

## Chapter Four

# Subordinators in Adverbial Clauses

### 4.1 Introduction

Following from the characteristic of Chinese adverbial clauses as shown in the PFR skeleton treebank, this book will focus on adverbial clauses which are overtly marked by a subordinating conjunction or an adverbial subordinator. In Chinese, several clauses can be juxtaposed in a sentence without being introduced by either a coordinator or a subordinator to mark their grammatical relations (Chu and Chi, 1999: 248–249). As a general rule, these clauses are more likely to be taken as coordinate clauses than subordinate clauses (cf. Li and Thompson, 1989: 631). Some Chinese scholars (Rai-Chu, 1982: 21–30; Liu et al., 1996: 505–513; Chu and Chi, 1999: 248f.; among others), however, argue that as long as a clause shows any semantic relations such as condition, reason, concession, etc., the clause must be an adverbial subordinate clause to another clause of the same sentence, even though it is not overtly marked by a subordinator. I did not follow this approach in my book because there is no conclusive morphosyntactic evidence in the Chinese language to prove that a clause under consideration is an adverbial subordinate clause rather than a coordinate clause and an independent sentence (cf. Chao, 1968: 104–106). In English, when an adverbial subordinate clause is not introduced by a subordinator, it must take the form of a non-finite clause such as *-ing* clause, *to*-infinitive clause, etc. (Quintero, 2002: 33–38). Chinese adverbial clauses, however, do not have such explicit morphological marking (Norman, 1988: 163; Hu et al., 2001). In the absence of any overt marking of the adverbial clause, the only way of identifying the adverbial clause is to rely on semantic relations, as noted above (Rai-Chu, 1982: 21–30; Liu et al., 1996: 505–513; Chu and Chi, 1999: 248f.). Since it is somewhat subjective to rely solely on semantic relations in identifying adverbial subordinate clauses and those quantitative analyses drawn from research of this sort would become

very unreliable, I decided to focus only on the adverbial clause which is overtly marked by a subordinating conjunction and to exclude those “headless” adverbial clauses (i.e. adverbial clauses without an introductory subordinator) in my book. I will therefore discuss in detail the identification of *adverbial subordinators* in this chapter.

## 4.2 Problems with the PFR tagset

In the annotation scheme of the PFR Chinese Corpus, there is no such category as subordinator. Rather, the vague category *conjunction* tagged “c” is used to refer to both the coordinating and subordinating conjunctions, as is common in Chinese grammars (see, for example, Zhu, 1982; Lu and Ma, 1990, among others). These grammars typically state that any word which marks the grammatical relation between clauses, no matter whether it is a coordinate relation or a subordinate relation, is generally subsumed under the catch-all term 连词 *lianci*, more or less equivalent to a conjunction in English. This concept is so general that very few scholars have attempted to distinguish subordinating conjunctions from coordinating conjunctions and thus not many analyses have as yet addressed the issue of subordinators in adverbial clauses, the notable exceptions being Chao (1968: 113–114) and Wu (1982: 250ff.).

However, not all of the Chinese tagging systems neglect the distinction between coordinator and subordinator. The CKIP tagset is a case in point. As reviewed in Gao (1997), the CKIP tagset was designed by the Chinese Knowledge Information Processing (CKIP) Group at Academia Sinica in Taiwan. This tagset consists of 32 categories, including separate entries for coordinating conjunction and subordinating conjunction. Another noteworthy Chinese tagging system (Qin, 1998) is the Jasmine Chinese tagging system developed at the Chinese University of Hong Kong, comprising 47 word categories and 25 punctuation marks. Though it does not distinguish subordinators from coordinators, it insightfully proposes the distinction between a clause connector and a phrase connector, on which I would like to expand in the following section.<sup>1</sup>

1 For a detailed critique of these two main tagsets for Chinese, see Piao (2000: 54–59).

### 4.3 Suggested modifications to the PFR tagset with respect to tag “c”

For the purposes of my research, the most vital distinction is evidently the one between a coordinating conjunction and a subordinating conjunction. Hence, the catch-all term conjunction, as used in the PFR annotation scheme, needs to be sub-divided into these two major subcategories. Moreover, as will be demonstrated shortly, the coordinating conjunction is further split into three subdivisions i.e. intraclausal coordinating conjunction, interclausal coordinating conjunction and textual connective. In the following subsections, unless specified otherwise, all of the illustrative examples are taken from the PFR skeleton treebank as the syntactic information marked in the treebank is useful for explaining the properties of conjunctions.

#### 4.3.1 Intraclausal coordinating conjunctions

As its name suggests, an intraclausal coordinating conjunction is typically used to link a variety of phrases in the same clause such as 和 *he* “and”, 与 *yu* “and” and 而 *er* “and”, etc. These phrases can be a noun phrase as in examples (1) and (2), a verb phrase as in example (3), and an adjective phrase as in example (4).

- (1) <N><N&>两岸\_n 经济\_n 文化\_n 交流\_vn</N&> 和\_c <N+>人员\_n  
往来\_vn</N+></N>  
<N><N&>lianggan\_n jingji\_n wenhua\_n jiaoliu\_vn</N&> he\_c  
across.the.border economic cultural exchange and  
<N+>renyuan\_n wanglai\_vn</N+></N>  
official visit  
“cross-straits economic and cultural exchange and official visits”

- (2) <N>钢琴\_n 与\_c 管弦乐队\_n 作品\_n 《\_w 东方\_f 之\_u 珠\_Ng 》  
\_w</N>  
<N>gangqin\_n **yu\_c** guanxianyuedui\_n zuopin\_n 《\_w Dongfang\_f  
piano and orchestra work Orient's  
Zhi\_u Zhu\_Ng 》\_w</N>  
GEN pearl  
“piano and orchestral versions of the song ‘Pearl of the Orient’”
- (3) <V><学习\_v 和\_c 掌握\_v> <N>党\_n 的\_u 十五大\_j 精神  
\_n</N></V>  
<V><xuexi\_v **he\_c** zhangwo\_v> <N>dang\_n de\_u  
learn and master the.Communist.Party's GEN  
shiwuda\_j jingshen\_n</N></V>  
15.primary principles  
“learn and master the Communist Party’s 15 primary principles”
- (4) <N><度过\_v 了\_u 非凡\_z 而\_c 辉煌\_a 的\_u> 1 9 9 7年\_t</N>  
<N><duguo\_v le\_u feifan\_z er\_c huihuang\_a de\_u>  
go.through PERF extraordinary and magnificent DE  
1 9 9 7nian\_t</N>  
year.of.1997  
“passed an extraordinary and magnificent year of 1997”

### 4.3.2 Interclausal coordinating conjunctions

An interclausal coordinating conjunction is used to show a wide range of relations (e.g. addition, concession, result, simultaneity in time, etc.) between two adjacent clauses of the same sentence. Many examples of this sort of coordinator can be identified in my sample skeleton treebank e.g. 并 *bing* “and”, 但是 *danshi* “but”, 因此 *yinci* “therefore”, 同时 *tongshi* “in the meantime”, etc.

(5) <S N="112"><S&><Pa>在\_p <N><N&>郭\_nr 家\_n</N&> 和\_c <N+>闫  
 \_nr 家\_n</N+></N></Pa> , \_w <N>李\_nr 鹏\_nr</N> <R>都\_d</R>  
 <Ja>具体\_a 地\_u</Ja> <V>了解\_v 了\_u <N><他们\_r 退休\_v 后\_f  
 的\_u> 生活\_vn 保障\_vn 问题\_n</N></V></S&> , \_w 并\_c <S+><P>  
 与\_p <N>一些\_m 老\_a 职工\_n</N></P> <Na>一起\_s</Na> <V>回忆  
 \_v 起\_v 了\_u <N><当年\_t 建设\_v 电厂\_n 的\_u> 情景  
 \_n</N></V> °\_w</S+></S>

<S N="112"><S&><Pa>zai\_p <N><N&>Guo\_nr jia\_n</N&> he\_c  
 at Guo home and  
 <N+>Yan\_nr jia\_n</N+></N></Pa> , \_w <N>Li\_nr Peng\_nr</N>  
 Yan home Li Peng  
 <R>dou\_d</R> <Ja>juti\_a de\_u</Ja> <V>liaojie\_v le\_u  
 both in.detail ADVL understand PERF  
 <N><tamen\_r tuixiu\_v hou\_f de\_u> shenghuo\_vn baozhang\_vn  
 their retire after DE living pension  
 wenti\_n</N></V></S&> , \_w bing\_c <S+><P>yu\_p <N>yixie\_m  
 difficulty moreover with some  
 lao\_a zhigong\_n</N></P> <Na>yiqi\_s</Na> <V>huiyi\_v qi\_v le\_u  
 old co-workers together conjure up PERF  
 <N><dangnian\_t jianshe\_v dianchang\_n de\_u>  
 past build electricity.supply.station DE  
 qingjing\_n</N></V> °\_w</S+></S>  
 memories

“In Guo’s and Yan’s homes, Li Peng gained an understanding of their life and difficulties after retirement. He also chatted with some other elderly staff and recalled the days when the electricity supply station was being built.”

(6) <S N="29">但是\_c , \_w <N>世界\_n</N> <R>还\_d 不\_d</R> <J>安宁  
 \_a</J> °\_w</S>

<S N="29">danshi\_c , \_w <N>shijie\_n</N> <R>hai\_d bu\_d</R>  
 however world still not  
 <J>anning\_a</J> °\_w</S>  
 tranquil

“Yet, the world is not in peace.”

(7) <S N="72">因此\_c , \_w <N>各级\_r 领导\_n 干部\_n</N> <R>务必\_d</R> <V>牢记\_v <N><全心全意\_i 为\_p 人民\_n 服务\_v 的\_u>宗旨\_n</N></V> , \_w <P>在\_p <N>勤政廉政\_l 、\_w 艰苦奋斗\_i 方面\_n</N></P> <以身作则\_i> , \_w <V>当\_v <N>好\_a 表率\_n</N></V> 。\_w</S>

<S N="72">yinci\_c , \_w <N>geji\_r lingdao\_n ganbu\_n</N>  
 therefore at.each.level leading official  
 <R>wubi\_d</R> <V>laoji\_v <N><quanxinquanyi\_i wei\_p renmin\_n  
 necessarily bear.in.mind whole-heartedly for citizens  
 fuwu\_v de\_u zongzhi\_n</N></V> , \_w <P>zai\_p  
 provide.service DE mission in  
 <N>qinzhenglianzheng\_l 、\_w jiankufendou\_i fangmian\_n</N></P>  
 diligence.and.integrity perseverance aspects  
 <yishenzuoze\_i> , \_w <V>dang\_v <N>hao\_a biaoshuai\_n</N></V> 。  
 set.an.example act.as good example  
 \_w</S>

“Hence, heads at all levels of leadership must bear in mind that they serve the citizens wholeheartedly and demonstrate integrity and perseverance in order to set a good example.”

(8) <S N="105">同时\_c , \_w <R>也\_d</R> <V>希望\_v <S><N>你们\_r</N>  
 <Ja>安全\_ad</Ja> <V>生产\_v</V> 、\_w <R>经济\_ad</R> <V>调度\_v</V> , \_w <V>实现\_v <N><经济\_n 增长\_vn 方式\_n 的\_u>转变\_vn</N></V></S></V> 。\_w ”\_w</S>

<S N="105">tongshi\_c , \_w <R>ye\_d</R> <V>xiwang\_v  
 meanwhile also hope  
 <S><N>nimen\_r</N> <Ja>anquan\_ad</Ja> <V>shengchan\_v</V> 、\_w  
 you safely produce  
 <R>jingji\_ad</R> <V>tiaodu\_v</V> , \_w <V>shixian\_v <N><jingji\_n  
 economically adjust realise economy  
 zengzhang\_vn fangshi\_n de\_u zhuanbian\_vn</N></V></S></V> 。  
 growth mode DE change  
 \_w ”\_w</S>

“In the meantime, I hope you could take note of safety measures in manufacturing, improve productivity and keep up with any changes in our economy.”



The major aim in establishing a catalogue of defining properties of adverbial subordinators needs to be a successful delimitation of the latter from other functionally analogous grammatical categories such as adverb and coordinator. In my book, the working definition of adverbial subordinator entails two criteria. Firstly, an adverbial subordinator introduces a clause which must be linked to (i.e. dependent on) another clause in the same sentence. Secondly, the two clauses must not be in coordination. One of the major differences between a coordinate clause and a subordinate clause is that the information expressed by the subordinate clause is likely to be placed in the background with respect to the main clause, while the information expressed by two coordinate clauses is of equal importance (Lakoff, 1971; Quirk and Greenbaum, 1973: 919; Winter, 1982; Martin, 1983; Hoey, 1986; Hoey and Winter, 1986; Johannessen, 1998). As an example of the first criterion, 可是 *keshi* “but” is not considered as a subordinator in my book as it can introduce a clause which is able to occur independently, as shown in example (10), though it is typically used in concert with a genuine subordinator, 虽然 *suiran* “although”. As an example of the second criterion, 既 *ji* “not only” is not a subordinator as it must be linked to a coordinate clause introduced by 又 *you* “but also” in the same sentence, as illustrated in example (11).

(10) 可是\_c ,\_w 父母\_n 靠\_p 平时\_t 省吃俭用\_i ,\_w 过年\_v 时\_Ng  
也\_d 要\_v 为\_p 我\_r 和\_c 妹妹\_n 做\_v 一\_m 身\_q 新衣\_n 。  
\_w (19980125)

*keshi\_c* ,\_w *fumu\_n kao\_p pingshi\_t shengchijianyong\_i* ,\_w  
however parents by.means.of daily save.money.on.expenditure  
*guonian\_v shi\_Ng ye\_d yao\_v wei\_p wo\_r he\_c*  
Chinese.New.Year occasion yet want.to for me and  
*meimei\_n zuo\_v yi\_m shen\_q xinyi\_n* 。\_w (19980125)  
sister make one CL new.clothes

“However, by cutting down on food and necessities, my parents bought new clothes for me and my younger sister for the Chinese New Year.”

(11) 要\_v 加强\_v 基层\_n 干部\_n 队伍\_n 的\_u 建设\_vn ,\_w 既\_c 要  
 \_v 抓好\_v 对\_p 现有\_v 干部\_n 队伍\_n 的\_u 培训\_vn ,\_w 提  
 高\_v 他们\_r 的\_u 素质\_n ,\_w 又\_c 要\_v 注重\_v 培养\_v 新\_a  
 的\_u 人才\_n 。\_w (19980110)

yao\_v jiaqiang\_v jiceng\_n ganbu\_n duiwu\_n de\_u jianshe\_vn ,\_w  
 want.to strengthen basic.level official troop DE development

ji\_c yao\_v zhuhao\_v dui\_p xianyou\_v ganbu\_n duiwu\_n de\_u  
 not.only have.to grasp as.regards current official troop DE  
 peixun\_vn ,\_w tigao\_v tamen\_r de\_u suzhi\_n ,\_w you\_c  
 training enhance their GEN quality but.also

yao\_v zhuzhong\_v peiyang\_v xin\_a de\_u rencai\_n 。\_w (19980110)  
 have.to emphasise train new DE people.of.high.calibre

“To strengthen our troop, not only do we need to provide training to serving  
 officers, but we also need to place emphasis on recruiting new blood of high  
 calibre.”

## 4.4 Subordinators in the PFR Chinese Corpus

### 4.4.1 Identification of adverbial subordinators

In the previous section, I have provided a detailed account of the properties of conjunctions in Chinese. The category needs to be split into four subdivisions, namely intraclausal coordinating conjunction, interclausal coordinating conjunction, textual connective and subordinating conjunction/adverbial subordinator, to address the range of properties that a conjunction may have. However, as the major aim of this book is to give both a quantitative and qualitative account of adverbial subordinate clauses in written Chinese, the distinction between a coordinating conjunction and a subordinating conjunction is the distinction focussed upon by my book. Consequently I do not explore the remaining subcategories of conjunction i.e. intraclausal coordinating conjunction, interclausal coordinating conjunction and textual connective.

#### 4.4.2 Results

In the PFR Chinese Corpus, there are 175 distinct Chinese word forms which were tagged as 连词 *lianci* “conjunction”.

Broadly speaking, most of the Chinese *lianci* are coordinators which function intraclausally, interclausally and textually. The most common ten *lianci* in written Chinese are coordinating conjunctions rather than subordinating ones. Five of the *lianci*, though tagged as “conjunction”, were taken as adverbs in this book: these are 便 *bian* “then”, 才 *cai* “then”, 就 *jiu* “then”, 宁愿 *ningyuan* “would rather” and 宁 *ning* “would rather”. One of the most important syntactic differences between a conjunction and an adverb is that the former (not the latter) can either precede or follow the subject of the clause in which it occurs (Chao, 1968: 791; Wong, 2002). These five words were attested in the corpus to occur only after the subject. They were therefore considered as adverbs. After eliminating the coordinating conjunctions and adverbs from the list, 57 subordinating conjunctions can be found, as outlined in the following table.

甬管 <i>bengguan</i> “no matter what”	虽然 <i>suiran</i> “although”
不单 <i>budan</i> “in addition to”	虽说 <i>suishuo</i> “while admitting that ...”
不管 <i>buguan</i> “no matter what”	随着 <i>suizhe</i> “as soon as”
不论 <i>bulun</i> “whether or, whatever”	倘 <i>tang</i> “supposing that”
不论是 <i>bulunshi</i> “whether or, whatever”	倘若 <i>tangruo</i> “supposing that”
不说 <i>bushuo</i> “let alone ...”	万一 <i>wanyi</i> “in case”
除非 <i>chufei</i> “unless”	无论 <i>wulun</i> “whether or, whatever”
从而 <i>conger</i> “in order that; as a result”	无论是 <i>wulunshi</i> “whether or, whatever”
而是 <i>ershi</i> “rather”	要 <i>yao</i> “assuming that”
故 <i>gu</i> “so that”	要不是 <i>yaobushi</i> “if not, otherwise”
果真 <i>guozhen</i> “supposing that”	要是 <i>yaoshi</i> “assuming that”
何况 <i>hekuang</i> “not to mention ...”	以 <i>yi</i> “in order that”
假如 <i>jiaru</i> “supposing that”	以便 <i>yibian</i> “in order that”
假若 <i>jiaruo</i> “supposing that”	以免 <i>yimian</i> “in order that... not...”
即便 <i>jibian</i> “even if”	因 <i>yin</i> “because”
尽管 <i>jinguan</i> “even though”	因为 <i>yinwei</i> “because”
既然 <i>jiran</i> “since, as”	以致 <i>yizhi</i> “as a result”
即使 <i>jishi</i> “even if”	以至于 <i>yizhiyu</i> “consequently”
就是 <i>jiushi</i> “even if”	由于 <i>youyu</i> “owing to the fact that”
哪怕 <i>napa</i> “even if”	与其 <i>yuqi</i> “rather than”
且不说 <i>qiebushuo</i> “let alone ...”	与其说 <i>yuqishuo</i> “rather than say that”
任 <i>ren</i> “no matter what”	只是 <i>zhishi</i> “except that”
如 <i>ru</i> “if”	之所以 <i>zhisuoyi</i> “why there is a consequence of”
如果 <i>ruguo</i> “if”	只要 <i>zhiyao</i> “provided that”
若 <i>ruo</i> “if”	只有 <i>zhiyou</i> “only if”
若果 <i>ruoguo</i> “if”	纵 <i>zong</i> “even if”
若是 <i>ruoshi</i> “if”	纵使 <i>zongshi</i> “even if”
如若 <i>ruruo</i> “if”	
尚且 <i>shangqie</i> “even”	
虽 <i>sui</i> “though”	

Table 6: The inventory of 57 adverbial subordinators in Chinese.

These subordinators generally exhibit two properties. Firstly, most of the Chinese adverbial subordinators are *correlative subordinators* (Quirk and Greenbaum, 1973: 313–314; Biber et al., 1999: 86): they are combinations of two markers, one (a subordinating conjunction) occurring in the subordinate clause, and the other (either an adverb or a conjunc-

tion) occurring in the superordinate clause. For example, 如果 *ruguo* “if” usually occurs with an adverb 就 *jiu* “then”; 虽然 *suiran* “although” is typically followed by a coordinating conjunction 但 *dan* “but”; 不单 *budan* “not only” and 尚且 *shangqie* “even” have the same correlative adverb 更 *gen* “even”. An adverbial subordinator can have diverse correlates and those correlates are not obligatory. Take 尽管 *jinguan* “even though” as an example. It has a range of correlatives such as 但是 *danshi* “but”, 可是 *keshi* “but”, 却 *que* “but”, 然而 *raner* “yet”, 仍然 *rengran* “still”, 还是 *haishi* “still”, 而 *er* “but” (cf. Hou, 1998: 331 ff.) and a null correlative (i.e. *jinguan* does not have a correlative which occurs in the main clause), as illustrated in the following table.

Correlatives	Frequency of Occurrence
*Null correlative	8
但 <i>dan</i> “but” (conjunction)	88
但是 <i>danshi</i> “but” (conjunction)	10
都 <i>dou</i> “still” (adverb)	2
而 <i>er</i> “but” (conjunction)	2
还是 <i>haishi</i> “still” (adverb)	2
可 <i>ke</i> “but” (conjunction)	1
可是 <i>keshi</i> “but” (conjunction)	1
却 <i>que</i> “but” (adverb)	3
然而 <i>raner</i> “yet” (conjunction)	3
仍 <i>reng</i> “still” (adverb)	8
仍然 <i>rengran</i> “still” (adverb)	2
尚 <i>shang</i> “still” (adverb)	1
也 <i>ye</i> “still” (adverb)	1
<b>Total:</b>	<b>132</b>

\* A null correlative refers to the fact that no correlative is found in the main clause.

Table 7: The list of correlatives of the adverbial subordinator *jinguan*.

Secondly, the adverbial subordinators can express a wide range of meanings such as condition (e.g. *ruo* 若 “if”, 要是 *yaoshi* “if”, etc.), reason/cause (e.g. 因为 *yinwei* “because”, 由于 *youyu* “due to”, etc.), result (e.g. 之所以 *zhisuiyoyi* “as a result”, 故 *gu* “therefore”, etc.), purpose

(e.g. 从而 *conger* “in order to”, 以便 *yibian* “in order to”, etc.), and concession (e.g. 即使 *jishi* “even if”, 就是 *jiushi* “even if” etc.), roughly reflecting different types of adverbial clauses. The semantic types of adverbial clauses in written Chinese will be discussed at length in the next chapter.

#### 4.5 Using Java programming: The extraction of sentences containing adverbial subordinators

As adverbial clauses in Chinese are overtly marked by a subordinating conjunction, it is essential to extract those sentences having adverbial subordinators in order to identify the adverbial clause. Given an adverbial subordinator, something as simple as the “Find” facility of a word processor can easily identify the subordinator within a piece of text. However, the problem with this searching tool is that it can only look for one subordinator at one time: for a piece of text, I needed to search 57 times for the occurrence of 57 different subordinators which I identified earlier. This procedure would be repeated depending on how many texts I have to examine. Furthermore, this search facility merely spots the position of the subordinator in the text and does not automatically extract the sentence(s) in which the subordinator occurs. Hence the extraction of these subordinator-loaded sentences needs to be done manually. As a word processor’s search function does not offer a very good resource for processing my corpus data to meet my research question, I decided to write a computer program to extract those sentences in which an adverbial subordinator occurs, as shown in the following figure.



Figure 7: An output of the Subordinator Extractor.

## 4.6 Chapter summary

The PFR annotation scheme and similar Chinese tagsets have a shortcoming in that they do not distinguish a subordinating conjunction from a coordinating conjunction. This is also reflected in traditional grammars for Chinese in which the catch-all category 连词 *lianci* “conjunction” does not express this distinction. Hence, in this book, it was proposed that a conjunction should be further split into four subcategories, namely, intraclausal coordinating conjunction, interclausal coordinating conjunction, textual connective and subordinating conjunction in order to capture all properties of conjunctions in Chinese. However, as my book is concerned with the adverbial subordinate clause, this categorisation covers cases not relevant to my research question. Hence, only the distinction between a coordinator and a subordinator is used in

this work. A total of 175 conjunctions were identified in the PFR Chinese Corpus. To classify a given item as an adverbial subordinator, two defining criteria have to be fulfilled: firstly, it introduces a clause which must be linked to another clause in the same sentence; secondly, the two clauses are not in coordination.

From the list of conjunctions found in my corpus, I identified 57 adverbial subordinators, most of which are correlative subordinators: they take either an adverb or a conjunction as their correlative. An adverbial subordinator can have more than one correlative and the correlative is not obligatory. Moreover, the adverbial subordinator can express a wide range of meanings such as condition, concession, reason/cause, result, purpose, etc., possibly reflecting different types of adverbial clauses. After I obtained a list of subordinators, I developed a Java program to extract those sentences in which these subordinators occur in order to identify the adverbial clause, which is overtly marked by a subordinating conjunction. The program design is based on the idea that the computer can spot the occurrence of any of these subordinators in a text and display only those sentences containing the adverbial subordinator. In the next chapter, I will examine these subordinator marked sentences closely and identify the adverbial clauses and discuss their semantic roles.

