
 Mommy wants to go out.

Mother: 是 不是?
 shi bu-shi
 be not-be
 Doesn't she?

Mother: 是 不是 這樣?

shi bu-shi zheyang
 be not-be this way
 Is that so?
 Child: 不是.
 bu-shi
 not-be
 No.
 Mother: 是 啦.
 shi la
 be PAR
 Yes.
 Child: 是.
 shi
 be
 Yes.

In Example 08, Qiang's mother first provided some new information, and then used a tag question to keep Qiang's attention. When she was asking the tag question, she had a positive answer in her mind. When Qiang responded an unexpected answer, she asked again until Qiang produced the expected answer. The purpose of these questions, "quiz style" in Erbaugh's term, aims to prepare children for later school education. It emphasizes "obedience, choral response, and memorization" (p. 401). If the child provides the preselected answer, the mother usually moves on, as Jing's mother in Example 09.

Example 09 (Low-income, child Jing, 3;8, female)

Mother: +^ 狗狗 還 會 幫 小 baby 倒 咖啡 倒
 +^ gougou hai hui bang xiao baby dao kafei dao

+^ doggie still can help little baby pour coffee pour
牛奶 呢.

niunai ne

milk PAR

The doggie gives the baby coffee and milk.

Mother: 對 不對?

dui bu-dui

right not-right

Doesn't he?

Child: 對.

dui

right.

Yes.

Chen and He (2001) examined pragmatic functions and positions of tag questions. They found that tag questions that bear one independent tone constructional unit function as a discourse marker to signal transitions of interactional sequences and to maintain the addressee's attention. They also found that tag questions that occur at the end of tone constructional units serve as basic marker that reinforce the illocutionary force of the main sentence it is tagged to. The distinction was followed in present study in examining mother-child interaction. Thus, independent tag questions were classified as requests for attention, and tag questions that occur at the end of utterances were regarded as an intensifier of the proposition of main sentences.

(7) Provision of Attention

One speaker shows attention to the topic under discussion, usually preceded by

a request for attention. A-not-A structure, as stated earlier, is categorized as requests for attention in this coding system. Responses to A-not-A structure are thus regarded as provision of attention as in Example 10.

Example 10 (Low-income, child Jing, 3;8, female)

Mother: 喔 媽媽 回來 的 時候 狗狗 好
 o mama huilai de shihou gougou hao
 oh mommy return-come NOM time doggie very
 乖 喔.
 guai o
 well-behaved PAR
 Oh, when mommy comes back, the diggie is so well-behaved.

Mother: 對 不對?
 dui bu-dui
 right not-right
 Isn't he?

Child: 對.
 dui
 right
 Yes.

Mother: 還 會 幫 小 baby 洗澡.
 hai hui bang xiao baby xizao
 still will help little baby take a bath
 [The doggie] will also help the little baby take a bath.

Mother: 是 不是?
 shi bu-shi
 be not-be
 Will he?

Child: 是.
 shi
 be
 Yes.

Sometimes a speaker only shows a sign of attention, such as “mm” or “*dui*”, or the speaker simply repeats total or partial utterance of the other speaker. In this situation, the speaker’s “mm”, “*dui*”, or repetition does not carry any positive or negative meaning toward the other participant’s previous utterances, but only provides attention. Utterances of this kind are all coded as provision of attention.

Example 11 (Low-income, child Rou-fang, 3;8, female)

Mother: 在 嬰兒床 裡面.
 zai yingerchuang limain
 in baby carriage inside
 [He is] in the baby carriage.

Mother: 爬 啊 爬.
 pa a pa
 climb a climb
 He climbs and climbs.

Mother: 啊 好 危險 喔.
 a hao weixian o
 oh very dangerous PAR
 Oh, it’s so dangerous!

Child: 嗯.

mm

mm

Mm.

Mother: 這 樣子 危 不 危險?
 zhe yangzi wei bu weixian
 DEM way dangerous not dangerous
 Is it dangerous?

Provision of attention need not to be verbal; notes of a nod in transcription can also be regarded as a sign for showing attention.

(8) Request for Clarification

Requests for clarification usually occur when speakers do not hear clearly what was previously said and ask for a repetition or a better pronunciation. A request to clarify meaning is not included in this category but rather classified as a request for elaborate information.

Example 12 (Low-income, child Ming-da, 3;1, male)

Mother: 你 看 這裡.
 ni kan zheli
 you look here
 Look!

Child: 啊?

a
 Q
 What?

Mother: 這裡 啊.
 zheli a
 here PAR
 Here!

(9) Provision of Clarification

Speakers repeat what was previously said in response to a request for clarification.

Example 13 (Low-income, child Ming-da, 3;1, male)

Mother: 你 看 這裡.
 ni kan zheli

you look here
 Look!
 Child: 啊?
 a
 Q
 What?
 Mother: 這裡 啊.
 zheli a
 here PAR
 Here!

(10) Feedback

Speakers give feedback to what the other interlocutor has said. Under the category, three subcategories exist. Each of the three subcategories will be discussed and illustrated as follows.

Speakers' positive reaction toward the information given by the other interlocutor is coded as **Approval**.

Example 14 (Upper-middle SES, child Jie, 3;7, male)

Child: +^ 你 看 他 在 玩 奶油.
 +^ ni kan ta zai wan naiyou
 +^ you look he DUR play butter
 Look, he is playing the butter.
 Mother: 對 呀.
 dui a
 right PAR
 Right.

Correction or **Disputation** is a negative feedback or a challenge to the

information previously given. It may be a repetition with raising intonation, or provision of a correct answer.

Example 15 (Upper-middle SES, child Jia-pei, 3;4, male)

- Mother: <牠 就> [//] 卡兒 就 在 窗戶 <看 媽媽> [//]
 <ta jiu> [//] ka'er jiu zai chuanghu <kan mama> [//]
 <he then> [//] Carl then at window <see mommy> [//]
 看 媽媽 走 了 沒 哦。
 kan mama zou le mei o
 see mommy go PFV not PAR
 <He then> [//] Carl then goes to <see if mommy> [//] see if
 mommy has gone away from the window.
- Mother: 媽媽 走 了 然後 牠 就 # 走 到 旁邊。
 mama zou le ranhou ta jiu # zou dao pangbian
 mommy go PFV then he then # go to beside
 After mommy has gone away, he # goes to the other side.
- Child: 他 又 回 來 了 啦 媽媽。
 ta you huilai le la mama
 3sg again return-come CRS PAR mommy
 Mommy, she's coming back again.
- Mother: 沒 有 媽 媽 剛 出 門。
 meiyou mama gang chu men
 not-exist mommy just exit door
 No, the mommy just went out.

The last situation that was coded under the category of feedback is **Response to Feedback**. Usually it occurs when speaker respond to correction or disputation. Sometimes it occurs when speakers give feedback to the other interlocutor's feedback to previously uttered information.

Example 16 (Low-income, child Jing, 3;8, female)

Mother: 這 是 什麼?
 zhe shi sheme
 DEM be what
 What's this?

Child: 小 朋友.
 xiao pengyou
 little friend
 A kid.

Mother: 小 baby [= corrects].
 xiao baby [= corrects]
 little baby [= corrects]
 A little baby.

Child: 小 baby [= repeats].
 xiao baby [= repeats]
 little baby [= repeats]
 A little baby.

(11) Associative Talk

Statements or questions that are not directly associated with the story, but are tangentially related to the topic under discussion, such as general knowledge talk (facts or knowledge about events or objects discussed in the story), fantasy talk (imaginary world associated with or similar to the story), and talk in connection of the book to the interlocutor or other texts (similar past events that happened to one of the interlocutors) are coded as associative talk. In the following example, the mother talked about a similar situation in Fei-fei's life.

Example 17 (Low-income, child Fei-fei, 3;4, female)

- Mother: 然後 她 就 對 她的 # 狗狗 說 <卡兒 你
 ranhou ta jiu dui tade # gougou shuo <ka'er ni
 then she then to her # doggie say <Carl you
 要 好好 照顧 這 個 小 寶 寶 喔> [".
 yao haohao zhaogu zhe ge xiao baobao o> [".
 will well take care of DEM CL little baby PAR> [".
 Then she says to her doggie, "Take care of the baby, Carl."
- Mother: 那 個 小 寶 寶 在 上面 睡 覺 對 不 對?
 na ge xiao baobao zai shangmian shuijiao dui budui
 DEM CL little baby at upside sleep right not-right
 That baby is sleeping up there, isn't he?
- Mother: 跟 阿 姨 的 小 寶 寶 一 樣.
 gen ayide xiao baobao yiyang
 with aunties' little baby the same
 [He looks] like Auntie's little baby.

(12) Task Oriented

Utterances of negotiation about who will do the task, and how to do the task.

Example 18 (Upper-middle SES, child Ai-qi, 3;7, female)

- Mother: 那 <現在> [/] 現在 +...
 na <xianzai> [/] xianzai +...
 then <now> [/] now +...
 Then <now> [/] now +...
- Mother: 好 那 +...
 hao na +...
 ok then +...
 Ok, then +...
- Mother: 那 你 要 不 要 換 你 講 了?
 na ni yao bu-yao huan ni jiang le
 then you want not-want change you speak CRS
 Do you want to take the turn?
- Child: 我 不 會 講.

wo buhui jiang
 I not-can speak
 I don't know how to tell.

(13) Off-topic Talk

Utterances that are totally unrelated to the storyline are classified as off-topic talk, including asking for speaking slowly, or distraction from the narration by a phone call or a neighbor.

Example 19 (Upper-middle SES, child Lily, 3;7, female)

Mother: 那 卡兒 怕 他 沉 下去 啊 趕快 咬
 na ka'er pa ta chen xiaqu a gankuai yao
 then Carl afraid he sink down-go PAR hastily bite
 著 他的 # 這 個 [//] 咬 住 他的 衣服 對
 zhe tade # zhe ge [//] yao zhu tade yifu dui
 DUR his # DEM CL [//] bite RVC his clothes right
 不對?
 budui
 not-right
 Carl bites his clothes incase that he would sink.

Mother: 噯 小姐 專心 一點。
 ei xiaojie zhuanxin yidian
 hey miss concentrate a little bit
 Hey, lady, are you with me?

Mother: 來 貼紙 送 給 媽咪。
 lai tiezhi song gei mami
 come sticker send to mommy
 Come on, send your sticker to mommy.

Mother: 送 給 媽咪 ok?
 song gei mami ok
 send to mommy ok
 Send [the sticker] to mommy, ok?

Mother: 好 一 人 一 個.

hao yi ren yi ge
ok one person one CL

Ok, every one of us keeps one [sticker].

Mother: 好 # 來.

hao # lai
ok # come

Ok. Come on.

Mother: 結果 呢 卡兒 想 說 <嗯 好 無聊 哦
jiegou ne ka'er xiang shuo <mm hao wuliao o
result PAR Carl think say <mm very boring PAR
我們 來 開 音樂 來 聽 好 不好> [']?
women lai kai yingyue lai ting hao buhao
we come open music come listen ok not-ok
Then, Carl thinks, "Mm, it's so boring. Let's turn on the music,
shall we?"

(14) Unclassifiable

All uncodable, incomplete, interrupted utterances are coded as unclassifiable

because they are unintelligible and obscure in meaning.

Example 20 (Upper-middle SES, child Ai-qi, 3;7, female)

Mother: 趕快 把 媽媽的 床舖 拉 整齊.

gankuai ba mamade chuangu la zhengqi
hastily BA mommy's bed pull neat

[The doggie] arranges mommy's bed as soon as possible.

Mother: 把 弄 亂 的 東西 把 他 放 回

ba nong luan de dongxi ba ta fang hui
BA make disorder NOM object BA 3sg put back

原來的 地方 喔.

yuanlaide difang o

original place PAR

[The doggie] puts everything back.

Mother: xxx.

xxx

xxx

xxx.

Mother: 哇 狗狗 看 到 媽媽 回來 了。
 wa gougou kan dao mama huilai le
 wow doggie see RVC mommy return-come PFV
 Wow, the doggie sees mommy has come back.

In addition to the above codes for interactional functions, careful examination of data and the result of Snow et al. (1976) revealed that question types contribute to the different parental styles in book reading. For example, some mothers tend to use more open-ended questions and some use more yes-no questions. Open-ended questions require children more language abilities than yes/no questions do. Example 21 and 22 illustrate how mothers use open-ended questions and yes/no questions to involve children into conversation.

Example 21 (Upper-middle SES, child Jie, 3;7, male)

Mother: 後來 狗狗 怎樣? (open-ended question)

houlai gougou zeyang

then doggie how

What happens to the doggie then?

Child: 他 [= the baby] 下來.

ta [= the baby] xialai

3sg [= the baby] down-come

He comes down.

Mother: 對 呀 然後 他 要 去 騎 狗狗.

dui a ranhou ta yao qu qi gougou

right PAR then 3sg want go ride doggie

Right. He wants to ride the dog.

Example 22 (Low-income, child Qiang, 3;2, male)

Mother: 哇 弟弟 爬 起來 了。
 wa didi pa qilai le
 wow little brother climb rise-up CRS
 Wow, the boy climbs up.

Mother: 是 不是 站 起來?
 shi bushi zhan qilai
 be not-be stand rise-come
 Does he stand up?

Child: 是 他 [= points the baby] 要 站 起來 了。
 shi ta [= points the baby] yao zhan qilai le
 be 3sg [= points the baby] want stand rise-come CRS
 It's he who wants to stand up.

The mothers in Example 21 and 22 read the same page with their children. Jie's mother, in Example 21, used an open-ended question to invite Jie to read the story together. Jie thus had a chance to provide new information on his own. On the other hand, Qiang's mother in Example 22 used a yes/no question so Qiang provided nothing more than a confirmative answer. Question types will thus be added to the interactional coding tier in order to see whether mothers from different social classes differ in the uses of questions.

In addition, Chinese mothers seem to use tag questions or A-not-A structure more often than mother in Western cultures (Erbaugh, 1992). As stated in previous section, tag questions that bear a single tone constructional unit are classified as requests for attention, and those occurred at the end of a tone constructional unit are

categorized as intensifiers. Example 23 shows a tag question as an intensifier.

Example 23 (Low-income, child Ming-da, 3;1, male)

Mother: +^ 你 看.

+^ ni kan

+^ 2sg see

Look!

Mother: 哇 [!] 妹妹 騎 狗狗 耶 有 沒有?

wa [!] meimei qi gougou ye you meiyou

wow [!] little sister ride doggie PAR exist not-exist

Child: qia qia [= imitates the sound of riding horse].

qia qia

qia qia

Qia qia [= imitates the sound of riding horse].

In order to obtain a thorough view of how Chinese mothers' tag question usages, codes for tag questions are thus be added to the system, although such codes are actually related to form instead of function.

3.4.2. Information Coding Tier

Information coding tier was made for detail examination of the content of information carried in book reading. This tier focuses on what parents and children say when they provide and request information. Three main parts are included in this tier: narrative talk, non-narrative talk, and unclassifiable utterances. Narrative talk, the main body in this coding tier, marks the storyline and related talk in joint book

reading. Non-narrative talk labels not-on-task talk, including attention talk, off-topic talk, and talk that functions to keep the conversation going on. Finally, utterances that are obscure in meaning, and those that are incomplete and interrupted are classified as unclassifiable talk.

Codes in this tier were organized for two purposes. The first is to differentiate information that is spontaneously provided by the speaker and information that is responsive to previous requests. The proportion of spontaneous and responsive information can show the extent to which children and mothers involved in the interaction. Further, it can also reveal whether children elaborated their answer to mothers' questions or they just provided a simple answer. The other purpose is to distinguish immediate talk and non-immediate talk. Non-immediate talk, as stated earlier, is considered as talk about prediction, inference, explanation of the story, and connection with real or other imaginary worlds, which is also recognized to be a type of decontextualized language skill. Such language skill is related to later performance in school.

The hierarchy of codes in this tier is listed in Figure 2.

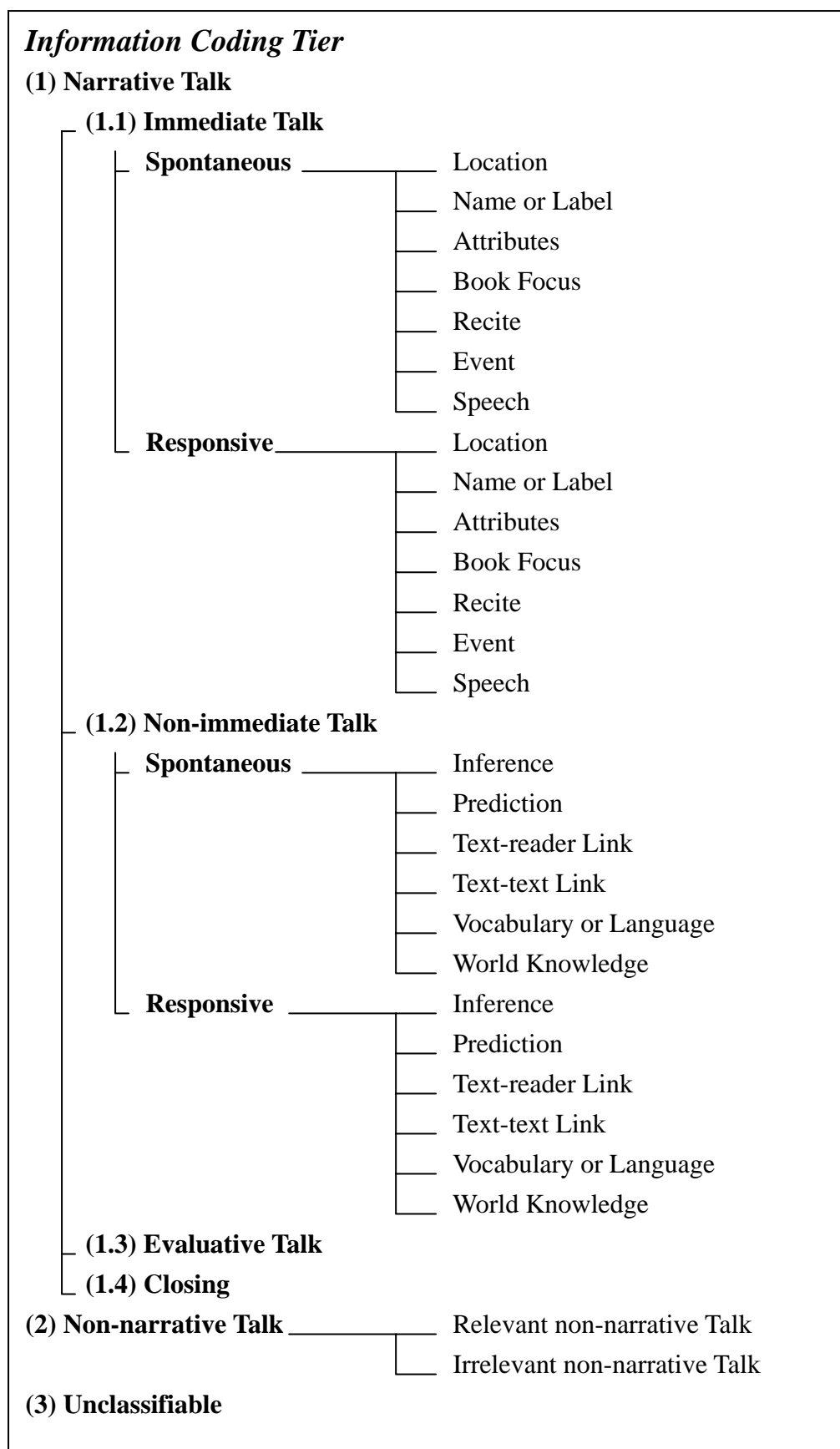


Figure 2. The hierarchy of codes in information coding tier.

The unit of coding is utterance. Definition and examples of the codes are stated as follows.

(1) Narrative Talk

This part of interaction, the true narrative of the storyline, is the most important component of book reading and the main part of information coding tier. It is composed of provision and request for information about the story. In narrative talk, four sub-parts include. They are immediate talk, non-immediate talk, evaluative talk, and closing. Each will be defined with excerpts from real data.

(1.1) Immediate Talk

Immediate talk refers to information that is directly tied to the book being read. This kind of information is immediately available to mothers and children, for the items they talk about are physically present. It is often a description or a comment about an illustration or an event in the story. In other words, it is the here-and-now information available to both readers. Requests and provision of this kind of information were all counted in this category. Under this code, utterances are separated as responsive and spontaneous. Subordinate codes such as *location*, *naming*, *attributes*, *event*, and other details are further separated under responsive and

spontaneous utterances. All the codes will be described as follows.

(1.1.1) Location

Speakers provide or request information about location. Sometimes the speaker shows information about location along with pointing and gestures. When speakers request this kind of information, they do not need verbal response; a demonstration of comprehension and attention such as pointing is enough. In the following example, Dai-mei's mother asked her for information about location.

Example 24 (Upper-middle SES, child Dai-mei, 3;6, female)

Mother: 那 你 出來 之後 呢?
na ni chulai zhihou ne
then you exist-come after Q
What happens after you came out?

Mother: 卡兒 就 帶 著 你 去 哪裏?
ka'er jiu dai zhe ni qu nali
Carl then take DUR you go where
Where does Carl take you to?

Mother: 你們 要 去 哪裏?
nimen yao qu nali
you want go where
Where do you two want to go?

Mother: 要 去 哪裏?
yao qu nali
want go where
Where [do you] want to go?

Mother: 去 誰的 房間?
qu sheide fangjian
go whose room

Whose room [do you] want to go?

Child: 媽媽的 房間.
 mamade fangjian
 mommy's room
 Mommy's room.

In this system, requested information is distinguished from spontaneous information. The child's response in the above example is coded as responsive information about location.

(1.1.2) Naming or Labeling

Speakers label or name a certain object in the process of book reading, or they request the other interlocutor to name an object.

Example 25 (Upper-middle SES, child Dai-mei, 3;6, female)

Mother: 然後 呢?
 ranhou ne
 then Q
 What happens next?
Mother: 還 有 帶 什麼?
 hai you dai sheme
 still have take what
 What else [does she] takes?
Child: 帶 手套.
 dai shoutao
 take gloves
 Gloves.
Mother: 帶 手套 哦.
 dai shoutao o

take gloves PAR
 Oh, [she] takes gloves with her.

As stated previously, the child's response is coded as responsive information about naming.

(1.1.3) Attributes

Speakers give or request information about the so-called "basic school skills" which include color identification, counting, size, and other basic skills.

Example 26 (Upper-middle SES, child Xiu-xiu, 3;4, female)

Mother: 然後 呢?
 ranhou ne
 then Q
 And then?

Child: 結果 他 要 [/] 結果 他 要 xxx +...
 jieyou ta yao [/] jieyou ta yao xxx +...
 then 3sg want [/] then 3sg want xxx +...
 Then he wants [/] then he wants +...

Child: 我 要 數 xxx.
 wo yao shu xxx
 I want count xxx
 I want to count

Child: 一 二 三 四 五 六 +/.
 yi er san si wu liu +/.
 one two three four five six +/.
 One, two, three, four, five, six +/.

Mother: 六 個 什麼 東西?
 liu ge sheme dongxi
 six CL what object

Six what?
Child: 七.
 qi
 seven
 There are seven.
 Mother: 七 個 什麼 東西?
 qi ge sheme dongxi
 seven CL what object
 Seven what?
 Child: xxx 橘色的 魚.
 xxx jusede yu
 xxx orange fish
 xxx orange fish.

(1.1.4) Book Focus

Direction or information about the book as an object, rather than a picture or a story. It includes page turning, reference to the title and author, and physical features of the book.

Example 27 (Upper-middle SES, child Mei-mei, 3;6, female)

Mother: 這 是 一 本 什麼 書 啊?
 zhe shi yi ben sheme shu a
 DEM be one CL what book Q
 What's the book about?
Child: 阿拉丁的 [= publisher company].
 aladinde [= publisher company]
 Aladinde [= publisher company]
 [A book from] Aladin.
Mother: 哦 是 阿拉丁的 童話 故事書 是 不是 啊?
 o shi aladinde tonghua gushishu shi bushi a
 oh be Aladin's fairy tale book be not-be PAR
 Oh, [it's] a story book from Aladin, isn't it?

Child: 阿拉丁.
 aladin
 Aladin
 Aladin.

(1.1.5) Recite

The speaker, usually the mother, asks the child to repeat what she has just said.

In Example 28, Hong's mother had Hong recite every word she said after each word was read.

Example 28 (Low-income, child Hong, 3;7, male)

Mother: 卡兒 +...

ka'er +...

Carl +...

Carl +...

Child: 卡兒.

ka'er

Carl

Carl.

Mother: +, 你 要 +...

+, ni yao

+, you have to

+, You have to +...

Child: 你 要 +...

ni yao +...

you have to +...

You have +...

Mother: +, 好好 +...

+, haohao +...

+, well +...

+, Well +...

Child: 好好 +...

haohao +...

well +...

Well +...

Mother: +, 照顧 +...

+ , zhaogu +...

+ , take care of +...

+ , Take care of +...

Child: 照顧 +...

zhaogu +...

take care of +...

Take care of +...

Mother: +, 小 寶寶.

+ , xiao baobao

+ , little baby

Little baby.

Child: 小 寶寶.

xiao baobao

little baby

Little baby.

(1.1.6) Event

Speakers request or provide information of what is happening and what has happened in the story.

Example 29 (Upper-middle SES, child Hannah, 3;4, female)

Mother: 用 <什麼> [>] 東西 擦 乾?

yong <sheme> [>] dongxi ca gan

use <what> [>] object wipe dry

What [does Carl] use to dry the baby?

Child: <然後> [<] [/] 然後 就 這 個 哇.

<ranhou> [<] [/] ranhou jiu zhe ge wa

<then> [<] [/] then nearby DEM CL PAR

Then [Carl uses] this.

Child: 然後 用 吹風機 吹。
 ranhou yong chuifengji chui
 then use hair drier blow
 Then [Carl] uses hair drier to dry [the baby].

Child: 然後 就 跑 去 睡覺。
 ranhou jiu pao qu shuijiao
 then thereby run go sleep
 Then [they] go to bed.

Child: 然後 就 很 乾淨。
 ranhou jiu hen ganjing
 then thereby very clean
 The [it becomes] clean.

(1.1.7) Speech

Information about direct or indirect speech, about who says what in the story.

This code also occurs when a speaker pretends to be one character in the story and speak for the character.

Example 30 (Low-income SES, child Fei-fei, 3;4, female)

Mother: 對 那 他的 主人 要 出去 了。
 dui na tade zhuren yao chuqu le
 right then his master want exit-go CRS
 Yes. Then his master wants to go out.

Mother: 然後 她 就 對 她的 # 狗狗 說 <卡兒 你
 ranhou ta jiu dui tade # gougou shuo <ka'er ni
 then 3sg thereby to her # doggie say <Carl you
 要 好好 照顧 這 個 小 寶寶 喔> ['].
 yao haohao zhaogu zhe ge xiao baobao o> [']
 need to well take care DEM CL little baby PAR> [']
 Then she said to her # doggie, "Carl, take care of the baby well."

Mother: 那 個 小 寶寶 在 上面 睡覺 對 不對?
 na ge xiao baobao zai shangmian shuijiao dui budui

DEM CL little baby at upside sleep right not-right
That baby is sleeping up there, isn't he?

(1.2) Non-immediate Talk

Non-immediate talk, unlike immediate talk, involves information indirectly tied to the story. It includes talk about explanation, connection to the real world and other texts, imaginary worlds, prediction, and other information that is not immediately available, but tangentially related to the story. As noted earlier, this kind of talk has been referred to as decontextualized talk for its lack of context. In this study, non-immediate talk is separated as many subcategories, each of which will be discussed and illustrated as follows.

(1.2.1) Inference

This code includes most of why questions and answers. Speakers request or provide explanations and inferences.

Example 31 (Low-income, child Fei-fei, 3;4, female)

Mother: 他 看 媽媽 走 了 他 馬 上 爬 起 來。
ta kan mama zou le ta mashang pa qilai
3sg see mommy go PFV 3sg immediately climb rise-come
Once after he sees mommy has left, he climbs up immediately.
Mother: 然後 # <他 叫> [/] # 他 叫 卡 兒 過 來。
ranhou # <ta jiao> [/] # ta jiao ka'er guolai
then # <3sg call> [/] # 3sg call ka'er cross-come

Then he has Carl come to him.

Mother: 因爲 這 個 床 很 高 啊。
 yinwei zhe ge chuang hen gao a
 because DEM CL bed very high PAR
 Because the bed is high.

Mother: 他 很 小 啊 對 不對?
 ta hen xiao a dui budui
 3sg very small PAR right not-right
 [And] he's small, isn't he?

Mother: 他 就 不能 下來。
 ta jiu buneng xialai
 3sg then cannot down-come
 He can't come down.

Mother: 他 就 叫 # 狗狗 過來。
 ta jiu jiao # gougou guolai
 3sg then call # doggie cross-come
 He then has # the doggie come to him.

(1.2.2) Prediction

This code occurs when speakers predict what will happen in the story. It also appears when speakers imagine what happens based on the pictures in the book. Here prediction is different from event in that event occurs when speakers describe what is in the picture, whereas prediction occurs when speakers imagine what is not depicted in the picture but reasonable on the basis of the storyline.

Example 32 (Upper-middle SES, child Hannah, 3;4, female)

Child: 然後 他 吃 得 滿 身 都 是。
 ranhou ta chi de man shen dou shi
 then 3sg eat CSC full body all be
 The he spreads food all around his body.

- Mother: 吃 得 滿 身 都 是。
 chi de man shen dou shi
 eat CSC full body all be
 [He] spreads food all around his body.
- Child: 媽媽 回來 會 很 生氣 哦。
 mama huilai hui hen shengqi o
 mommy return-come will very angry PAR
 Mommy will be angry.
- Child: 然後 就 去 <曬 太陽> [?] 然後 去 洗。
 ranhou jiu qu <shai taiyang> [?] ranhou qu xi
 then thereby go <bask sun> [?] then go wash
 Then [he] goes to bask in sun, [and] then to wash.

In Example 32, Hannah predicted the mother in the story would be angry about the child's behavior. Although Hannah seems to evaluate the mother's reaction from her perspective, the main proposition of the utterance is a prediction.⁴

(1.2.3) Text-reader Link

Speakers request or provide information about the connection between the story and real life experiences of the two speakers. Usually speakers talk about similar or related events that happened in the past.

Example 33 (Low-income, child Fei-fei, 3;4, female)

- Mother: 喔 你 看 好 聰明 喔。
 o ni kan hao congming o
 oh you look very smart PAR
 Oh, look. [He's] so smart.

⁴ When there is more than one possibility of coding, the coding will be based on main proposition.

Mother: 你 會 不會?
 ni hui bu-hui
 you can not-can
 Can you [do so]?

Child: 會.
 hui
 can
 Yes.

Mother: 你 會 不會 倒 咖啡?
 ni hui buhui dao kafei
 you can not-can pour coffee
 Can you help [someone get] a coffe?

Child: 會.
 hui
 can
 Yes.

Mother: 會 喔?
 hui o
 can Q
 Can you?

(1.2.4) Text-text link

Speakers provide or request information about the connection between the story and other texts or stories.

Example 34 (Upper-middle SES, child Hannah, 3;4, female)

Child: 然後 跳舞.
 ranhou tiaowu
 then dance
 Then [they] dance.

Mother: 哦.
 o
 oh

Oh.

Child: 然後 # 是 snoopy 一樣。
 ranhou # shi snoopy yiyang
 then # be snoopy the same
 Then [he's] the same with snoopy.

Mother: 哦 跳 得 好 高興。
 o tiao de hao gaoxing
 oh dance CSC very happy.
 Oh, [they] dance happily.

(1.2.5) Vocabulary and Language

Speakers request or provide information about how a word is pronounced or meaning of a word.

Example 35 (Low-income, child Eric, 3;8. male)

Mother: 這 什麼?
 zhe sheme
 DEM what
 What's this?

Child: 小狗。
 xiaogou
 doggie
 A doggie.

Mother: 小狗 叫 什麼?
 xiaogou jiao sheme
 doggie call what
 How do you say doggie [in English]?

Mother: dog.
 dog
 dog
 Dog.

Child: dog [= repeats].
 dog

dog
Dog.

(1.2.6) World Knowledge

The mother teaches the child general world knowledge or moral lessons.

Example 36 (Low-income, child Fei-fei, 3;4, female)

Mother: 然後 這 個 小 弟弟 一下 # 掉 進 #
 ranhou zhe ge xiao didi yixia # diao jin #
 then DEM CL little brother suddenly # fall into #
 金魚缸 裡面 了。
 jinyukang limain le
 fish jar inside CRS
 Then the little boy suddenly falls into # a fish jar.

Mother: 哇 好 危險 喔。
 wa hao weixian o
 wow very dangerous PAR
 Wow, [it's] very dangerous.

Mother: 知道 沒?
 zhidao mei
 know not
 Do you understand?

Mother: 不可以 爬 這麼 高 喔。
 bukeyi pa zheme gao o
 not-can climb this high PAR
 [You] can't climb high.

Child: 對。
 dui
 right
 Yes.

(1.3) Evaluative Talk

Speakers provide or request perspectives about events or characters in the story.

Example 37 (Low-income, child Fei-fei, 3;4, female)

Mother: 他 抹 個 東西 擦 整 臉。
 ta mo ge dongxi ca zheng lian
 3sg smear CL object wipe whole face
 He smears something on his face.

Mother: 你 看 他 把 東西 全部 拿 出來 到
 ni kan ta ba dongxi quanbu na chulai dao
 you look 3sg BA object all take exit-come to
 整 地 喔。
 zheng di o
 whole ground PAR

Look! He takes everything out, and put them all around.

Mother: 好 髒 喔。
 hao zang o
 very dirty PAR
 [It's] so dirty.

Mother: 你 看 看 有 沒有 很 髒?
 ni kan kan you meiyou hen zang
 you see see have not-have very dirty
 Do you think it's dirty?

Mother: 你 看 他的 身 上 # 手 上 全 部 都 是。
 ni kan tade shen shang # shou shang quanbu dou shi
 you see his body up # hand up all all be
 Look, [food] is all around his body and hands.

Mother: 好 髒 喔。
 hao zang o
 very dirty PAR
 [It's] so dirty

(1.4) Closing

This code marks speakers' utterances that indicate an explicit conclusion.

Example 38 (Low-income, child Jing, 3;8, female)

Mother: +^ 你 看 狗 狗 就 躺 在 媽 媽 身 上.
 +^ ni kan gougou jiu tang zai mama shen shang
 +^ you see doggie then lie at mommy body up
 +^ Look, the doggie lies on mommy.

Mother: 是 不 是?
 shi bushi
 be not-be
 Doesn't he?

Mother: +^ 媽 媽 就 說 牠 好 乖.
 +^ mama jiu shuo ta hao guai
 +^ mommy then say 3sg very well-behaved
 +^ Then mommy says he's good.

Mother: 好 了 講 完 了.
 hao le jiang wan le
 ok PFV speak RVC PFV
 Ok, we've done.

Child: 故 事 講 完 了.
 gushi jiang wan le
 story speak RVC PFV
 The story is over.

(2) Non-narrative Talk

This kind of talk includes any talk other than narrative talk. That is, talk that is not narration of the story. Usually non-narrative talk functions to keep the conversation going on without providing any new information about the story.

Under this category, relevant non-narrative talk and irrelevant non-narrative talk

are separated as two codes. Provision and requests of attention, negotiation about who will do the task, and utterances that are not complete but are able to be identified as related to the narration all belong to **relevant non-narrative talk**.

Example 39 (Low-income, child Fei-fei, 3;4, female)

Mother: 卡兒 你 要 看 好 小 寶 寶 喔.

ka'er ni yao kan hao xiao baobao o

Carl you have to watch well little baby PAR

Carl, take care of the baby.

Mother: 好像 媽媽 說 <你 要 照顧 小 弟弟

haoxiang mama shuo <ni yao zhaogu xiao didi

like mommy say <you have to watch little brother

喔> ["].

o> ["]

PAR> ["]

[It's] like mommy said, "Take care of your brother."

Mother: 知道 沒?

zhidao mei

know not

Do you understand?

Child: +^ 知道.

+^ zhidao

+^ know

+^ Yes.

Mother: +^ 要 保護 弟弟 喔.

+^ yao baohu didi o

+^ have to protect brother PAR

+^ [You] have to take care of your brother.

Mother: 對 然後 +/.

dui ranhou +/.

right then +/.

Yes. And then +/.

Child: <弟> [//] <那 個> [>] 弟弟 出來 了.

<di> [//] <na ge> [>] didi chulai le

<brother> [//] <DEM CL> [>] brother exit-come CRS

<Boy> [//] <that> [>] boy comes out.

Mother: <嗯> [<].

<mm> [<]

<mm> [<].

<Mm> [<].

On the other hand, **irrelevant non-narrative talk** is the same as off-topic talk in interactional tier. Typical examples include talks in a phone call from a friend or an unexpected visit from a neighbor. In Example 40, the child Jia-Pei interrupted the mother's narration and asks for a drink.

Example 40 (Upper-middle SES, child Jia-Pei, 3;4, male)

Mother: 哦 他 把 這 個 紙 都 打 翻 了 啊。
o ta ba zhe ge zhi dao da fan le a
oh 3sg BA DEM CL paper all hit over CRS PAR
Oh, he makes all the paper turn over.

Child: 對。
dui
right
Yes.

Mother: 然後 看 到 這 個 +/。
ranhou kan dao zhe ge +/。
then see RVC DEM CL +/。
Then [he] sees this +/.

Child: 好 渴 好 渴 等 一 下。
hao ke hao ke deng yixia
very thirty very thirty wait a while
[I'm] very thirty. Wait a second.

Mother: 好 渴 等 一 下。
hao ke deng yixia
very thirsty wait a while

[You're] thirsty, Wait a second.

Mother: www.

%exp: MOT takes drink to CHI and EXP

Mother: 來 繼續 講 好 不好?

lai juxu jiang hao buhao

come keep on speak ok not-ok

Come on. Let's keep on telling [the story], shall we?

(3) Unclassifiable

Utterances that are obscure or unintelligible.

Example 41 (Upper-middle SES, child Jia-Pei, 3;4, male)

Mother: 你 看 他 <嘴巴> [>] 就 有 泡泡 啦.

ni kan ta <zuiba> [>] jiu you paopao la

you see 3sg <mouth> [>] then have bubble PAR

Look, there're bubbles around his mouth.

Child: <xxx> [<].

<xxx> [<]

<xxx> [<]

<xxx> [<].

Child: 他 +/.

ta +/.

3sg +/.

He +/.

Mother: 他 嘴巴 咬 肥皂 就 有 泡泡 啦.

ta zuiba yao feizao jiu you paopao la

3sg mouth bite soap then have bubble PAR

He bites the soap, and bubbles come out.

3.4.3 Reliability

Four transcripts randomly selected from each group were coded by another

Mandarin speaker. Cohen's Kappa was used to estimate the inter-rater reliability of

the two coding systems. Both of the two systems reach $K > 0.98$.