Chapter Two

Literature Review and Linguistic Properties of Discourse Markers

In this chapter, linguistic properties of discourse markers in English and Chinese will be introduced in section 2.1. Section 2.2 reviews previous theoretical studies on conjunctions in Chinese. In section 2.3, several empirical studies on the acquisition of conjunctions and other cohesive devices will be discussed. Finally, section 2.4 is a brief summary of the main points of this chapter.

2.1 Linguistic Properties of Discourse Markers in Chinese

In actual language use, sentences occur in larger contexts instead of an isolated single sentence. To achieve discourse coherence, we need to use discourse markers (DMs), and there are surely many of such linguistic device in human-to-human discourse. Different scholars (Schourup 1985, Schiffrin[1] 1987, Jucker 1993, and Fraser 1990 & 1999) have different opinions about DMs. Discourse markers, also known as pragmatic markers, are used extensively to mark the structure of the discourse. It is generally believed that DMs in English have the following characteristics: (1) they can be operated at either local or discourse level, (2) they usually appear in utterance-initial position, and (3) they signal speakers' intention to relate the following message(s) to the prior discourse and vice versa.

Similarly in Chinese, DMs in Chinese have caught the attention of linguists over the past two decades. Yet, the studies of DMs in Chinese are relatively fewer than those in English, and such studies of Chinese discourse markers have always been rather limited on the discourse function of individual markers (Biq 1988a on *you*,

[1] According to Schiffrin (1987), she suggests that discourse markers should at least bear the following properties: (1) they have to be syntactically detachable from a sentence, (2) they have to be commonly used in initial position of an utterance, (3) they have to have a range of prosodic contours, and (4) they have to be able to operate at both local and global levels of discourse.

Miracle 1989a on *hao3*, Biq 1990 and Miracle 1989b on *na*(*me*), Shen 1993 on *jiou* and *ranhou*, Tsai 2000 on *dui*, Wu 2003 on *ta*, Yu 2004 on *meiyou*). Most of these previous studies focus on individual Chinese discourse markers only. Since the purpose of the present study is to investigate preschoolers' acquisition of Chinese conjunctions, in what follows, we will discuss Chinese conjunctions from syntactic and semantic perspectives in section 2.1 and review previous researchers' classifications of Chinese conjunctions in section 2.2.

2.1.1 Syntactic Classification of Conjunctions

As we know, not all conjunctions can be used to connect every linguistic element. Some can connect words or phrases only, whereas others can only connect clauses. In this section, we classify conjunctions based on its syntactic properties, as follows:

Type 1: Coordinator (Coordinating conjunction)

In general, conjunctions in English are classified into two categories: coordinate conjunctions and subordinate conjunctions (Radford 1988). Coordinators in English are usually used to conjoin phrases of the same syntactic categories such as NP, VP, PP, AP, ADVP, etc. (Radford 1988). That is, coordinators can only link items which are members of the same word class or sentence constituents. That is, nouns can only be combined with nouns but not verbs, clauses can be conjoined with clauses but not with nouns as shown below.

(1) What would you like, coffee ***or*** tea?

(2) Tina doesn't like to ***study English*** and ***play tennis***.

(3) Is your mother ***in the kitchen*** or ***in the bathroom***?

(4) *I bought ***a pen*** and ***in the kitchen.***

The above examples show that coordinating conjunctions (hereafter, coordinators) such as ***and***, ***but***, ***or*** can only be used to connect words or phrases of the same

syntactic category. Similarly, the conjunctions such as *hen* and *gen* in Chinese are functionally similar to the conjunction *and* in English, which is used to connect phrases of the same syntactic category, as can be seen in (5) and (6).

(5) Wo *hen* ta dou xihuan da lanchiu.

1SG[2] and 3SG all like hit basketball

'Both he and I like to play basketball.'

(6) Wo mai le yi tai shuwei xianji *gen* yi ge dianchi.

1SG buy ASP one CL digital camera and one CL battery

'I bought a digital camera and a battery.'

In (5), the pronouns *wo* and *ta* are the subjects. Since they are both NPs, there is no doubt that they can be connected by the coordinator *hen*. In (6), *gen* is used to connect two nouns, *shuwei xianji* and *dianchi*.

Type 2: Subordinator (Subordinating conjunction)

Unlike coordinators, subordinators combine two clauses. That is, subordinators are often used to introduce subordinate clauses. The major function of subordinators is to combine a subordinate clause with a main clause. Semantically speaking, the relationship between two clauses could be conditional, hypothetical, temporal, causal, adversative, and so on. Conjunctions in English which involve causal or temporal relations such as *because*, *so*, *when*, *since*, *though*, *although* are considered as subordinators as shown below:

(6) Almost all boys couldn't help but to chase Maggie, *because* she is beautiful.

(7) *When* you finished your homework, you can watch TV.

(8) *Although* John has studied very hard, he still performed poorly in that exam.

Likewise, in Chinese, conjunctions such as *suiran, jiaru, keshi*, and so forth

[2] 1SG stands for first person singular pronoun in Chinese whereas 3SG stands for third person singular pronoun in Chinese.

which are used to connect two clauses can be seen as subordinators. Yet, whether the clauses have coordinates or subordinates is largely determined by the semantic independency of that clause. Chao (1980) presents *correlative conjunctions* when discussing about the connection between sentences. This type of conjunction can either connect coordinate or subordinate clauses. Under many circumstances, correlative conjunctions seem to have the properties that adverbs carry, as in (9) and (10):

(9) ***Yinwei*** jiantian xiayu, ***suoyi*** wo dai zai jia.
because today rain so 1SG stay at home
'Because it rains today, I stay at home.'

(10) ***Suiran*** waigoang zoulu hen man, ***keshi*** chi fang chi hen kuai.
although grandpa walk very slowly but eat rice eat very quickly
'Although Grandpa walks very slowly, he eats very fast.'

Type 3: Macro-syntactic conjunctions[3]

Although coordinators and subordinators seem to constitute the primary part of all conjunctions, we somehow feel such dichotomous classification cannot properly exhaust all conjunctions. That is why we have the third category: macro-syntactic. Macro-syntactic, as the name suggests, indicates conjunctions of this type is above the sentence-level. However, the use of macro-syntactic conjunctions does not clearly belong to any specific syntactic categories or phrases. Rather, from a global point of view, macro-syntactic conjunction views something outside of the sentences. They can connect more than two clauses or several paragraphs.

In English, phrasal expressions such as *in other words, to sum up*, and *finally* frequently occur in the beginning of a paragraph as the concluding or transition words or phrases. They are therefore classified as macro-syntactic conjunctions, because

[3] This tern is directly borrowed from Chao (1980).

they function at the discoursal level. Not surprisingly, Chinese also has such macro-syntactic conjunctions, even though researchers do not mention much about this type of conjunction. This type of conjunction is generally derived from a larger clause being shortened into a fixed form[4].

Chao (1980) states that the occurrence of macro-syntactic conjunctions are not to indicate dependence between clauses, but to imply the dependence of "something outside of the sentences" (p.791). For example, ***Zhuihou*** 'at last' and ***Congjin*** 'from now on' are two typical conjunctions being used when we summarize an article, which have more to do with the discourse functions:

(11) ***Zongeryanzhi***, ni bu gai ding-zhui. (Chao 1980)

In one word you NEG should talk back

'In one word, you shouldn't talk back.'

(12) ***Zhuihou***, wangzi hen gongzu guo zhe kuaile de shenghuo.

Finally prince and princess pass ASP happy DE life

'Finally, the prince and princess lived a happy life.'

In the examples above, ***Zongeryanzhi*** and ***Zhuihou*** are used to conclude the preceding utterances. The speaker must have talked a lot about why someone should not talk back/ the encounter of the prince and the princess and then conclude the whole paragraph with conjunctions, specifically termed here as a "macro-syntactic conjunction". Clearly, such connection is above the phrasal and sentence-level.

2.1.2 Semantic Classification of Conjunctions

Aside from the syntactic classification, another approach that should not be left unexpressed is to classify conjunctions in terms of their meaning. For cohesive

[4] This idea is borrowed from Chao, who maintains that expressions such as ***Zongeryanzhi***, ***Huanyanzhi*** and ***Zhejiushishuo*** are reduced forms of a larger sentence. They are generated by reducing the main clause and become an adverbial phrase, which changes the subordinate clause to the main clause status.

devices in English, Halliday & Hasan (1976) generally classify them into four: reference, substitution, ellipsis, and conjunction, each of which has its unique function to achieve coherence. According to Halliday & Hasan (1976), conjunctions in English, which are not strictly semantic or anaphoric but are related to the entire environment of a text (Halliday & Hasan 1976) include *and*, *but*, *or*, *so*, *because*, etc. There is a range of possible meanings within domains of elaboration, extension and enhancement is expressed by the choice of a conjunctive adjunct (an adverbial group or prepositional phrase), or of one of a small set of conjunctions *and, or, nor, but, yet, so, then,* etc[5]. Moreover, Halliday (1985) claims that the relationship of cause constitutes a cohesive bond between the two clauses. It is expressed by the words *consequently* and *for*. This type of conjunction is known as "causals". For instance, *for* in (14) presupposes that she did not know the rules:

(13) She didn't know the rules. *Consequently*, she died.

(14) She died. *For* she didn't know the rules.

Likewise in Chinese, it is never easy to have a perfect classification which can categorize all the conjunctions. However, Halliday's framework seems to serve a good model for the present study. Although some researchers like Hutchinson (2003) propose that one more "hypothetical" category should be added for words such as *if, in that case, if only*, etc., we will not add as it does not functionally behave like conjunctions. We will classify conjunctions in Chinese into additive, adversative,

[5] To have a more systematic analysis, Halliday & Hasan (1976) offer four subcategories: additive, adversative, causal and temporal. Table (i) presents some examples for each subcategory:

Table (i): Four Types of Conjunctions in English

Types of Conjunctions	Examples
Additive	*And* in all this time he met no one.
Adversative	*Yet* he was hardly aware of being tired.
Causal	*So* by night time the valley was far below him.
Temporal	*Then*, as dusk fell, he sat down to rest.

causal and temporal in the present study.

Type 1: Additive

For additive conjunctions, they typically express senses of additions, alternatives, and likeness. They are generally used to link paratactic expressions which are semantically alike. In other words, when ideas cannot be fully expressed in one clause or a sentence, additive conjunctions would be used to connect similar ideas. It is noteworthy that additive conjunctions in English could be a word only or a phrase, depending on the context in which they occur. ***And*** as in (15) functions like a bridge, linking two pieces of information. Without such additive conjunctions, two independent clauses are required:

(15) Peter doesn't like to go out ***and*** he always stays at his dorm.

Similarly in Chinese, the additive conjunction ***erqie*** links two events that the younger sister did in the afternoon. In (16), ***erqie*** is not necessarily considered as a temporal conjunction because the event is unclear. What this type of conjunction serves, basically, is to add additional information:

(16) Meimei xiawu qu guangjie, ***erqie*** hai kan dianyin.

sisiter afternoon go windowsshopping and more watch movie

'My sister went shopping and saw a movie this afternoon.'

Type 2: Adversative

Adversative conjunctions usually show something which is contrary to one's expectation. That is, they are used to show some contrasts, express antithesis or opposition (Yo 1989, Miracle 1991). In (17), it illustrates that there are two contrast events and they have to be connected by adversative conjunctions:

(17) ***Although*** John believes he is the best in the speech contest, the judges do not think so.

Similarly in Chinese, there are a number of conjunctions which can be used to

show contrast such as ***keshi, danshi, buguo*** and so on. ***Danshi*** in (18) mark a contrast in which a qualification of the prior clause is found in the following clause.

(18) Zhei shi youde, ***danshi*** jixiao bufen (Miracle 1991)

this be have-NOM but extremely-small part

'(You) have this, but it's a very small part.'

Type 3: Causal

Generally, causal conjunctions present a cause-and-effect relation and sometimes even conditional relation between clauses. Speaking of causal conjunctions, what comes to our mind first in English is perhaps ***because*** and ***so***. However, in the use of conjunctions, one significant difference between English and Chinese is that Chinese allows the co-occurrence of these two conjunctions in a sentence whereas English does not as shown in examples (19) and (20).

(19) I decided to major in English ***because*** learning English is really fun.

The "***yinwei****…****suoyi****…*" pair often indicates the two clauses have some cause-and-effect relations. In (20), we can see that ***suoyi*** is used to mark the following talk as the culmination of the preceding segment of talk. The clause followed by ***suoyi*** is like the result or the outcome of the preceding discourse.

(20) Jieguo ta shi bande hen hao ***suoyi*** bing bu (Miracle, 1991)

result 3SG be manage-PRT very good therefore also NEG

shi shuo linshi renyuan dou,… biaoshi shuo women bu neng shixian.

be speak temporary personnel all show speak 1PL NEG can implement

'The result was that he/she did very well, so that doesn't mean all temporary personnel,…, shows that we can't implement it.'

Type 4: Temporal

When there are a series of sequentially related events, temporal conjunctions are likely to be used. In addition, temporal conjunctions are especially important in

narratives, because they can link up the fragmented events in the discourse.

(21) I washed my face ***and then*** brushed my teeth ***and then*** had my breakfast.

The temporal most widely used temporal conjunction in Chinese is perhaps ***ranhou*** as shown in (22). Normally, ***ranhou*** is used to link to two sequentially related events. The former event occurs usually than the latter. However, nowadays in Taiwan, we found that ***ranhou*** is so extensively used that it can replace almost any conjunctions unless the relationship between the two clauses is clearly causal or adversative. If we carefully listen to the chatting or conversation between two or more people, such phenomenon is quite true. That is, ***ranhou*** is more like an unmarked conjunction in Chinese. Sometimes, what is linked by ***ranhou*** may not necessarily entail a temporal relationship.

(22) Mama saowan di hou ***ranhou*** you qu xi wan.
mother sweep-finish floor after then again go wash dishes
'After Mom sweeps the floor, she washes the dishes.'

To sum up, we have classified conjunctions in English and Chinese in terms of their syntactic scope as in section 2.1.1 and semantic meanings as in section 2.1.2. Table 2-1 presents the classification with an example for each type in Chinese:

Table 2-1: A Summary of Classification of Conjunctions in Chinese

Classification	Type	Example
Syntactic	Coordinator	Laoshi ***hen*** xuesheng dou hen renjen. Teacher and student both very hardworking 'Both the teacher and the student are hardworking.'
	Subordinator	***Suiran*** waigoang zoulu hen man, although grandpa walk very slowly ***keshi*** chi fang chi hen kuai. but eat rice eat very quickly 'Although Grandpa walks very slowly, he eats very fast.' (same as (10))

	Macro-syntactic conjunction	Ta zhong le lotto. 3SG win PRT lottery. ***Zongeryanzhi***, ta xian-zai hen youqian. In other words 3SG now very rich 'He won the lottery. To sum up, he is very rich now.'
Semantic	Additive	Zhe dong lou hen da This CL building very big ***binqie*** hen youming. and very famous 'This building is very huge, and it is very famous as well.' (Li & Thompson 1981)
	Adversative	Ta hen ben ***buguo*** kao shang da xue le. 3SG very stupid but test up college PRT 'Although he is very stupid, he is admitted to college through entrance examination.' (Li & Thompson, 1981)
	Causal	***Yinwei*** tian hei le because sky black PRT ***suoyi*** wo mei chuqu. so 1SG NEG go out 'Because it's getting dark, I didn't go out.' (Li & Thompson 1981)
	Temporal	Mama saowan di, mother sweep-finish floor ***ranhou*** you qu shi wan. (same as (22)) then again go wash dishes 'After sweeping the floor, then Mom washes the dishes.'

2.2 Previous Studies on Conjunctions in Chinese

In this section, we will briefly four studies of Chinese conjunctions by Chao (1980), Yo (1980), Li and Thompson (1981), and Chen (1990).

2.2.1 Chao (1980)

According to Chao (1980), Chinese connective devices can be classified into

four: (1) prepositional conjunctions, (2) correlative conjunctions, (3) reduced main clauses, and (4) macro-syntactic conjunctions[6].

First, prepositional conjunctions in Mandarin are functionally similar to the conjunction ***and*** in English, which is used to connect phrases of the same syntactic category. Chao (1980) considers "conjunctions such as ***hen***, ***gen***, and ***tong*** are used to join noun phrases within sentences" (p. 392). Sentence (23) shows that Zhangsan and Lisi are both nouns and connected by ***hen***.

(23) Zhangsan ***han*** Lisi dou zou le.

Zhangsan and Lisi DOU walk ASP

'Both Zhangsan and Lisi left.'

Second, Chao presents correlative conjunctions when discussing about the connection between sentences. This type of conjunction can either connect coordinate or subordinate clauses. Under many circumstances, correlative conjunctions seem to share the properties of adverbs. Moreover, Chao further classifies correlative conjunctions into two. One is repetition of the coordinate as in (1) identical coordinate: repetition of the same word as in "***yue***…***yue***…", "***yo***…***yo***…", "***yeibu***… ***yeibu***…", and the other is two different coordinates are used as in (2) non-identical coordinate: "***suiran***…***keshi***…", "***zhiyao***…***jioshi***…".

(24) Ni ***ye*** ***bu*** ranbu wo ***ye*** ***bu*** ranbu. (Chao 1980)

2SG also NEG give in 1SG also NEG give in

'Neither you nor I will compromise.'

[6] Tsao (1990) has argued that clause connectives in Chinese have always been classified according to their surface position so far. He has a different view of connectives and classifies clause connectives in Chinese into three: (1) Pure conjunctions such as ***danshi***, ***buguo*** and ***suoyi*** as they invariably occur at the initial position of the second clause. (2) Adverbials such as ***ye***, ***hai***, and ***cai*** because they occur in the position usually occupied by other kinds of adverbs and they never occur at the beginning of the clause unless the topic(s) is/are deleted. (3) Adverbial connectives such as ***suiran***, ***yinwei***, ***ruguo***, and ***zongshi*** because they can occur in the position usually occupied by a pure conjunction, i.e. clause-initially, or in the position normally occupied by an adverb.

(25) *Jiran* dajia dou mei yubei hao na shiching jiu xiaci zai tan ba. (Chao 1980)

since everyone all NEG ready ok then things then next time at speak PRT

'Since everyone is not ready, we will walk about that next time.'

"*yei bu…yei bu*" in (24) shows the meaning dependence of the clause; however, each clause is syntactically independent. Two independent clauses, therefore, form a compound sentence. In (25), clearly the first clause led by *jiran* is a conditional clause, and it relies heavily on the following main clause to have the complete semantic meaning. Therefore, "*jiran…jiu…*" is used as a subordinate conjunction here.

Third, Chao introduces the idea that "the reduced main clauses" can form another group of conjunctions in Chinese. This type of conjunction is derived from clauses. Some examples are *zongeryanzhi*, *huanyanzhi*, and so on. Chao maintains that such expressions are reduced forms of larger sentences. However, they cannot appear alone, because their meaning is heavily associated with the following clauses. They are generated by reducing the main clause and become an adverbial phrase. Then they function to raise the subordinate clause to the main clause status.

Fourthly, words such as *zuihou* and *zongzhi* can be used to summarize the whole paragraph, and they are generally considered as macro-syntactic conjunctions.

Chao's prepositional conjunctions behave like coordinators while correlative conjunctions behave like subordinators in the present study. Such classification is good. However, it is not necessary to further classify correlative conjunctions, since they are both used to connect clauses. Moreover, macro-syntactic conjunctions do not necessarily belong to any specific syntactic categories or phrases, as Chao points out that "the occurrence of a conjunction is not to indicate dependence between clauses, but to imply the dependence of 'something outside of the sentences'" (p. 791).

2.2.2 Yo (1980)

Yo's research focus is primarily on the discourse functions of Chinese connectives in the written narratives. According to Yo (1980), there are more than 50 connectives in Chinese. Each of these connectives has its own function in connecting linguistic expression of various structures and with different semantic relations. Yo thinks that simply analyzing the connectives from the perspectives of syntax is not enough because it cannot fully reflect how connectives are used in a given narrative. Therefore, she classifies Chinese connectives into four based on their semantic function: additives, causals, adversatives, and temporals, mainly following Halliday and Hasan's (1976) framework of cohesive devices. Under each major category, she also offers some subcategories as shown in Table 2-2:

Table 2-2: Semantic Classifications of Connectives in Chinese (Yo 1980)

Category	subcategory	Examples
Additive	In addition	*kuanqie, bianqie, erqie, yue…yue, ye…ye, yo…yo, yibian…yibian, shangqie…hekuang, budan…erqie, zai…ye, yebu…yebu, bu…bu, jibu…yobu*
	Alternative	*huozhe, huoshi, haishi, bushi… caishi*
	Explanation	*biru, bifang, huangyanzhi, yejioshishuo*
Adversative	Concession	*buruan…haishi, suiran…keshi, jinguang…haishi*
	Contrast	*ningke…yebu, yuchi…buru, keshi, danshi, buguo, raner*
	Opposition	*shisheshang, xiangfande*
Causal	Cause-and-effect	*yinwei, suoyi, weideshi, yinwei…suoyi*
	Conditional	*jishi…ye, fozhe, buran, zaibujiu, jiu, jiran…jiu, zhiyao…jiu, …dehua*
Temporal	Sequential	*holai, hueto, yihou, le…jiu*
	Previous	*yiqien*
	Simultaneous	*…deshihou, tongshi, danshi*
	Conclusive	*zongeryanzhi, zongyu, zhuihou*

Additives, typically express senses of additionalness, alternatives, and likeness. They are often used to link expressions which are semantically alike. For adversatives,

Yo states that the basic meaning of adversative connectives is "contrary to expectation", which can be further extended as concepts of contrast, concession and opposition. For causals, the most commonly observed pair is *yinwei...suoyi*. *Yinwei* is used to introduce the description of a causal event while the results are included in the clause led by *suoyi*. Interestingly, Yo includes phrases such as *jishi…ye, fozhe, buran, zaibujiu* as "conditional/hypothetical" under the big category "causals". However, in the present study, these phrases are considered adverbial linking elements, not conjunctions. Therefore, conditional phrases are excluded in the present study. Yo found that temporals play an important role in linking up the component fragments of the discourse. This is especially true in a narrative because there are some events in the narratives which are either temporally or spatially related. That is why temporal conjunctions are virtually indispensable in narratives.

Generally speaking, Yo's semantic classification in Chinese is similar to that of Halliday & Hasan (1976)'s classification in English and will be adopted in the present study. Yo classifies Chinese conjunctions based upon their meaning into four types and explains the discourse hierarchy from micro and macro structures. Within this hierarchical relationship, temporal conjunctions are at the highest status, adversatives and causals are in the middle, and additives are at the lowest. However, Yo's analysis primarily focuses on the written data, which inevitably are limited by different writing styles and genres.

2.2.3 Li and Thompson (1981)

Unlike Chao (1980), who classifies connectives mainly on the syntactic structure or the semantic relations between the connected units, Li and Thompson (1981) offer a different classification about how the connected elements are related to each other in terms of the directions. Li and Thompson point out there are essentially two kinds of

linking: forward linking and backward linking. They further discuss the differences between the two. For *forward linking*, at least two clauses must be considered, because the first clause is always dependent on the second clause for its meaning to be complete. *Backward linking*, on the other hand, is that the clause the speaker says is dependent on the previous clause for its meaning to be complete. In the case of *forward linking*, the first clause highly relies on the second clause to fully manifest the sentence meaning. As for *backward linking*, it is the first clause that determines the semantic meaning of the entire sentence. "Unlike a forward linking, however, a speaker intends a relationship between a pair of clauses uttered by himself/herself, with certain linking elements, backward linking clauses can be linked either to the speaker's own previous clause or to a clause that someone else had just said" (Li and Thompson 1981, p.651). Table 2-3 presents Li and Thompson's classification of the two major types of linking.

Table 2-3: Two Types of Linking (Li and Thompson 1981)

Linking	Types	Examples
Forward	A. Forward-linking elements in clause-final position	…*dehua, …deshihou, …yiqien,…yihou*
	B. Adverbial forward-linking 1. Movable forward-linking elements 2. Non-movable forward-linking elements	*budan/feidan, ruguo/jiaru/jiashi/yaoshi, chufei, jishi/jiushi, yaobushi,suiran, yinwei/yoyu, urun/burun, jiran/zhiyao*
	C. Perfective aspect	…*le*
	D. Without a linking element	Zero marking
Backward	A. Adverbial backward-linking elements in clause-initial position	*binqie/erqie, keshi/danshi/raner, haishi, huoshi/huozhe/huozheshi, weideshi, zhende, suoyi, yinwei*

	B. Non-movable adverbs as backward-linking elements	*cai, dao*

For forward-linking, the first type is the linking element in clause-final position, as *de hua* in (26).

(26) Ni you qian *de hua*, jiu bu hui xiang wo jie qian le.
you exist money if then not likely toward I borrow money CRS[7]
'If you had money, you wouldn't have to borrow money from me.'

The second type is adverbial forward-linking, which is further divided into movable and non-movable elements. They must occur in clause-initial position. Adverbial backward linking, according to Li and Thompson, can link a clause either to the speaker's own previous clause or to a clause someone else has just said. Most important of all, Li and Thompson point out that "the majority of these forward-linking movable adverbs require the occurrence of a backward-linking element in the clause that follows" (p.637). The most common pairings of such linking elements are *yinwei…suoyi, ruguo…jiu, suiran…keshi*, etc. (27) shows that *yinwei* and *suoyi* co-occur within a sentence.

(27) *Yinwei* tian hei le, *suoyi* wo mei chu qu.
because sky black CRS so 1SG NEG exit go
'Because it had gotten dark, I didn't go out.'

We will ignore the third type perfective aspect *le* here, since *le* in Chinese is generally considered as sentence-final particle and behaves less like "conjunction" we have defined in the present study. For the fourth type "zero markings", Li and Thompson claim that "forward linking need not be overtly marked at all, but can occur simply by virtue of the speaker's intention that C1 and C2 be related" (p.641). This observation is quite reasonable in that the presence and absence can both make a coherent text as

[7] CRS stands for Currently Relevant State. The final particle representing this is *le.*

in example (28).

(28) Renlei huo zai shishang bu neng bu laodong.

humans alive at world NEG can NEG labor

'(*Since/As long as*) human beings live in this world, they will have to do hard work.'

Li and Thompson argue that although *Since/As long as* are not overtly marked in this sentence, which is the so-called "zero-marking"[8], the hearer can still infer from his/her knowledge of the situation and of what has been said to the point.

Overall, Li and Thompson focus on the combination of two or more clauses. To put it differently, coordinators at the phrasal level are not discussed in their classification. However, there is an evident disadvantage in such classification. For instance, *yinwei* and *suoyi* are both categorized as forward and backward-linking elements. We need to trace back to the original text to find out which type it belongs to.

2.2.4 Chen (1990)[9]

After discussing and offering some critiques of the cohesion framework in Halliday and Hasan (1976) and Beaugrande and Dressler (1981), Chen (1990) proposes her own classification for Mandarin conjunctions. She adopts the category

[8] Zero marking means although there is no overt conjunction used, the hearer can still understand what the speaker tries to convey.

[9] Chen (1990) compared the spoken and written forms of Chinese. Chen's subjects included college students, graduate school students and high school teachers. She asked the subjects to view a five-minute opera with the sound turned off first. Later, they were required to describe what they have just seen in two forms: oral and written. The result showed that the age, gender, and educational background of the subjects did not have any significant influence on their use of cohesive devices. However, there was a sharp difference between written and oral forms of the discourse. The major differences between oral and written description are as follows: unplanned/planned, fragmented/integrated, colloquial/literate, and involved/detached.

"junction" from Beaugrande and Dressler (1981) for there are no tense markers and few aspect markers in Chinese. According to Chen, in the discourse structure of Mandarin, there are three main types of cohesion: (1) junction, (2) anaphora, and (3) sentence-final particles. She further subcategorizes the first type- junction into five: conjunction, disjunction, contrajunction, subordination and adjunction. It is clear that the former four subcategories are classified based on their syntactic and semantic properties. Chen discovers that anaphora is the most commonly used form to achieve discourse coherence. The main discourse function of the sentence-final particles such as *le, ne, a/ya, ba, la* is to indicate how the utterances are to be taken by the hearer. In addition, Chen found that the use of junction was mainly used to indicate the semantic relationship in situations, states, events, etc., as follows:

Table 2-4: Chen's Classification of Cohesive Devices in Chinese (Chen 1990)

Types	Definition
conjunction	a set of forms which are syntactically conjunctive and semantically additive, used both intrasentenially and intersententially.
disjunction	a set of forms which are syntactically conjunctive but semantically contrastive. Such forms represent a choice between two or more alternatives.
contrajunction	a set of forms which are syntactically coordinate, but semantically contrastive. They make the text cohere at the syntactic level by conjoining two constructions which are in contrast at the semantic level.
subordination	a set of forms which syntactically join a subordinate clause to a main clause or join an adverbial to a sentence. These subordinate forms can be subdivided semantically into subsets: (i) temporal, (ii) causal, (iii) conditional, and (iv) conclusive.
adjunction	a set of forms which syntactically mark unit boundaries and connect two units and semantically have no substantive meaning. These adjunctive forms include a few forms derived from junctives and some pause fillers.

Overall, Chen's syntactic and semantic-oriented classification is vague in that it fails to provide a clear-cut distinction among all conjunctions. Syntactically speaking, Chen's conjunction, disjunction and contrajunction are conjunctive. What differ from one another are their semantic functions; that is, conjunction being additive, disjunction being contrastive, and contrajunction being contrastive again. Chen's study shows that the variables such gender, age, educational background, foreign language competency of the subjects did not really influence how the subjects used the cohesive devices. Rather, it has a lot to do with the form- written and oral.

2.3 Previous Empirical Studies on the Acquisition of Conjunctions

After reviewing the linguistic properties of conjunctions, it is equally important to examine the empirical studies on the acquisition of discourse markers in younger children. In this section, five empirical studies are reviewed, each of which has different approaches to examine conjunctions in L1 acquisition.

2.3.1 Erbaugh (1982)

Erbaugh did a longitudinal study on Mandarin-speaking children in Taiwan, focusing on their development of the basic sentences as well as their discourse competence. She pointed out that children's discourse development generally follow the patterns from local, word, and utterance-oriented order use, to the flexible and generalized cross-sentential discourse use. Based on her observation from the subjects, she proposed four stages for word-order acquisition as shown in Table 2-5:

Table 2-5: Stages of Order Development in Child Mandarin (taken from Erbaugh 1982)

	Age	Basic sentence type	Discourse structure
Stage 1: Proto-order	2;0 and under	Just over 2 words, few 3 words. Mostly agent-action, action-patient, patient-state.	Heavily adult structured limited hearer, topic sensitivity.
Stage 2: Immutable-order	2;0~2;9	Over 3 words. Begin aspect distinctions, between perfectives and durative. Some existential constructions.	Much adult structuring. More connected speech.
Stage 3: Sentence-internal reordering	2;10~3;6	Little constraint on sentence length. Many orderable sentences. Start marking time, manner, direction, instrumentality; fuller aspect. Sentence-final particles begin.	Little adult structuring. Spontaneous narratives.
Stage 4: Discourse-sensitive reordering	Over 3;6	Co-ordination of non-continuous elements. Time, aspect, causality, counterfactual, habituals, durations marked but unreliable.	Fluent speech; long, increasingly cohesive narratives; increasing hearer and register sensitivity.

According to Erbaugh's observation, Mandarin-speaking children aged 2 and under were just able to use two words in an utterance, with a few three-word utterances appearing as well. In addition, the children produced little extended, spontaneous speech and had only limited linguistic sensitivity to topic introduction and maintenance. By the time when children were about two years and a half years old to three years old (stage 2), the sentences they produced are frequently longer than

just three words. Aspectual contrasts between perfective and progressive started to be marked and some existential sentences appeared. At stage 3, children began to mark location, time, manner, movement and instrumentality regularly. Moreover, the children started to produce spontaneous extended narratives and could make some meta-linguistic comments. At stage 4 (with the range extending from around age 3;6 through late childhood), children are generally able to produce fluent sequences of related sentences. They could also use sentence-internal markers of discourse-topics whose scope extends across several sentences. The children's narratives became increasingly coherent, and they showed greatly increasing hearer and register sensitivity.

Generally speaking, for Chinese children who are learning Mandarin, they can soon discover and master the dominant SVO order of the language and then remain with it for several months until more complex modifiers and embellishments are acquired. In addition to the acquisition of word order in Mandarin Chinese, purely grammatical morphemes such as those indicating number, tense, person, plurality, and definiteness did not increase difficulty for the children, what is really complicated is referential expression. As for markers which link the utterances together, Erbaugh found that "continuous markers are more easily mastered than discontinuous ones in both modeled and spontaneous speech. (p. 338)" Markers which are continuous within a single compound are much more easily learned than those which must be coordinated across word and sentence boundaries. Compared with markers which are at phrasal level and sentence level, Erbaugh claimed that cross-utterance and cross-speaker order relations are hardest to maintain, with discourse-oriented topicalization the most difficult of all.

Overall, based on the results proposed by Erbaugh, we can see that Chinese-speaking children in Taiwan before the age of two, their utterances are

mostly at two-word stage. When they reach three years old, the sentence length is much longer than before and they start to mark time, manner, direction, instrumentality with appropriate linguistic devices and gradually begin to use some sentence-final particles. However, children did not extensively start to use cohesive devices until they are over three years old. With Erbaugh's empirical study, it would be interesting to examine Chinese-speaking preschoolers development in the acquisition of cohesive devices.

2.3.2 French and Nelson (1985)

French and Nelson (1985) conducted an empirical study of children's acquisition of relational terms such as *before, after, because, so, if, but,* and *or*. These words are generally known in English as the linguistic expressions of logical relationships. Forty-three children (Male=27; Female=16) from middle-class homes, ranging in age from 2;11 to 5;6 participated in the study. There were six events, namely fire drills, a birthday party, getting dressed, making cookies, grocery shopping and going to a restaurant and all subjects were asked to select one of the six events. After that, the researcher asked each subject some neutral questions such as "What happened?" to describe what is going on in each event. In total, all subjects were provided with 687 separate event descriptions.

French and Nelson roughly categorized conjunctive elements into three: temporal, causal, and continuative. Productions of *first, after, before* and *when* were categorized as the temporal elements. French and Nelson found temporal terms were virtually never used inappropriately, which implies that establishing an inaccurate temporal relationship is rarely observed (1985). On the other hand, the subjects' productions of *before* and *after* suggested that they understand the meanings of these terms and use them properly. This contradicts to the previous findings (Clark 1971,

Coker & Legum 1975, and Goodz 1982) in that these comprehension studies showed that these children temporal elements were not well understood by preschoolers. French and Nelson argue that very young preschoolers can spontaneously organize their descriptions familiar events in terms of temporal structure and are also able to move backwards as well as forwards in these temporally organized descriptions.

The term *first* occurred 71 times in the subjects' event descriptions produced by 22 children. In general, the miscellaneous use of *first* was appropriately found. Also, children's productions of *first* indicated that they understood that *first* was used only at the beginning of a sequence and its ordinary function was to introduce a series rather than a single event. The word *after*[10] appeared 33 times in total with three occurrences being judged as false starts. The remaining 30 occurrences were produced by 17 children ranging in age from 3;1 to 5;6. The connective *before* appeared less frequently with a total of 14 occurrences. One occurrence was a false start while the remaining 13 occurrences were produced by 6 children ranging from 3;9 to 4;10. The connective *when* has a variety of functions and/or meanings in ordinary speech such as to introduce a general scene-setting clause, to be used interchangeably with *if* to introduce a conditional statement with both temporal and causal components. *When* was produced 149 times by 30 children ranging from 3;1 to 5;6.

In French and Nelson's findings, the subjects' production of statements containing *because* and *so* was virtually always appropriately formed. In addition, it was found that there could be some minor adjustments on the positions of *because*

[10] Generally, there are four types of *before* and *after* sentences (as schematized below). All these sentences express the same idea, that is, X is followed by Y:

(i) Before Y, X

(ii) X before Y

(iii) After X, Y

(iv) Y after X

and *so*; that is, *because* could be replaced by *so* and vice versa.

The term *because* appeared 23 times by 16 children ranging from 3;10 to 5;6, three of which were false starts. *So* appeared a total of 39 times, produced by 17 children ranging from 3;9 to 5;6. Among the 39 instances of *so*, four of which occurred as false starts, seven of which are used as intensifier as in "it's so cold!", one of which was used *as also*, and six of which was used as an introductory conjunction of sorts as in "so know what?" Therefore, 21 utterances remained, produced by 11 children ranging from 3;9 to 5;6. Of the 15 appropriately formed *because* statements, 6 were judged to express a logical expression, 4 a causal relation, and 5 a motivational relation. Similarly, for *so* statements, 7 were judged to express a logical relation, 2 a causal relation, 11 a motivational relation, and the other one *so* statement were not classified.

The most commonly used connective by children was *and*. *And* was used to encode a wide range of relationships, including coordinate, temporal, causal, antithetical, and reiterative relationships. Another continuative element frequently found was *but*. The connective *but*[11] appeared 82 times, produced by 25 children ranging in age from 2;11 to 5;6. Of the 82 *but* statements produced by the subjects, 17 were uninterruptible or anomalous, and some of which were found to be synonymous with *and*. In addition, it was suggested that all occurrences of *but* be considered as the conjunctive elements linking the following clauses. The findings showed that the subjects used *but* appropriately by the age around 3 to 4.

Overall, the production of the relational terms in French and Nelson's study appeared quite "context-sensitive." In other words, in the course of describing

[11] French and Nelson (1985) further classified the major functions of *but* into 5: (1) contrasted with shared knowledge about the usual state of affairs, (2) described a condition under which the situation described in the preceding clause did not hold, (3) denied an inference that might be drawn on the basis of preceding statement, (4) explicitly contradicted a prior statement and (5) introduce a temporal repair.

familiar events, preschoolers tended to use more appropriately and organize their descriptions in accord with the temporal structure of events. It was also found that their temporal knowledge was generally flexible in that they could move backwards as well as forwards in their descriptions. French and Nelson found that there were indeed more occurrences of the relational terms by the older children than by the younger ones. The older children produced longer narratives with complex relationships than the younger ones.

2.3.3 Peterson and McCabe (1987)

Peterson and McCabe (1987) attempted to address the following research question: Do children use the connective *and* less as they learn other connectives? The previous research has long described the connective *and* as a useful all-purpose connective. Because *and* can be used to achieve multiple discourse coherence needs, children are supposed to use it very frequently before they acquire other connectives. Therefore, it has long been assumed that as children get older, *and* should be used less since there are some more specific connectives readily available.

Ninety-six children aged 3;6 to 9;6 participated in this study. They were then divided into 6 groups (4-year-old, 5-year-old, 6-year-old, 7-year-old, 8-year-old, and 9-yaer-old). The procedure of this experiment was as follows: Each child was engaged in conversation with an experimenter and he was encouraged to talk about his personal experience. In the younger age groups (4, 5 and 6-year-old), about 1,000 to 1,500 sentences were produced. Around 2,150 sentences were produced by 7 and 8-year-old groups. 9-year-old group produced 3,025 sentences in total. Since the focus of this study was the connective *and*, Peterson and McCabe calculated the frequency of different functions between two sentences connected by *and*. The percentage of these '*and*'s fell into 6 categories: coordinate, temporal, causal, antithesis, enabling,

and restatement as shown in Table 2-6:

Table 2-6: The Percentile Distribution of Six Categories *And*

Function / Age	Coordinate	Temporal	Causal	Antithesis	Enabling	Restatement
4	13%	32%	18%	10%	19%	4%
5	17%	27%	21%	9%	21%	3%
6	19%	32%	19%	8%	19%	2%
7	20%	32%	17%	10%	20%	2%
8	18%	34%	19%	8%	18%	2%
9	20%	33%	19%	9%	16%	2%

Indeed, the number of instances of ***and*** increased significantly as the children got older. From Table 2-5, Peterson and McCabe maintained that the relative frequencies of the meaning categories did not change with age. In other words, children in all age groups used ***and*** in the same way. Most often, ***and*** was used for a temporal relationship connecting two sentences. Coordinate and causal functions were also quite commonly found while only about 10% of the relationships involved antithesis, and restatement was comparatively rare.

To summarize, the hypothesis that ***and*** will eventually be increasingly reserved for simple coordination and other connectives will quickly replace ***and*** was not confirmed in this study. There did not seem to be a significant age difference. Children did not use ***and*** less by increasingly restricting its meaning to simple coordination as they acquired other connectives. Contrary to our expectation, ***and*** was used no more differently by 9-year-olds than by 4-year-olds, and simple coordination constituted no more than 20% of the relationship. Peterson and McCabe concluded that the role of ***and*** may be merely to indicate cohesion between sentences, without any regard to semantic relationship.

2.3.4 Peterson and Dodsworth (1991)

Peterson and Dodsworth's (1991) study focused on two factors in the developmental order of acquisition: (1) cohesion between sentences and (2) the identification of narrative referents. To construct comprehensible narratives, it is necessary for storytellers to tie a series of related sentences together by manipulating a set of linguistic cohesive devices. Peterson and Dodsworth adopted Halliday and Hasan's (1976) model[12] to identifying cohesive ties. Previous studies on the acquisition of cohesive ties, particularly on conjunctions and pronominal references, have shown that school-aged children can both comprehend and use cohesive ties in their narratives and their use becomes more sophisticated between 5 and 10 years of age. Yet, it is unclear exactly at what age that preschoolers can have a good command of these devices. Some researches showed that pronominal references as well as conjunctions could be used by 4- and 5-year-olds (Pellegrini 1952; McTear, 1984, and Gopnik 1986); others showed that 3-year-olds (Dore 1985) could use conjunctions and pronominal references well; still another showed that children as early as 2 year old (Bennett-Kastor 1983) could use these two cohesive ties quite well. Despite the results of the exact age in using these cohesive devices vary from one another, most researchers agree that the use of these cohesive ties become more sophisticated when ages increase.

To systematically address developmental acquisition of cohesive ties, Peterson and Dodsworth (1991) sampled children's narrative skills at regular longitudinal[13] intervals. Five boys and five girls participated in the study. Two were 2;1 at the beginning, five were 2;2, and three were 2;3. The subjects were all recruited as close to their second birthday as possible. To get a clearer picture of the development of

[12] There are nine cohesive ties in total: three types of reference (pronominal, demonstrative, and comparative reference), three types of ellipsis (nominal, verbal, and clausal ellipsis), and substitution, conjunctions and lexical cohesion.

[13] A longitudinal study is to observe the (linguistic) development of one or more subjects on a regular basis.

narrative skills, all the subjects were tested at one month intervals over a period of 18 months. In addition, MLU[14] was calculated using data from the entire transcript, not just narration, since narratives were few and short at early ages to allow reasonable MLU estimated. In order to make each subject feel at ease when their utterances were recorded during the experiment, the subjects were first visited them individually at their home until they were familiar or felt comfortable with the researchers. During the visits, the researchers gave the children verbal prompts intended to elicit narratives about their past experience such as "Have you ever been to the doctor?" Other prompts were the products of the immediate conversation. Each session was about one hour in length and was tape-recorded.

For cohesive devices between sentences, not surprisingly, the stories generated by the children increased in number as well as length over the period of study. Among the nine cohesive ties as defined by Halliday and Hasan (1976), six were present in the earliest transcripts, including reference pronouns, reference demonstratives, verbal ellipsis, clausal ellipsis, conjunctions and lexical cohesion. All of these, according to Peterson and Dodsworth, apparently develop prior to two years of age. The other two ties, comparative reference and nominal ellipsis, did not appear in the sample until the children's MLU passed 2.5. Substitution was not evident until an MLU of above 3.0.

To see how the use of the nine specific cohesive ties described by Halliday and Hasan changed with age, the average number of each tie per utterance was calculated. One-way ANOVA was then computed for three age levels. It was found that there was a significant increase in the use of reference pronouns, $F(2,27)= 8.05$, $p<0.01$ with age and of conjunctions, $F(2,27)= 5.09$, $p<0.05$. Also, there was a significant decrease in verbal ellipsis, $F(2,27)= 3.95$, $p<0.05$, and clausal ellipsis, $F(2,27)= 6.20$, $p<0.01$. As

[14] According to Peterson, MLU loses value as an indicator of language development after a level of 4.0. Therefore, throughout this study, only categories under 4.0 are presented.

for the other remaining five cohesive ties, there were no significant changes with age.

On the other hand, children's reference system is another concern of the study. Nouns and pronouns used by the children are the two foci of the reference system of analysis. It appeared that the majority of them were anaphoric. To further analyze what these NPs were referring to, two approaches were adopted. First, each time a new NP was introduced into the narrative, it was later classified how well this was managed. If new people and objects were introduced properly, it would be classified as *related new introduction*. If they were not, then it would be classified either as *unrelated new introduction* or *ambiguous*. The results showed that at three age levels, when children were introducing something new, around 20% of the time that they are unclear to the listener. Such trend did not change with age or MLU. Second, to test whether all errors would change significantly with age, one-way ANOVA was calculated. The results showed that the age effect was significant, $F(2,27)= 8.53$, $p<0.01$ and it indicated a decrease in the total numbers of errors found with increasing age. In other words, there is a gradual decrease in the number of errors over time.

Overall, in Peterson and Dodsworth's (1991) study, children as young as three-year-old could and did use all nine of the cohesive ties. Moreover, children who turned to two-year-old could use at least two-thirds of them (i.e., at least six types of cohesive ties). Another worth noting issue is that how frequently these cohesive ties were used in narration, and it showed on average, approximately two cohesive ties were used to link successive utterances. In addition, the use of pronominal reference and conjunctions were quite common. As the children got older, referential cohesion were used more and more frequently. Conjunctions, on the other hand, did not show the age-related increase of referential cohesion. The other types of cohesive ties remained relatively rare. Finally, a major difference between the adult sample and the children's sample was that adults rarely used elliptical cohesion (2% of their links)

while it was common in the children's production (13% of their links).

2.3.5 Vion and Colas (2004)

Vion and Colas (2004) examined the occurrences of *and* in French (*et*) within children's discourse as they began to describe the last event in the comic strip.

One hundred and ninety-one native French-speaking boys and girls aged 7;0 to 11;0 participated in the study. They were further divided into three age groups. In total, there were 63 seven-year-olds (median age: 6;6), 64 nine-year-olds (median age: 8;8), and 64 eleven-year-olds (median age: 10;6). Two types of event sequences of comic strips serve as the material. The first type of event sequence was called "arbitrary conditions" in which events, though presented as a sequence, could have occurred in any order. For instance, the picture of the woman changing clothes might either occur before or after the picture of the woman watching TV. In other words, the eight pictures depicted in the first type of sequence were relatively independent of each other. The second type of event sequence was called "ordered conditions"[15], in which every picture was in a chronological order. Overall, the testing was individual and lasted approximately 20 minutes. The data were audio-recorded and were transcribed later. All connectives such as *and* (*et*), *then* (*puis*), *so* (*alors*), *after that* (*après*), *but* (*mais*) were tallied. If a connective was combined with another connective such as *and then* or *and then after that*, with a deictic or with a temporal marker, the element would be treated as a unit.

Eight narrations per speaker were recorded, making a total of 1,528 occurrences in which narrators had the opportunity to use a connective. 74% of the time (1,132

[15] Take the eight pictures of going fishing for instance. The preparation of fishing equipments was necessarily occurring before the result of catching a real fish eventually. Indeed, the interaction among the following variables was really interesting. They were age (7;0, 9;0, 11;0), display (simultaneous, consecutive), sequence type (arbitrary, ordered) and topic (maintained, changed).

occurrences) were found that at least one connective was used. Among such data, 58.8% of the time (899 occurrences), which was more than half of the time, the children started the narration with *and* (*and* or *and* + co-occurring with another connective, a deictic, or a temporal marker). Among all the other connectives such as *then, but, after that, so* following *and, after that* (*après*) was the most frequent (40.7% of the 233 other connectives). It seemed that when oral narration based on pictures was requested, the use of *and* to begin the last event of a story, though not always present, was a relatively frequent phenomenon.

23.6% of the occurrences with *and* was used to connect the rest of the production to the preceding part with no change in the connection mode. There were about 35.2% of the cases in which *and* created a syntagmatic contrast with the earlier connection mode (marked either by *zero* o by various other connectives such as *after that, then* and so on). In the remaining 15.2% of the description that began with a connective, the connective was sometimes used to create a syntagmatic contrast. In addition, when the comic strip was presented at once as opposed to presented one by one, there was more frequent use of *and* (44.3% vs. 25.1%) to create a syntagmatic contrast with the earlier connection mode. Similarly, the use of *and* was more in the comic strip being offered in an ordered sequence than in arbitrary sequence (39.5% vs. 30.7%).

Vion and Colas narrowed down their analysis into two types: (1) *and* employed alone and (2) *and* in co-occurrence with other connectives. Generally, children used *and-alone* to change the textual standard more often when the character in the last pictures was not the one in the preceding frames and it was largely due to a topic effect. However, in the first type of analysis (*and-alone*), it was found that only the oldest children (eleven-year-olds) had a significantly greater tendency than seven-year-olds to start narrating the last picture by using *and-alone* to change the previously established connection mode. Such increase in the occurrences of

and-alone was mainly due to the eleven-year-olds and this finding confirmed that children gradually increased their ability to organize the event structure. In the comparison between simultaneous and consecutive display, *and-alone* often occurred when the topic changed. Again, the eleven-year-olds employed this form the most.

In the second type of analysis (*and* in co-occurrence with other connectives), *and+other connectives* were more frequently used in simultaneous display than in consecutive display and when the topic was maintained than when it was changed. Vion and Colas thus proposed that *and-alone* and *and+other connectives* should fulfill complementary functions with regard to the marking of thematic continuity. Usually, *and-alone* was used to mark a topic change and transition to the end of the story. *And+other connectives* appeared to mark topic continuity while indicating the transition at the end of the story.

To sum up, more than half the time, the children started the narration of the last event using *and*, and the majority of such occurrences changed the previously established text pattern. Also, about a third of the time, the children would create a sequential difference between *and* and *zero* (or some other connectives). This finding echoed with Schiffrin's (1986, 1987) model that the use of *and* was to mark transitions in an idea structure. Second, temporally dependent (i.e., chronologically well-ordered sequences) gave rise to more connection mode changes starting with *and*. Third, Vion and Colas found that "the connective *and* seems to evolve during linguistic development from its very early function of forming a discourse by grouping a series of propositions into a linear sequence, to its function in creating a hierarchically organized structure" (p.417). *And* gradually acquires greater specialization with increasing age.

2.4 Summary of Chapter Two

In this chapter, we have reviewed some previous classifications of discourse markers (DMs), specifically focusing on conjunctions in Chinese. Syntactically, Chinese conjunctions are classified into three: phrasal-level, syntactic-level, and macro-syntactic-level conjunction. Semantically, there are four primary types of conjunctions: additive, adversative, temporal, and causal. Previous studies on the acquisition of cohesive devices have been reviewed in section 2.3., and it has been found that *and* in English seems to function as a useful all-purpose connective. It is probably because *and* can always link clauses to some cohesive extent, regardless of the semantic relations among the linked elements. Although the data examined in the empirical studies are English and French, we can still see that there is a universal phenomenon that preschoolers first produce only a few conjunctions, which cover a wide range of meanings. At a later stage, specific use of conjunctions becomes gradually clearer. As preschoolers get older, they somehow know that in what linguistic contexts that certain conjunctions can be used.